VOLUME 2 AIR OPERATOR AND AIR AGENCY CERTIFICATION AND APPLICATION PROCESS

CHAPTER 1 THE GENERIC PROCESS FOR CERTIFICATING ORGANIZATIONS

Section 4 Preparation of FAA Operating Certificates

2-71 FORMS TO USE. Use the following Federal Aviation Administration (FAA) forms to prepare the appropriate certificates (specific examples found in Figures 2-5 through 2-9A):

- FAA Form 8000-4, Air Agency Certificate.
- FAA Form 8000-43, Training Center Certificate.
- FAA Form 8430-18, Air Carrier Certificate.
- FAA Form 8430-21, Operating Certificate.

2-72 REQUIRED INFORMATION. Enter the following information on the form, as appropriate:

A. Legal Name. Enter the certificate holder's legal name directly below the words "This certifies that."

B. Additional Business Names for Operators, Air Agencies, and Training Centers. For Title 14 of the Code of Federal Regulations (14 CFR) parts 125, 133, and 137 certificates, and Air Agency and Training Center Certificates, place any additional business names on the certificate below the legal name.

1) The acronym "DBA" (doing business as) precedes the additional business name.

2) The certificate holder will provide evidence, as applicable, of the appropriate State or local government's authorization of all business names.

3) The certificate-holding district office (CHDO) should not restrict the number of DBAs used by a certificate holder. Should there be insufficient space on the certificate to accommodate all DBAs, the legal name and address should appear on the certificate with a notation to see an accompanying letter for a list of DBAs. Part 125 operators will have DBAs placed on their operations specifications (OpSpecs).

C. Additional Business Names for 14 CFR Parts 121 and 135 Certificates. For parts 121 and 135 certificates, only place DBA names in the operator's OpSpecs and not on the certificate.

D. Address of Principal Base. Enter the address of the certificate holder's principal base of operations directly below the certificate holder's name. A post office box address is not acceptable unless it also reflects the physical location of the principal base of operations.

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E. Statement of Authority.

1) FAA Form 8430-21. Do not modify the preprinted certification statement of authority on FAA Form 8430-21. However, complete the statement of authority (as applicable) as follows:

a) Part 125 (Operations).

b) Part 133 (Rotorcraft External-Load Operations).

c) Part 135 (Operations).

1. Operating Certificate for Intrastate Common Carriage.

a. In the first space, enter "Intrastate Common Carriage Operations."

b. In the second space, enter "and the terms, conditions, and limitations in the approved operations specifications."

c. In the third space, enter "indefinitely."

2. Operating Certificate for Private Carriage.

a. In the first space, enter "Private Carriage Operations."

b. In the second space, enter "and the terms, conditions, and limitations in the approved operations specifications."

c. In the third space, enter "indefinitely."

d. Part 137 (Private Agricultural Aircraft Operations or Commercial Agricultural Aircraft Operations, as appropriate).

2) FAA Form 8430-18. Do not modify the preprinted certification statement of authority on FAA Form 8430-18.

F. Certificate Number. Obtain the certificate number from the Aviation Data Systems Branch (AFS-620) in accordance with Volume 2, Chapter 1, and enter it in the space provided on the form. For more information on Air Carrier Certificates, see Volume 2, Chapter 2, Section 2.

G. Effective Date. Enter the date that all the requirements for certification were met in the space provided for certificate effective date. Retain the date of original issuance on the amended certificate if there is a change in the address or the CHDO. A change of name to the air operator or a change in the certification statement of authority has the effect of a new certification. Therefore, issue a new certificate and certificate number. For this situation, enter the issuance date of the new certificate in the space provided.

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H. CHDO Designator. Enter the designator of the region and CHDO on the "Issued at" line on the form.

I. Signature/Title. The district office manager signs the operating certificates issued to a part 125, 133, or 137 air operator, and part 135 air carriers complying with on-demand rules on the line provided. The regional Flight Standards division (RFSD) manager signs the Air Carrier Certificates issued to air carriers conducting part 121 operations or part 135 commuter operations. Enter the full title of the person signing the certificate in the space provided.

J. Region/Office Block (FAA Form 8430-18). When the RFSD manager signs the certificate, enter the full name of the region in the "Region/Office" space (e.g., Southwest Region). When the Flight Standards District Office (FSDO) manager signs the certificate, enter the full name of the region and FSDO acronym and number in the "Region/Office" space (e.g., Southwest Region, FSDO-18).

2-73 CHANGES TO CERTIFICATE NUMBER.

A. Change of Name. A change of the certificate holder's legal name without a change of ownership does not require a new certificate number. However, principal inspectors (PI) and aviation safety inspectors (ASI) must ensure the certificate holder is not using the name change to circumvent initial certification requirements.

1) Legal Authorization. The certificate holder must provide evidence that the appropriate State or local government (as applicable) authorized the change of a legal name.

2) Sole Proprietor. Do not treat a sole proprietor, who incorporates under State law, as a name change only. Once incorporated, a sole proprietor is considered to be a "new" person who must meet all the initial certification requirements of 14 CFR in order to receive an Operating Certificate.

B. Change in Ownership. Except where repair stations are concerned, changes in ownership will require a change in certificate number. For information related to repair stations, see Volume 2, Chapter 11, Section 2. For more information related to changes in ownership, see Volume 3, Chapter 34, Sections 3 and 4.

C. Prepare the Certificate. When the PI or ASI is ready to prepare the new certificate, contact AFS-620 via the established correspondence mailbox and provide an explanation of the change, along with copies of the associated documentation.

2-74 INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO) STANDARDIZED, CERTIFIED TRUE COPY OF THE AIR OPERATOR CERTIFICATE (AOC).

A. Amended Annex 6 Requirements. Annex 6 requires air operators to carry onboard their aircraft a standardized, certified true copy of their AOCs when operating internationally.

B. FAA Role. To enable certificate holders to fulfill this ICAO requirement, the FAA made an ICAO-standardized AOC available as Template A999 in the Web-based Operations

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Safety System (WebOPSS). (See Figure 2-9A for a sample of Template A999.) Preload most of the data contained in the AOC from operator data already maintained in the WebOPSS. The principal operations inspector (POI) or the certificate holder must enter additional data specific to the AOC. This standardized ICAO AOC is in addition to the FAA Operating Certificate or Air Carrier Certificate. For compliance with Annex 6, operators must carry this ICAO AOC onboard their aircraft when operating internationally.

C. Certified True Copy. Annex 6 also requires that the copy carried onboard the aircraft is a "certified true copy" of the original. Template A999 contains a certification statement that the FAA will digitally sign. See subparagraph 2-74D.

D. Procedure.

1) After January 1, 2010, certificate holders who fly or intend to fly internationally must request and receive Template A999 in the WebOPSS from their POIs. When the POI receives such a request, the POI should:

- Work with the certificate holder to properly fill out the template,
- Verify that the information in Template A999 is correct, and
- Sign and issue Template A999 in the WebOPSS.

2) The certification statement fulfilling the ICAO requirements is a certified true copy when the POI digitally signs and issues Template A999 in the WebOPSS.

3) When operating internationally, ICAO requires an air operator to carry a certified true copy of the AOC onboard his or her aircraft. The certificate holder may print a copy for each aircraft he or she operates internationally and place it onboard or, if the air carrier has the capability, carry it electronically onboard so that it is accessible to a foreign Civil Aviation Authority (CAA) during an inspection.

4) If any information contained on the ICAO-standardized AOC changes, the certificate holder will need to work with his or her POI to update the data in Template A999, print new copies, and, if necessary, have the FAA sign the certification statement.

2-75 TASK OUTCOMES. Completion of this task results in one of the following:

- Assignment of a precertification and final certificate number to a part 125 operator;
- Assignment of a final certificate number to a 14 CFR part 121, 133, 135, 137, 141, 142, 145, or 147 air agency or operator; or
- Assignment of a designator to a part 125 deviation holder.

2-76 FUTURE ACTIVITIES. See related certification chapters.

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Figure 2-5. FAA Form 8000-4, Air Agency Certificate

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

Air Agency Certificate

Number **(Enter cert. # obtained from AFS-620)**

This certificate is issued to
(Enter name of school)
whose business address is
(Enter address of main base of operations)
upon finding that its organization complies in all respects with the requirements of the Federal Aviation Regulations relating to the establishment of an Air Agency, and is empowered to operate an approved **(Enter the appropriate kind of school)**
with the following ratings:
(List all the ratings the pilot school or provisional pilot school is authorized for)

SAMPLE

This certificate, unless canceled, suspended, or revoked, shall continue in effect **(Date 24 calendar-months from date of issuance)**

By direction of the Administrator

Date issued:

(MMM DD, YYYY) **(Have district office manager sign)**

This Certificate is not Transferable, AND ANY MAJOR CHANGE IN THE BASIC FACILITIES, OR IN THE LOCATION THEREOF, SHALL BE IMMEDIATELY REPORTED TO THE APPROPRIATE REGIONAL OFFICE OF THE FEDERAL AVIATION ADMINISTRATION

Any alteration of this certificate is punishable by a fine of not exceeding $1,000, or imprisonment not exceeding 3 years, or both

FAA Form 8000-4 (1-67) SUPERSEDES FAA FORM 390. AFS Electronic Forms System - v2.2

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Figure 2-5A. FAA Form 8000-43, Training Center Certificate

U.S. Department of Transportation
Federal Aviation Administration

Training Center Certificate

Number:

This certificate is issued to

whose primary business address is

Upon finding that its organization complies in all respects with the requirements of the Federal Aviation Regulations relating to the establishment of an Air Agency, is empowered to operate an approved Training Center in accordance with the Training Specifications issued herewith, and may conduct training courses with respect to the following Parts of the Federal Aviation Regulations:

This certificate unless amended, suspended, or revoked, shall continue in effect indefinitely.

By Direction of the Administrator

Date issued _____ _____

Issuing Officer _____ _____

THIS CERTIFICATE IS NOT TRANSFERABLE, AND ANY MAJOR CHANGE IN THE APPROVED FACILITIES, OR IN THE LOCATION THEREOF, SHALL BE IMMEDIATELY REPORTED TO THE RESPONSIBLE FLIGHT STANDARDS DISTRICT OFFICE.

Any alteration of this certificate is punishable by a fine not exceeding $1000, or imprisonment not exceeding 3 years, or both.

FAA FORM 8000-43 (11-95) NSN: 0052-03-917-8003

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Figure 2-6. FAA Form 8430-18, Air Carrier Certificate

U.S. Department
of Transportation

Federal Aviation
Administration

Air Carrier Certificate

This certifies that

has met the requirements of the Federal Aviation Act of 1958, as amended, and the rules, regulations, and standards prescribed thereunder for the issuance of this certificate and is hereby authorized to operate as an air carrier and conduct common carriage operations in accordance with said Act and the rules, regulations, and standards prescribed thereunder and the terms, conditions, and limitations contained in the approved operations specifications.

This certificate is not transferable and, unless sooner surrendered, suspended, or revoked, shall continue in effect indefinitely.

By Direction of the Administrator

Certificate number _____

Effective date _____

Issued at _____

_____
(Signature)

_____
(Title)

_____
(Region/Office)

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Figure 2-7. FAA Form 8430-21, Operating Certificate for Intrastate Common Carriage

U.S. Department
of Transportation

**Federal Aviation
Administration**

OPERATING CERTIFICATE

This certifies that

(Enter Intrastate Common Carriage Company Name)
(Enter Address of Principal Base of Operations)

has met the requirements of the Federal Aviation Act of 1958, as amended, and the rules, regulations, and standards prescribed therein for the issuance of this certificate and is hereby authorized to operate as an Air Operator and conduct

Intrastate Common Carriage Operations

in accordance with said Act and the rules, regulations, and standards; *and the terms, conditions, and limitations contained in the approved operations specifications*

This certificate is not transferable and, unless canceled, suspended, superseded, or revoked, shall continue in effect *indefinitely* .

By Direction of the Administrator

Certificate number: _____

Effective date: _____

Issued at: _____

_____
(Signature)

_____
(Title)

FAA Form 8430-21

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Figure 2-8. FAA Form 8430-21, Operating Certificate for Private Carriage

U.S. Department
of Transportation

**Federal Aviation
Administration**

OPERATING CERTIFICATE

This certifies that

(Enter Private Carriage Company Name)
(Enter Address of Principal Base of Operations)

has met the requirements of the Federal Aviation Act of 1958, as amended, and the rules, regulations, and standards prescribed therein for the issuance of this certificate and is hereby authorized to operate as an Air Operator and conduct

Private Carriage Operations

in accordance with said Act and the rules, regulations, and standards; *and the terms, conditions, and limitations contained in the approved operations specifications*

This certificate is not transferable and, unless canceled, suspended, superseded, or revoked, shall continue in effect *indefinitely* .

By Direction of the Administrator

Certificate number: _____ _____ *(Signature)*

Effective date: _____ _____ *(Title)*

Issued at: _____

FAA Form 8430-21

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Figure 2-9. FAA Form 8430-21, Operating Certificate

US Department of Transportation
Federal Aviation Administration

Operating Certificate

This certifies that

MID-CONTINENTAL HELICOPTER, INC.
d/b/a
Verti-Flite
1234 Avalon Avenue
San Francisco, CA 95123

has met the requirements of the Federal Aviation Act of 1958, as amended, and the rules, regulations, and standards prescribed therein, for the issuance of this certificate and is authorized to operate as an Air Operator and conduct

Rotorcraft External-Load Operations

In accordance with said Act and the rules, regulations, and standards; and the terms, conditions, and limitations contained in the approved operations specifications. Classes A, B, C, and D loads are authorized.

This certificate is not transferable and, unless canceled, suspended, superseded, surrendered or revoked, shall continue in effect until March 31, 1997.

By Direction of the Administrator

Certificate number: RWI-L-001-A

Effective Date: March 10, 1995

Issued at: WP03, San Francisco, CA

(Signature)

Manager, AWP-FSDO-03
(Title)

FAA Form 8430-21 (6-87)

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Figure 2-9A. Sample Template A999, Air Operator Certificate (AOC) in the ICAO Format

<table>
<tr><th colspan="3">AIR OPERATOR CERTIFICATE</th></tr>
<tr><td rowspan="2">[3]</td><td>State of the Operator[1]
United States of America</td><td rowspan="2">[3]</td></tr>
<tr><td>Issuing Authority[2]
Federal Aviation Administration</td></tr>
<tr><td>AOC #:[4]</td><td rowspan="4">Operator Name[6]
DBA Trading Name[7]
Operator Address:[9]

Telephone:[10]
Fax:
E-mail:</td><td rowspan="4">Operational Points of Contact:[8]
Contact details, at which operational management can be contacted without undue delay, are listed in _____[11].</td></tr>
<tr><td></td></tr>
<tr><td>Expiry Date:[5] None</td></tr>
<tr><td></td></tr>
<tr><td colspan="3">This certificate certifies that _____[12] is authorized to perform commercial air operations, as defined in the attached operations specifications, in accordance with the Operations Manual and the _____[13].</td></tr>
<tr><td>Date of Issue:[14]</td><td colspan="2">Name:[15]
Title:</td></tr>
</table>

CERTIFICATION STATEMENT

I hereby certify that the attached is a true copy of the *[title of the AOC]* issued at *[place]* on *[date]* by the FAA.

Signed at [*place]* on *[date]*

[Digital signature of FAA official]
[Title]

---

1. Issued by the Federal Aviation Administration.
2. Support information reference:
3. These Operations Specifications are approved by direction of the Administrator.
4. Date Approval is effective:_____ Amendment Number:_____
5. I hereby accept and receive the Operations Specifications in this paragraph.

Date:

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Notes:
1. Auto-filled.
2. Auto-filled.
3. Reserved for future use.
4. Unique AOC number: this is the operator's FAA certificate number.
5. Auto-filled.
6. Insert the operator's registered name.
7. Operator trading name, if different. Insert "DBA" before the trading name (for "doing business as").
8. The contact details include the telephone and fax numbers, including the country code, and the e-mail address (if available) at which operational management can be contacted without undue delay for issues related to flight operations, airworthiness, flight and cabin crew competency, dangerous goods, and other matters, as appropriate.
9. Operator principal place of business address.
10. Operator principal place of business telephone and fax details, including the country code. Provide e-mail, if available.
11. Insertion of the controlled document, carried onboard, in which the contact details are listed with the appropriate paragraph or page reference. For example: "Contact details … are listed in the Operations Manual, Gen/Basic, Chapter 1, 1.1" or "… are listed in the Operations Specifications, page 1," or "… are listed in an attachment to this document."
12. Operator registered name.
13. Insert "14 CFR."
14. Issuance date of the AOC (dd-mm-yyyy).
15. Title and name of the authority representative. An official digital signature stamp is applied to the certification statement on the AOC.

RESERVED. Paragraphs 2-77 through 2-100.

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VOLUME 2 AIR OPERATOR AND AIR AGENCY CERTIFICATION AND APPLICATION PROCESS

CHAPTER 6 TITLE 14 CFR PART 125 CERTIFICATION AND OPERATING RULES

Section 3 Evaluate an Application for Deviation Authority under Part 125

2-711 PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

A. Title 14 of the Code of Federal Regulations (14 CFR) Parts 119 and 125. Granting a Letter of Deviation Authority (LODA) authorizing deviation from 14 CFR part 119, § 119.23 and part 125, § 125.5, the requirement to hold a certificate and operation specifications (OpSpecs) identified in automated Web-based Operations Safety System (WebOPSS) as an A125 LODA (part 125M database).

- Operations: 1328.
- Maintenance: 3319.
- Avionics: 5319.

B. Part 125. Granting a LODA authorizing deviations from a specified section of part 125.

- Operations: 1328.
- Maintenance: 3319.
- Avionics: 5319.

C. Special Flight Authorization (SFA). Granting a LODA authorizing SFA.

- Operations: 1260.
- Maintenance: 3319.
- Avionics: 5319.

D. Parachute, Museum, and Aircraft Leasing/Manufacturer Operations. Granting LODAs authorizing parachute, museum, and aircraft leasing/manufacturer operations.

- Operations: 1328.
- Maintenance: 3319.
- Avionics: 5319.

2-712 OBJECTIVES. The objective is to determine the applicant's eligibility for and issuance of the following:

A. Sections 119.23 and 125.5. LODA authorizing a deviation from § 119.23 and § 125.5, the requirement to hold a certificate and OpSpecs (A125 LODA),

B. Part 125. A LODA to deviate from specified sections of part 125,

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C. SFA. A LODA authorizing an SFA, and

D. Parachute, Museum, and Aircraft Leasing/Manufacturer Operations. A LODA authorizing parachute, museum, and aircraft leasing/manufacturer operations.

NOTE: All deviations, including the A125 LODA and SFAs will be approved or denied by the principal operations inspector (POI) and, if approved, issued through WebOPSS.

2-713 DEFINITIONS.

A. Applicant. An applicant is the entity applying for any deviation authority. The applicant may be a part 125 certificate holder or an A125 LODA holder. An applicant may also be a person applying for a part 125 certificate or a person applying for a deviation from § 119.23(a)(3) and § 125.5 (the requirement to hold an operating certificate and OpSpecs) here after to be identified as an A125 LODA holder.

B. A125 LODA Holder. An A125 LODA holder is a person/operator who is issued a LODA from § 119.23 and § 125.5 (the requirement to hold an operating certificate and OpSpecs), and is identified in WebOPSS (125M database) as an A125 LODA operator.

C. Letter of Deviation Authority (LODA). LODA is a formal authorization issued by the Federal Aviation Administration (FAA) certificate-holding district office (CHDO), authorizing a deviation from specified section/sections of part 125. The LODA is permitted by § 125.3. LODAs are issued to certificate holders and A125 LODA holders. LODAs to all of part 125 are issued for operational uniqueness such as SFAs, intentional parachute operations, airplane museum operations, airplane leasing/manufacturer operations and other individualized authorizations approved by AFS-800.

D. Special Flight Authorization (SFA). SFA is a LODA authorizing an operator to accomplish the following short-term operations (normally a maximum of 30 days) in accordance with 14 CFR part 91:

1) Sales demonstration flights when the operator is not certificated under part 119 or the holder of an A125 LODA.

2) Ferry flights when the operator is not certificated under part 119 or the holder of an A125 LODA.

3) Training flights conducted for certification under 14 CFR parts 61 and 63, associated with certification under part 119, or an applicant for an A125 LODA.

4) SFAs (§ 91.715) are also issued to allow a foreign civil aircraft to be operated without a U.S. airworthiness certificate.

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E. Standard Intentional Parachute Operations, Airplane Museum Operation, and Airplane Leasing/Manufacturer Operations Standard LODA. AFS-800 has considered the operational uniqueness of these operations and has determined that such operations, conducted by airplanes with a seating configuration of 20 or more passengers or a maximum payload capacity of 6,000 pounds or more, should be authorized a deviation from § 125.1 applicability, and allowed to conduct all operations in accordance with part 91. AFS-800 has developed Standard Parachute, Museum, and Airplane Leasing/Manufacturer LODAs. See Figures 2-33 through 2-35, Sample of the Standard Parachute, Museum, Airplane Leasing/Manufacturer Operation LODAs.

F. Special Flight Permits (SFP). SFPs are issued to the operator of an aircraft that may not currently meet the applicable airworthiness requirements but is capable of safe flight (see § 21.197 and § 21.199). Foreign citizens operating U.S.-registered airplanes may apply to the Flight Standards District Office (FSDO) for an SFP to allow operation to the United States for obtaining a part 125 certificate.

2-714 DEVIATION APPLICATION PROCESSES.

A. A125 LODA. A request for LODA, A125 LODA (paragraph 2-715).

B. Part 125. A request for deviation from specified sections of part 125 (paragraph 2-716).

C. SFA. A request for an SFA (paragraph 2-717).

D. Standard Parachute, Museum, Airplane Leasing/Manufacturer Operations LODA. A request for the standard parachute, museum, airplane leasing/manufacturer operations LODA (paragraph 2-718).

2-715 A125 LODA APPLICATION AND ISSUANCE PROCESS.

A. Background.

1) The development of the A125 LODA is the outcome of a change in policy associated with “full deviations” to all of part 125. Historically, corporate and private use operators operating in non-common carriage, carrying passengers or cargo, without compensation or hire, were given full deviation to all of part 125. These operators were allowed to operate under part 91 rules. The FAA has determined that issuing a deviation from all provisions of part 125, for prolonged periods, would render part 125 meaningless and defeat the purpose of the rule. Therefore, deviation authority granted under § 125.3 should be interpreted to mean deviation authorization to the extent possible by regulation and policy while maintaining an equivalent level of safety.

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2) The policy embodied in the A125 LODA is to require all aircraft having a seating configuration of 20 or more passengers or a maximum payload capacity of 6,000 pounds or more to operate in accordance with the higher safety requirements of part 125. The A125 LODA provides relief from the requirements to hold a certificate and operation specifications for noncommercial operators only. The A125 LODA assures the safety intent of the operating rule while granting certification relief to corporate and private use operators.

B. Eligibility.

1) Operation under an A125 LODA is authorized when the operations are noncommercial in nature. Noncommercial operations, as they relate to the A125 LODA, are defined as:

- Operations in which persons or cargo are transported without compensation or hire, or
- Operations that do not involve the transportation of persons or cargo.

2) The A125 LODA may also be issued when the operator conducts compensation operations not involving common carriage as long as such compensation operations are only in accordance with the following:

a) Aerial work operations such as aerial photography or survey, or pipeline patrol, but not including fire-fighting operations.

b) Flights for the demonstration of an airplane to prospective customers when no charge is made except for those specified in expenses below.

c) Flights conducted by the operator of an airplane for his personal transportation, or the transportation of his guests when no charge, assessment, or fee is made for the transportation.

d) Carriage of officials, employees, guests, and property of a company on an airplane operated by that company, or the parent or a subsidiary of the company or a subsidiary of the parent, when the carriage is within the scope of, and incidental to, the business of the company (other than transportation by air) and no charge, assessment or fee is made for the carriage in excess of the cost of owning, operating, and maintaining the airplane. The exception is that no charge of any kind may be made for the carriage of a guest of a company, when the carriage is not within the scope of, and incidental to, the business of that company.

e) The carriage of company officials, employees, and guests of the company on an airplane operated under a time sharing, interchange, or joint ownership agreement as specified in category below.

f) The carriage of property (other than mail) on an airplane operated by a person in the furtherance of a business or employment (other than transportation by air) when the carriage is within the scope of, and incidental to, that business or employment and no charge, assessment, or fee is made for the carriage other than those specified in expenses below.

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g) The carriage on an airplane of an athletic team, sports group, choral group, or similar group having a common purpose or objective when there is no charge, assessment, or fee of any kind made by any person for that carriage.

h) The carriage of persons on an airplane operated by a person in the furtherance of a business other than transportation by air for the purpose of selling them land, goods, or property, including franchises or distributorships, when the carriage is within the scope of, and incidental to, that business and no charge, assessment, or fee is made for that carriage.

C. Category.

1) A *time sharing agreement* means an arrangement whereby a person leases his airplane with flightcrew to another person, and no charge is made for the flights conducted under that arrangement other than those specified in expenses below.

2) An *interchange agreement* means an arrangement whereby a person leases his airplane to another person in exchange for equal time, when needed, on the other person's airplane, and no charge, assessment, or fee is made, except that a charge may be made not to exceed the difference between the cost of owning, operating, and maintaining the two airplanes.

3) A *joint ownership agreement* means an arrangement whereby one of the registered joint owners of an airplane employs and furnishes the flightcrew for that airplane and each of the registered joint owners pays a share of the charge specified in the agreement.

D. Expenses. The following may be charged, as expenses of a specific flight, for transportation:

1) Fuel, oil, lubricants, and other additives.

2) Travel expenses of the crew, including food, lodging, and ground transportation.

3) Hangar and tie-down costs away from the airplane’s base of operation.

4) Insurance obtained for the specific flight.

5) Landing fees, airport taxes, and similar assessments.

6) Customs, foreign permit, and similar fees directly related to the flight.

7) In flight food and beverages.

8) Passenger ground transportation.

9) Flight planning and weather contract services.

10) An additional charge equal to 100 percent of the expenses listed above in item 1) of this subparagraph.

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E. Authority.

1) An A125 LODA (see Figure 2-31, Sample Template LODA A125) is the authority to deviate from § 125.5 and § 119.23(a)(3), the requirement to hold a certificate and OpSpecs, when conducting noncommercial operations. This deviation authority is granted in accordance with § 125.3.

2) The A125 LODA holder must comply with all other sections of part 125 with the exception of § 125.5.

3) Any reference in part 125 to the certificate holder (except for § 125.5), for the purpose of this A125 LODA, should be interpreted to mean the A125 LODA holder. Any reference in part 125 to OpSpecs (except for § 125.5), for the purpose of this A125 LODA, should be interpreted to mean letters of authorization (LOA).

4) The A125 LODA holder will require LOAs for operations such as Reduced Vertical Separation Minimums (RVSM), North Atlantic High Level Airspace (NAT HLA), or any other item that the Administrator determines is necessary to cover a particular situation (see § 125.31).

F. Guidance. Applying for the A125 LODA.

1) An applicant seeking an A125 LODA must submit a letter requesting the A125 LODA deviation authority at least 60 days prior to the date the applicant plans to begin operations (§ 125.3(c)).

2) The written request must declare that no operations conducted with the aircraft listed in the request will be used for compensation or hire. If any compensation is involved and such operations meet every element of one or more of the examples (see subparagraph 2-715B and paragraph 3 of the A125 LODA), then the POI may issue the A125 LODA allowing the operator to conduct flight operations without a part 125 certificate or OpSpecs.

3) The POI must ensure the eligibility of the applicant in accordance with subparagraph 2-715B, Eligibility.

4) The FSDO/CHDO will scrutinize each operator and the circumstances of the proposed operation to determine if granting the A125 LODA is appropriate. Because of the 60-day limitation for formal action on the request, assessing the application for the A125 LODA requires prompt action when the FSDO/CHDO receives the request.

5) If the applicant is eligible for the A125 LODA, they should present a written plan (see Figure 2-32, Sample Letter of Compliance) to the FSDO/CHDO. The plan should outline how they will comply with the requirements of each section of part 125 as listed in the LODA (Figure 2-31, paragraph 5). The plan must also include practices and procedures that will meet the equivalent level of safety for those additional specified sections of part 125 for which a deviation is requested.

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6) Oversight will be accomplished by the local FSDO/CHDO based on its geographic location in relation to the applicant's proposed principal base of operations. The controlling CHDO will be responsible for all matters relating to the A125 LODA application and administration.

G. Administrating the A125 LODA in the WebOPSS.

1) WebOPSS enables the FAA to track, manage, and administer part 125 authorizations and deviations, including the A125 LODA. A125 LODA LOAs and deviations will be accountable, traceable, current, and readily available to both the operator and the FAA through the WebOPSS system.

2) Issuance of the A125 LODA (A125 template) authorizing the operator to deviate from § 125.5 and § 119.23(a)(3), the requirement to hold a certificate and OpSpecs, is available in the 125M database and will be issued from the WebOPSS.

3) Selectable authorized deviations in the WebOPSS drop-down deviation menu are identified and available for issue and authorization in (LOA) A005.

4) Deviations requested that are not listed in the drop-down deviation menu may be added (by AFS-260 and AFS-820 only) through a separate application process described in paragraph 2-716, Request for Deviation from Specified Sections of Part 125.

NOTE: At no time should the POI manually enter or amend deviations selected from the WebOPSS deviation database. The management and administration of the WebOPSS database is solely a function of AFS-260 and AFS-820.

5) The A125 LODA (A125 template) requires other accompanying LOAs. The following is a list of *must issue* LOAs:

- A001, Issuance and Applicability,
- A002, Definitions and Abbreviations,
- A003, Airplane/Aircraft Authorization,
- A004, Summary of Special Authorizations and Limitations,
- A005, Exemptions and Deviations,
- A006, Management Personnel,
- A007, Other Designated Persons,
- A008, Operational Control,
- A009, Airport Aeronautical Data,
- A010, Aeronautical Weather Data,
- A031, Arrangements with Training Center(s) or Other Organization(s) for Certificate Holder Training,
- A125, Letter of Deviation Authority (LODA),
- A447, Emergency Airworthiness Directives (AD) Notification Information,
- B050, Authorized Areas of En Route Operations, Limitations, and Procedures,
- D073, Approved Airplane Inspection Program (AAIP),
- D085, Aircraft Listing,

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- D088, Maintenance Time Limitations Authorization,
- D095, Minimum Equipment List (MEL) Authorization, and
- E096, Weight and Balance Control Procedures.

6) Optional LOAs for special areas of operations are available in the WebOPSS. If authorized, these must be issued from the WebOPSS. For example, use template B034 for issuing Precision Area Navigation (P-RNAV) authorizations for European airspace, B036 for required navigation performance (RNP-10) (Pacific RNP-10 operations), B039 for NAT HLA, B046 for RVSM, C059/C060, respectively, for Category (CAT) II/III, and so forth. The guidance for issuing these operations is associated with each template in the WebOPSS.

H. Issuing enhanced Vital Information Database (eVID) and WebOPSS Designators.

1) If an operator is entered in the WebOPSS as a 91M or 91J operator and is or will be issued this A125 LODA, the operator will need to be moved into the WebOPSS 125M database.

2) If your operator does not have a part 125 designator, follow the standard guidance in Order 8900.1 for obtaining, from AFS-620, the eVID designator number with the fourth character as "M." Once the operator is assigned this designator, follow the WebOPSS procedures to obtain a 125M designator in the WebOPSS.

3) After the WebOPSS designator is assigned, process all authorizations from the 125M database of the WebOPSS.

4) Other optional templates/LOAs are available in the 125M database. These templates may be issued with approval from the POI.

2-716 REQUEST FOR DEVIATION FROM SPECIFIED SECTIONS OF PART 125.

A. Request for Deviation.

1) A list of standard deviations can be found in the drop-down deviation menu of the WebOPSS. These standard deviations have been authorized by FAA Headquarters (AFS-820) and can be approved at the FSDO level.

2) Requests for deviations not listed in WebOPSS must be forwarded to FAA Headquarters (AFS-820) along with the justification and any supporting documents. FAA Headquarters (AFS-820) will either approve or reject the request. If FAA Headquarters approves the deviation sought, the deviation will be entered into the WebOPSS database and will become an authorized selectable deviation.

3) If the request for deviation is rejected, FAA Headquarters (AFS-820) will notify the FSDO/CHDO.

B. Authorizing Deviations. A certificate holder or an A125 LODA holder must apply for a deviation. The requestor must submit a specific request to its A125 LODA CHDO.

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1) The requestor must identify, in writing, the specific regulatory section(s) from which a deviation is requested. An entity seeking deviation authority from one or several sections of part 125 must file the request at least 60 days before the date of intended operations. The requestor may not deviate from Federal regulations until the authority is granted and the deviation is issued through the WebOPSS.

2) The letter and any attachments must contain the specific reasons for the deviation request, information to show that an equivalent level of safety will be maintained, and any other information the FAA may require.

3) If the POI/principal maintenance inspector (PMI)/principal avionics inspector (PAI) determines that an equivalent level of safety will be maintained, the POI may authorize the deviation by selecting the deviation from the list of authorized deviations in the WebOPSS database. (Select Deviations in WebOPSS from the Certificate Holder menu then click on Deviation Assignment.)

4) The WebOPSS provides standardized selections of deviations that are available for authorization in template A005. (Detailed instructions for assigning deviations from the WebOPSS are available in WebOPSS guidance system with template A005 in all databases.)

5) Inspectors may only authorize deviations listed in the 125/125M database.

6) If the specific deviation is not in the WebOPSS national database, the POI must e-mail a request to AFS-820 with a courtesy copy to the regional Flight Standards division (RFSD).

7) The POI's request for the deviation that is not in the WebOPSS deviation database must contain the deviation, its authority, and description of the deviation. For example see Table 2-8 below:

Table 2-8. Deviation Authority, Deviation Form, Description, Conditions/Limitations

Deviation Authority	Deviation From	Description	Conditions and Limitations
§ 125.203(e)	§ 125.203(e)	Authorizes a deviation from the radio and navigation equipment requirements in extended over water operations (B045 and B054)	N/A
§ 125.207(a)(1)(i)	§ 125.207(a)(1)(i)	Authorizes a deviation from the first aid kit content requirements	N/A
§ 125.207(b)(1)	§ 125.207(b)	Authorizes a deviation from the megaphone location requirements	N/A

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8) Once the appropriate FAA policy division (AFS-800 or the Aircraft Maintenance Division, AFS-300) approves the deviation, headquarters may enter it into the WebOPSS deviation database so it is available for authorizing in LOA template A005. Some deviation approvals may remain with AFS-800 to be addressed in coordination with the jurisdictional FSDO in certain unique cases.

2-717 REQUEST FOR AN SFA.

A. Sections 119.1(e) and 125.1(b)(3) and (4). SFAs are used as an alternate method of compliance with § 119.1(e) and § 125.1(b)(3) and (4). The current regulatory language in these sections does not allow for operations such as sales demonstrations flights, ferry flights, and training flights conducted for part 61 and 63 crew training and qualification associated with the certification phase of a part 119 certificate applicant or an applicant for a part A125 LODA.

1) Section 125.3 provides the authority for the SFA.

2) An SFA is conducted in accordance with part 91 rules. The maximum duration of an SFA is normally 30 days.

B. Written Request. The operator must request the SFA, in writing, specifically outlining enough information for the inspector to be able to evaluate the proposed operation. The written request must include at least the following:

1) A statement asserting that the operation is not for compensation or hire,

2) The proposed type of operation,

3) The length of the proposed operation, to include a start and stop date, and

4) The airplane make/model and registration/serial number.

C. SFA LODA. The FSDO issues an SFA LODA, through the WebOPSS, when a particular operation is infrequent and involves a defined short period. The limitations on the operation vary depending on the type of operation. These limitations are detailed in each of the sample letters (templates) in this section. Operations considered in this category include:

1) Sales demonstration flights when the operator is not certificated under part 119 or the holder of an A125 LODA;

2) Ferry flights when the operator is not certificated under part 119 or the holder of an A125 LODA; and

3) Training flights conducted for certification under parts 61 and 63, associated with certification under part 119, or an applicant for an A125 LODA.

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D. Issuance of the SFA Template from WebOPSS. An SFA is used, when required, to meet the needs of 14 CFR part 121 and part 125 operations. SFA templates, therefore, are located in the part 91, 121, 125, and part 125M databases. Depending on the proposed operation, choose the SFA needed (sales demonstration flights, ferry flights, etc.) from the suitable database.

1) Location of the SFA in WebOPSS.

a) SFAs (three standard types) are located in the part 91, 121, 125, and 125M WebOPSS databases. Access to the SFA deviation assignment is through the dropdown "Certificate Holder" menu button on the WebOPSS database toolbar. Next, select the deviation button to acquire the selectable deviations.

b) Each SFA will have an associated LODA shown as a LODA template. These LODA templates are found in the "A" section of the appropriate databases.

c) Each SFA LODA will have an accompanying, selectable, deviation authority, which will be issued in the A005 template (shown in Table 2-9).

Table 2-9. A005 Template

Deviation Authority	Deviation From	Description	Conditions and Limitations
§ 125.3	Part 125	Sales Demonstration	Sales demonstration flights when the operator is not certificated under part 119 (see Figure 2-30, subparagraph B).
§ 125.3	Part 125	Ferry Flights	Ferry flights when the operator is not certificated under part 119 (see Figure 2-30, subparagraph A).
§ 125.3	Part 125	Training Flights	Training flights conducted for parts 61 and 63 crew training, qualification and currency associated with the certification phase of part 119 (see Figure 2-30, subparagraph C).

2) Issuance of the SFA.

a) Upon determination of eligibility for the SFA, the POI will issue the SFA/LODA through WebOPSS.

b) The POI will select the appropriate SFA and complete the fill in text (within the template) to satisfy the requirements and limitations deemed necessary for the respective operation.

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c) The SFA is then issued in the A005 template and a true copy of the SFA LODA is given to the operator to satisfy the requirements of § 125.7.

2-718 PROCEDURES FOR PROCESSING THE STANDARD PARACHUTE, MUSEUM, AND AIRPLANE LEASING/MANUFACTURER OPERATIONS LODA.

A. Application. The operator must apply in writing to the local FSDO or CHDO (in accordance with § 125.3) stating that they are engaged in, or planning to engage in, one of the three operations above and are requesting authorization for a LODA. To qualify for a museum LODA, the museum must be established for the purpose of exhibiting and operating historic aircraft and hold a determination from the U.S. Internal Revenue Service (IRS) that it is a 501(c)(3) nonprofit, tax-exempt, charitable organization or be approved by AFS-800.

B. Operation Verification. The POI/FSDO must verify that the operator is engaged in or is planning to engage in the operation from which they are seeking LODA relief.

C. Compliance Verification. The POI/FSDO must verify that the operator can comply and is willing to comply with the conditions and limitations listed in the LODA.

D. Written Request. After verification of subparagraph 2-718B and C, the FSDO should submit a written request to AFS-800 for authorization to issue the LODA sought.

E. Complete Memorandum. Upon receipt of the FSDO's request, AFS-800 will complete the standard LODA memorandum and issue it to the FSDO.

F. Issuance. Upon receipt of the memorandum the FSDO will comply with the instructions of the standard memorandum and issue the standard LODA to the operator.

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Figure 2-31. Sample Template LODA A125

U.S. Department
of Transportation
Federal Aviation
Administration

14 CFR Part 125M Operations

Letter of Deviation Authority (LODA)

1. The operator/company listed at the bottom of this document is hereby issued a Letter of Deviation Authority (LODA) from the requirements of Title 14 of the Code of Federal Regulations (14 CFR) part 125, § 125.5 to hold a part 125 operating certificate and operations specifications (OpSpecs), as provided by 14 CFR part 119, § 119.23(a), § 125.3(a), and as authorized in A005, Letter of Authorization, Exemptions and Deviations.

2. The LODA authorizes the company/operator to transport its personnel, property, and guests. Guests may only travel on flights for which the company/operator has a business purpose.

3. This LODA is issued for the purpose of conducting noncommercial operations. Noncommercial operations are operations in which persons or cargo are transported without compensation or hire, or operations that do not involve the transportation of persons or cargo. It is also issued when the operator/company conducts compensation operations not involving common carriage as long as such compensation operations are only in accordance with the following:

a. Kinds of Operations.

(1) Ferry or training flights;

(2) Aerial work operations such as aerial photography or survey, or pipeline patrol, but not including fire fighting operations;

(3) Flights for the demonstration of an airplane to prospective customers when no charge is made except for those specified in subparagraph 3c below;

(4) Flights conducted by the operator of an airplane for his personal transportation, or the transportation of his guests when no charge, assessment, or fee is made for the transportation;

(5) Carriage of officials, employees, guests, and property of a company on an airplane operated by that company, or the parent or a subsidiary of the company or a subsidiary of the parent, when the carriage is within the scope of, and incidental to, the business of the company (other than transportation by air) and no charge, assessment or fee is made for the carriage in excess of the cost of owning, operating, and maintaining the airplane, except that no charge of any kind may be made for the carriage of a guest of a company, when the carriage is not within the scope of, and incidental to, the business of that company;

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(6) The carriage of company officials, employees, and guests of the company on an airplane operated under a time sharing, interchange, or joint ownership agreement as defined in subparagraph 3c below;

(7) The carriage of property (other than mail) on an airplane operated by a person in the furtherance of a business or employment (other than transportation by air) when the carriage is within the scope of, and incidental to, that business or employment and no charge, assessment, or fee is made for the carriage other than those specified in subparagraph 3c below;

(8) The carriage on an airplane of an athletic team, sports group, choral group, or similar group having a common purpose or objective when there is no charge, assessment, or fee of any kind made by any person for that carriage; and

(9) The carriage of persons on an airplane operated by a person in the furtherance of a business other than transportation by air for the purpose of selling them land, goods, or property, including franchises or distributorships, when the carriage is within the scope of, and incidental to, that business and no charge, assessment, or fee is made for that carriage.

b. Definitions.

(1) A time sharing agreement means an arrangement whereby a person leases his airplane with flightcrew to another person, and no charge is made for the flights conducted under that arrangement other than those specified in subparagraph 3c below;

(2) An interchange agreement means an arrangement whereby a person leases his airplane to another person in exchange for equal time, when needed, on the other person's airplane, and no charge, assessment, or fee is made, except that a charge may be made not to exceed the difference between the cost of owning, operating, and maintaining the two airplanes;

(3) A joint ownership agreement means an arrangement whereby one of the registered joint owners of an airplane employs and furnishes the flightcrew for that airplane and each of the registered joint owners pays a share of the charge specified in the agreement.

c. Expenses That May be Charged. The following may be charged, as expenses of a specific flight, for transportation:

(1) Fuel, oil, lubricants, and other additives.

(2) Travel expenses of the crew, including food, lodging, and ground transportation.

(3) Hangar and tie-down costs away from the airplane’s base of operation.

(4) Insurance obtained for the specific flight.

(5) Landing fees, airport taxes, and similar assessments.

(6) Customs, foreign permit, and similar fees directly related to the flight.

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(7) In flight food and beverages.

(8) Passenger ground transportation.

(9) Flight planning and weather contract services.

(10) An additional charge equal to 100 percent of the expenses listed above in subparagraph 3c(1).

4. Any operations, other than those authorized by this LODA, will result in the termination of this deviation authority. This LODA must be surrendered upon the request of the Administrator or an authorized representative. A copy of this LODA must be carried in the airplane(s) as required by § 125.7 and presented for inspection upon the request of the Administrator or an authorized representative.

5. This LODA is issued with the understanding that the company/operator shall:

a. Operate its airplane (make/model and registration number) authorized in A003, Airplane/Aircraft Authorization, in compliance with §§ 125.91 and 125.93 notwithstanding specific deviations as authorized in A005, Letter of Authorization, Exemptions and Deviations.

b. Conduct operations in accordance with §§ 125.25, 125.37, 125.39, 125.45, 125.47 (A001, Issuance and Applicability), 125.49, 125.51, and 125.53, of subpart B, notwithstanding specific deviations authorized in A005, Letter of Authorization, Exemptions and Deviations. A007, Letter of Authorization, Designated Persons, must be issued to show compliance or equivalent level of safety to § 125.25.

c. Comply with the Manual Requirements of part 125 subpart C, notwithstanding specific deviations authorized in A005, Letter of Authorization, Exemptions and Deviations.

d. Comply with the Airplane Requirements of part 125 subpart D, notwithstanding specific deviations authorized in A005, Letter of Authorization, Exemptions and Deviations.

e. Comply with the Special Airworthiness Requirements of part 125 subpart E, notwithstanding specific deviations authorized in A005, Letter of Authorization, Exemptions and Deviations.

f. Comply with the Instrument and Equipment Requirements of part 125 subpart F, notwithstanding specific deviations authorized in A005, Letter of Authorization, Exemptions and Deviations.

g. Comply with the Maintenance Requirements of part 125 subpart G, notwithstanding specific deviations authorized in A005, Letter of Authorization, Exemptions and Deviations.

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h. Comply with the airmen and flight crewmember requirements of part 125 subparts H and I, and provide initial and/or recurrent training for flightcrew and flight attendant emergency training as authorized in A031, Letter of Authorization, Arrangements with Training Center(s) or Other Organization(s) for Certificate Holder Training, notwithstanding specific deviations authorized in A005, Letter of Authorization, Exemptions and Deviations.

i. Conduct flight operations in accordance with part 125 subparts J, K and L, notwithstanding specific deviations authorized in A005, Letter of Authorization, Exemptions and Deviations. These operations shall be described in A008, Letter of Authorization, Operational Control.

j. Comply with the requirements of part 125 appendices A, B, C, D, and E, notwithstanding specific deviations authorized in A005, Letter of Authorization, Exemptions and Deviations.

k. Comply with the Special Area of Authorization requirements contained in, but not limited to, LOAs B034, B036, B039, B046, B050, and D098, as applicable, if issued.

l. Comply with the requirements of § 125.201 by the issuance of a letter of authorization for an MEL (LOA D095).

m. Notify the manager of the Flight Standard District Office (FSDO) of any material change in the facts stated in your letter of compliance for this LODA and/or any changes in the original authorizations and deviations herein.

6. This LODA will remain in effect until superseded, withdrawn, or rescinded.

TEXT99

HQ Control: 12/21/06 HQ Revision: 010

This Authorization is Issued by the Federal Aviation Administration and approved by direction of the Administrator.

_____

Date Approval is effective: **Amendment Number:**

I hereby accept and receive this Authorization.

_____

Date:

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Figure 2-32. Sample Letter of Compliance

This attachment to the formal application letter should address each section of Title 14 of the Code of Federal Regulations (14 CFR) part 125, § 125.1 through § 125.411, including appendices A-E, and specify how the operator intends to comply with the requirements of the rule. The following examples, which are not all-inclusive, are representative of how this requirement may be met, but are not intended to imply that another approach would not be equally acceptable.

1. Subpart A, General.

a. Section 125.1, Applicability. AnyAir Aviation intends to conduct operations which meet the applicability of this section.

b. Section 125.3, Deviation Authority. AnyAir Aviation intends to comply with the requirements of part 125 and to request to operate under a Letter of Deviation Authority (LODA).

c. Section 125.5, Operating Certificate and Operation Specifications Required. AnyAir Aviation understands it may not operate under the requirements and privileges of part 125 until receiving a part 125 LODA.

2. Subpart B, Certification Rules and Miscellaneous Requirements.

a. Section 125.21, Application for Operating Certificate. AnyAir Aviation has provided the appropriate information to Flight Standards District Office (FSDO)-[number]. We are planning to begin operations under part 125 on [date].

b. Section 125.23, Rules Applicable to Operations Subject to This Part. AnyAir Aviation will comply with the applicable rules of part 125, and when operating outside the United States, will comply with International Civil Aviation Organization (ICAO) procedures and/or the rules specified by the country concerned and any rules of 14 CFR parts 61, 91, or 125, whichever is more restrictive.

c. Section 125.25, Management Personnel Required. AnyAir Aviation has included this information in the manual (Chapter 1).

d Section 125.27, Issue of Certificate. AnyAir Aviation meets all the requirements of this section and should be issued an LODA under part 125.

e. Section 125.29, Duration of Certificate. AnyAir Aviation understands that the certificate is effective until surrendered, suspended, or revoked, and is aware of the requirement to return the certificate to the Administrator in the event of an order of suspension or revocation.

f. Sections 125.31 through 125.35, Not Applicable.

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g. Section 125.41, Availability of Certificate and Operation Specifications. AnyAir Aviation will maintain the original LODA available for inspection at the principal operations base, located at the following address:

AnyAir Aviation, Inc.
1750 Broad Street
Tulsa, Oklahoma 57692

Note: All of our aircraft will have a copy of the LODA displayed on board.

h. Section 125.43, Use of Operation Specifications. Not Applicable.

i. Section 125.49, Airport Requirements. AnyAir Aviation aircraft will not attempt operations into any airport unless it is properly equipped and adequate for the proposed operation, considering such items as size, surface, obstructions, facilities, public protection, lighting, navigational and communication aids, and air traffic control. Our policies regarding the use of airports are contained in Chapter 8, Flight Operations Procedures, of the manual.

j. Section 125.53, Flight Locating Requirements. The pilot in command (PIC) assigned to an AnyAir Aviation flight will be responsible for operational control of each flight. The PIC will obtain the necessary information for the safe conduct of the flight and file a Federal Aviation Administration (FAA) flight plan with the nearest FAA Flight Service Station. Procedures to be followed for which an FAA flight plan is not filed are contained in Chapter 5, Preflight Planning and Flight Release Procedures, of the manual.

3. Subpart C, Manual Requirements.

a. Section 125.71, Preparation.

(1) AnyAir Aviation has prepared or acquired the manuals required to conduct operations.

(2) A revision system has been established to maintain these manuals in a current status. We are enclosing a copy of the policy and procedure manual and the Aircraft Flight Manual (AFM).

4. Subpart D, Airplane Requirements.

a. Section 125.91, Airplane Requirements: General.

(1) AnyAir Aviation airplanes will, at all times, carry an appropriate and current airworthiness certificate.

(2) Company flight and ground employees will accomplish the appropriate inspections prior to each flight to ensure that the airplane is in an airworthy condition, and meets the applicable airworthiness requirements set forth in Chapter 6, Procedure for Assuring Airworthiness of Airplane, of the manual.

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Note: AnyAir Aviation has established a procedure for weighing of the aircraft in Chapter 4, Airplane Loading Instructions, of the manual.

5. Subpart E, Special Airworthiness Requirements.

a. Section 125.189, Demonstration of Emergency Evacuation Procedures.

(1) AnyAir Aviation has requested relief from the actual demonstration, which requires the evacuation of the full seating capacity, including crewmembers from the Boeing 727 aircraft, on the basis of prior demonstrations as a certificate holder under 14 CFR part [number].

(2) Evacuation demonstration from the Douglas DC-9 will be accomplished as required by this section and has been scheduled with the FSDO on [date].

6. Subpart F, Instrument and Equipment Requirements.

a. Section 125.203, Radio and Navigational Equipment. AnyAir Aviation airplanes will be operated with the equipment specified in this section. Reference: minimum equipment list (MEL) (chapter 3 of the manual).

b. Section 125.215, Operating Information Required. AnyAir Aviation will maintain the materials, in current and appropriate form in the aircraft, accessible to the pilot while seated at the pilot station. All flight crewmembers will be required to use the appropriate checklists for the operations conducted.

c. Section 125.223, Airborne Weather Radar Requirements. AnyAir Aviation airplanes are equipped with approved airborne weather radar systems. Appropriate information is available in the manual and in the AFM. Reference: MEL (Chapter 3).

7. Subpart G, Maintenance.

a. Section 125.243, Certificate Holder's Responsibilities. AnyAir Aviation has contracted all aircraft maintenance, including required inspections, to:

Repair Airlines
22 Hilton Road
Tulsa, Oklahoma 73156

8. Subpart H, Airmen and Crewmember Requirements.

a. Section 125.261, Airman: Limitations on Use of Services. Crewmember records will be maintained at the principal operations base. A copy of the airman certificate, medical certificate, and the results of all checks or tests will be maintained for each flight crewmember employed by AnyAir Aviation, Inc.

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b. Section 125.263, Composition of Flightcrew. AnyAir Aviation airplanes will be operated by the number and type of crewmembers specified in the FAA-approved AFM. All flight crewmembers assigned to the Boeing [model] aircraft will be expected to be capable of performing emergency flight engineer functions. The PIC is designated on the flight release. Qualified captains will be designated only by the Director of Flight Operations.

c. Section 125.267, Flight Navigator and Long-Range Navigation Equipment. AnyAir Aviation will comply with the requirements of this section. We are requesting approval of the use of the Omega or long-range navigation-C system (LORAN-C) to meet the long range navigational equipment requirements in lieu of a flight navigator. (See our OpSpecs.)

d. Section 125.271, Emergency and Emergency Evacuation Duties. AnyAir Aviation meets all the requirements of this section by publishing appropriate instructions for all flight crewmembers on emergency evacuation duties. Reference: chapter 10 of the manual.

9. Subpart I, Flight Crewmember Requirements.

a. Section 125.281, Pilot-in-Command Qualifications. AnyAir Aviation is knowledgeable and will comply with the requirements of this section by checking all of our pilots' qualifications initially and on a monthly basis.

b. Section 125.285, Pilot Qualifications: Recent Experience. All AnyAir Aviation pilot flight crewmembers meet the recency of experience requirements of this section. We have developed a monthly status chart to assure that our crewmembers continue to meet recent experience requirements.

10. Subpart J, Flight Operations.

a. Section 125.311, Flight Crewmembers at Controls. AnyAir Aviation will comply with the requirements of this section. Our policy is shown in chapter 8 of the manual.

b. Section 125.329, Minimum Altitudes for Use of Autopilot. AnyAir Aviation understands and will comply with the requirements of this section. The automatic flight control system is described in the FAA-approved AFM. Operational information and limitations are specified, including minimum altitudes for en route and approach.

11. Subpart K, Flight Release Rules.

a. Section 125.359, Flight Release Under VFR. AnyAir Aviation will comply with the requirements of this section. Our procedures in chapter 5 of the manual cover this item.

b. Section 125.377, Fuel Supply: Turbine Engine-Powered Airplanes Other than Turbopropeller. AnyAir Aviation will comply with the requirements of this section as it is written. No exceptions or deviations from these requirements are necessary for our operations. Our policies regarding fuel supply are outlined in our manual. Trip fuel requirements will be determined by the captain based on a thorough flight analysis. Reference: chapter 5 of the manual and our proposed operation specifications.

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12. Subpart L, Records and Reports.

a. Section 125.405, Disposition of Load Manifest, Flight Release, and Flight Plans. AnyAir Aviation has developed procedures for the distribution of these documents (see chapter 9 of our manual).

13. Appendix A, Additional Emergency Equipment. AnyAir Aviation understands means for:

- Emergency evacuation,
- Interior emergency exit markings,
- Lighting for interior emergency exit markings,
- Emergency light operation,
- Emergency exit operating handles,
- Emergency exit access,
- Exterior exit markings, and
- Exterior emergency lighting and escape routes.

14. Appendix B, Criteria For Demonstration For Emergency Evacuation Procedures Under § 125.189. AnyAir Aviation understands the aborted takeoff demonstration and ditching demonstration of this section.

15. Appendix C, Ice Protection. AnyAir Aviation complies with the requirements of this section.

16. Appendix D, Airplane Flight Recorder Specification. AnyAir Aviation complies with the requirements of this section.

17. Appendix E, Airplane Flight Recorder Specifications. AnyAir Aviation complies with the requirements of this section.

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Figure 2-27. Sample of a Letter Denying Request for Deviation Authority (Specified Sections of 14 CFR Part 125)

FAA Letterhead

[Date]

[Applicant name and address]

Dear [name of appropriate official]:

This is to inform you that your request for deviation authority on [insert date of letter of request] has been denied.

[Cite the reasons for denial in detail]

Any questions concerning this matter should be directed to this office [insert the telephone number and operating hours of the Flight Standards District Office (FSDO)].

Sincerely,

District Office Manager

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Figure 2-28. Sample of a Letter Withdrawing Deviation Authority

FAA Letterhead

[Date]

[Deviation holder name and address]

Dear [name of appropriate official]:

This is to inform you that the Letter of Deviation Authority (LODA) issued by this office on [insert date of deviation letter], which granted you deviation from [list the sections of Title 14 of the Code of Federal Regulations (14 CFR) part 125], is withdrawn, effective [immediately or specify a date].

[Cite the reasons for withdrawal in detail]

In accordance with the conditions of the LODA, please return the original and all copies to this office.

Any questions concerning this matter should be directed to this office [include office telephone number and operating hours].

Sincerely,

District Office Manager

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Figure 2-29. Sample of a Letter Denying SFA

FAA Letterhead

[Date]

[Applicant name and address]

Dear [name of appropriate official]:

This letter is to inform you that your request for a Special Flight Authorization (SFA) under Title 14 of the Code of Federal Regulations (14 CFR) part 125, § 125.3 is denied.

[Cite all the reasons for denial in detail, as in the following examples:]

Any questions concerning this matter should be directed to this office [include office telephone number and operating hours].

Sincerely,

District Office Manager

Figure 2-30. Examples of Special Flight Authorization (SFA) Templates A510-A512

A. Ferry Flight Letter of Deviation Authority (LODA), SFA, Template A510.

LODA
SFA for Ferry Flights

1) This LODA constitutes an SFA, issued to the operator listed below, for the purpose of ferrying an airplane under 14 CFR part 91 from the departure airport [*enter*] to the destination airport [*enter*].

2) This LODA authorizes the operator to operate the airplane(s) listed in Table 2-11 in accordance with part 91.

3) The operator and responsible party listed in Table 2-10 must be responsible for the strict observance of the terms and provisions contained herein.

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Table 2-10. Registered Operator Contact Information

Operator Name:	
Responsible Party Name:	
Address:	
Telephone:	
Facsimile No.:	
E-Mail Address:	

4) This LODA is not transferable.

5) This LODA is effective from [enter dd/mm/year] to [enter dd/mm/year] inclusive, and is subject to cancellation at any time upon notice by the Administrator or his authorized representative.

6) Ferry flights will be conducted without passengers or cargo.

7) A true copy of this LODA must be carried on the airplane/airplanes listed in Table 2-11 (14 CFR part 125, § 125.7).

8) Only the authorized airplane(s) listed in Table 2-11 are authorized for ferry flights under this LODA:

Table 2-11. Airplanes Authorized for Ferry Flights

Registration No.	Serial No.	Aircraft M/M/S

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9) Only the ferry flightcrew members listed in Table 2-12 are authorized under this LODA:

Table 2-12. Authorized Crewmembers

Crewmember Name

10) Any changes, additions, or renewals to this LODA require submission of the request to the issuing Flight Standards District Office (FSDO).

B. Sales Demonstration Flights LODA, SFA, Template A511.

LODA
SFA for
Sales Demonstration Flights

1) This LODA constitutes an SFA, issued to the U.S. operator listed below, to conduct sales demonstration flights under part 91 within the contiguous United States and within a *[enter nautical miles]* nautical mile radius of the airport of departure.

2) This LODA authorizes the operator to operate the airplane(s) listed in Table 2-14 in accordance with part 91.

3) The operator and responsible party listed in Table 2-13 must be responsible for the strict observance of the terms and provisions contained herein.

Table 2-13. Registered Operator Contact Information

Operator Name:	
Responsible Party Name:	
Address:	
Telephone:	
Facsimile No.:	
E-Mail Address:	

4) This LODA is not transferable.

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5) This LODA is effective from [enter dd/mm/year] to [enter dd/mm/year] inclusive, and is subject to cancellation at any time upon notice by the Administrator or his authorized representative.

6) Only passengers and cargo necessary for the demonstration may be carried.

7) The Sales Demonstration Flights authorized herein are to be conducted without compensation or hire.

8) A true copy of this LODA must be carried on the airplane/airplanes listed in Table 2-14 (§ 125.7).

9) Only the airplane(s) listed in Table 2-14 are authorized for Sales Demonstration Flights under this LODA:

Table 2-14. Airplanes Authorized for Sales Demonstration Flights

Registration No.	Serial No.	Aircraft M/M/S

10) Only the pilots listed in Table 2-15 are authorized for use under this LODA:

Table 2-15. Authorized Pilots

Pilot Name(s)

11) Any changes, additions, or renewals to this LODA require submission of the request to the issuing FSDO.

C. Training Flights LODA, SFA, Template A512.

Letter of Deviation Authority
Special Flight Authorization (SFA) for Training Flights

1) This LODA constitutes an SFA, issued to the operator listed below, to conduct training flights under part 91 for the purpose of flight crewmember certification under 14 CFR parts 61 and 63, when associated with the certification process under 14 CFR part 119 or an applicant for a part 125 LODA (A125).

2) This LODA authorizes the operator to operate the airplane(s) listed in Table 2-17 in accordance with part 91.

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3) The operator and responsible party listed in Table 2-16 must be responsible for the strict observance of the terms and provisions contained herein.

Table 2-16. Registered Operator Contact Information

Operator Name:	
Responsible Party Name:	
Address:	
Telephone:	
Facsimile No.:	
E-Mail Address:	

4) The training flights will be conducted within the contiguous United States and within a [enter nautical miles] nautical mile radius of the airport.

5) This LODA is not transferable.

6) This LODA is effective from [enter dd/mm/year] to [enter dd/mm/year] inclusive, and is subject to cancellation at any time upon notice by the Administrator or an authorized representative.

7) Training flights will be conducted without passengers or cargo.

8) A true copy of this LODA must be carried on the airplane/airplanes listed in Table 2-17 (§ 125.7).

9) Authorized Airplane(s). Only the airplane(s) listed below in Table 2-17 are authorized for training flights under this LODA:

Table 2-17. Airplanes Authorized For Training Flights

Registration No.	Serial No.	Aircraft M/M/S

10) Only the flightcrew crewmembers in training listed in Table 2-18 below are authorized under this LODA:

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Table 2-18. Authorized Crewmembers

Crewmember Name

11) Any changes, additions, or renewals to this LODA require submission of the request to the issuing FSDO.

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Figure 2-33. Sample of a Standard Parachute Operations LODA

Federal Aviation Administration

Memorandum

Date:	[Date]
To:	[Type to whom here]
From:	[Type from whom here]
Prepared by:	[Type who prepared memo here]
Subject:	Standard Parachute Operation Part 125 Letter of Deviation Authority

Headquarters Flight Standards Service General Aviation & Commercial Division, AFS-800, authorizes the (name of FSDO) Flight Standards District Office (FSDO) to issue a Letter of Deviation Authority (LODA) in accordance with Title 14 of the Federal Code of Regulations (14 CFR) part 125, § 125.3.

The Standard Part 125 Parachute Operations LODA is to be issued to (name of parachute operator) in letter form, signed by the FSDO Office Manager, individually issued to each aircraft, and is to read as follows:

(Name of parachute operator), hereafter referred to as the operator, is granted a deviation from § 125.1, part 125 applicability, and is authorized to conduct operations in accordance with 14 CFR part 91.

The following conditions and limitations apply:

1. (Make/model/serial number) must be maintained in accordance with the applicable provisions of 14 CFR parts 21, 43, and 91; and must be operated in compliance with the maintenance requirements of § 91.409(e) and (f). Once the operator selects a maintenance inspection program, that program must be approved by the Administrator. The operator must include in the selected inspection program the name and address of the person responsible for scheduling the required inspections. The operator will make a copy of that program available to the persons performing the inspections and to the Administrator upon request.

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2. The aircraft must be U.S.-registered.

3. The aircraft must have a standard category U.S. airworthiness certificate.

4. Unless engaged in intentional parachute operations as defined in 14 CFR part 119, § 119.1(e)(6), operations with passengers or cargo are prohibited.

5. Unless engaged in intentional parachute operations as defined in § 119.1(e)(6), operations for compensation or hire are prohibited.

6. Operations will be conducted within U.S. airspace.

Any operation, other than that specified within and authorized by this letter, may result in the termination of this deviation authority. This LODA must be surrendered upon the request of the Administrator or an authorized representative.

A copy of this LODA must be carried in the airplane as required by § 125.7 and presented for inspection upon the request of the Administrator or an authorized representative.

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Figure 2-34. Sample of a Standard Airplane Museum Operations LODA

Federal Aviation Administration

Memorandum

Date:	[Date]
To:	[Type to whom here]
From:	[Type from whom here]
Prepared by:	[Type who prepared memo here]
Subject:	Airplane Museum Part 125 Letter Of Deviation Authority (LODA)

Headquarters Flight Standards Service General Aviation & Commercial Division, AFS-800, authorizes the (name of FSDO) Flight Standards District Office (FSDO) to issue a Letter of Deviation Authority (LODA) in accordance with Title 14 of the Federal Code of Regulations (14 CFR) part 125, § 125.3.

The Standard Part 125 Airplane Museum LODA is to be issued to (name of the airplane museum operator) in letter form, signed by the FSDO Office Manager, individually issued to each aircraft, and is to read as follows:

(Name of the airplane museum operator), hereafter referred to as the operator, is granted a deviation from § 125.1, part 125 applicability, and is authorized to conduct operations in accordance with 14 CFR part 91.

The following conditions and limitations apply:

1. (Make/model/serial number) must be maintained in accordance with the applicable provisions of 14 CFR parts 21, 43, and 91; and must be operated in compliance with the maintenance requirements of § 91.409(e) and (f). Once the operator selects a maintenance inspection program, that program must be approved by the Administrator. The operator must include in the selected inspection program the name and address of the person responsible for scheduling the required inspections. The operator will make a copy of that program available to the persons performing the inspections and to the Administrator upon request.

2. The aircraft must be U.S.-registered.

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3. The aircraft must have a standard category U.S. airworthiness certificate.

4. Operations carrying passengers or property for compensation or hire are prohibited.

5. Operations will be conducted within U.S. airspace.

Any operation, other than that specified within and authorized by this letter, may result in the termination of this deviation authority. This LODA must be surrendered upon the request of the Administrator or an authorized representative.

A copy of this LODA must be carried in the airplane as required by § 125.7 and presented for inspection upon the request of the Administrator or an authorized representative.

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Figure 2-34A. Sample of a Standard Airplane Leasing/Manufacturer LODA

Federal Aviation Administration

Memorandum

Date:	[Date]
To:	[Type to whom here]
From:	[Type from whom here]
Prepared by:	[Type who prepared memo here]
Subject:	Aircraft Manufacturer or Leasing Company Letter of Deviation Authority

Headquarters Flight Standards Service General Aviation & Commercial Division, AFS-800, authorizes the (name of FSDO) Flight Standards District Office (FSDO) to issue a Letter of Deviation Authority (LODA) in accordance with Title 14 of the Federal Code of Regulations (14 CFR) part 125, § 125.3.

The LODA is to be issued to (name of airplane manufacturer or leasing company) in letter form, signed by the FSDO office manager, and is to read as follows:

(Name of company), hereafter referred to as the operator, is granted a deviation from § 125.1, part 125 applicability, and is authorized to conduct operations in accordance with 14 CFR part 91 to allow movement of aircraft to a manufacturer or leasing company facility.

The following conditions and limitations apply:

1. (Make/model/serial number) must be maintained in accordance with the applicable provisions of 14 CFR parts 21, 43, and 91; and must be operated in compliance with the maintenance requirements of § 91.409(e) and (f). Once the operator selects a maintenance inspection program, that program must be approved by the Administrator. The operator must include in the selected inspection program the name and address of the person responsible for scheduling the required inspections. The operator will make a copy of that program available to the persons performing the inspections and to the Administrator upon request.

2. The aircraft must be U.S.-registered.

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3. The aircraft must have a standard category U.S. airworthiness certificate.

4. Operations with passengers or cargo are prohibited.

5. Operations for compensation or hire are prohibited.

6. Operations will be conducted within U.S. airspace.

7. Persons on board the aircraft are restricted to crewmembers and other persons who are essential to the operation and are specifically authorized by both the operator and the FAA.

Any operation, other than that specified within and authorized by this letter, may result in the termination of this deviation authority. This LODA must be surrendered upon the request of the Administrator or an authorized representative.

A copy of this LODA must be carried in the airplane as required by § 125.7 and presented for inspection upon the request of the Administrator or an authorized representative.

RESERVED. Paragraphs 2-719 through 2-765.

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VOLUME 2 AIR OPERATOR AND AIR AGENCY CERTIFICATION AND APPLICATION PROCESS

CHAPTER 6 TITLE 14 CFR PART 125 CERTIFICATION AND OPERATING RULES

Section 5 Evaluate Qualifications of Part 125 Maintenance Management Personnel

2-786 PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

A. Maintenance: 3352.

B. Avionics: 5352.

2-787 OBJECTIVE. This section provides guidance for evaluating the qualifications of Title 14 of the Code of Federal Regulations (14 CFR) part 125 management personnel responsible for ensuring compliance with the operator/applicant's aircraft maintenance/inspection programs.

2-788 GENERAL.

A. Number of Management Personnel. Part 125, § 125.25 requires operators to have sufficient management personnel to conduct their operations in accordance with part 125. In addition to a Director of Operations (DO), the operator must also designate a person to schedule inspections and update the approved Weight and Balance (W&B) system for all airplanes. Depending on the complexity of the operations and maintenance organization, the organization may include additional management personnel, as appropriate. The primary emphasis is on having sufficient personnel to ensure safe operations.

B. Qualifications of Management Personnel. Management qualifications must be based on the duties, responsibilities, and authority of the position, as stated in the operator's manual. Knowledge, skills, certificate requirements, and experience needed to carry out the duties of the position must be considered.

C. Policies and Procedures Manual. The operator must list management personnel in the policies and procedures manual. When reviewing the manual or revision for acceptance, the aviation safety inspector (ASI) must consider the individual's employment history and credentials.

D. Change in Personnel. The operator must notify the Federal Aviation Administration (FAA) of any change in management personnel within 10 business-days (§ 125.25).

E. Inspection Scheduling. The person responsible for scheduling inspections and other maintenance required by the manual and updating the approved W&B system should meet the following qualifications:

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- Have a thorough knowledge of the operator's aircraft maintenance/inspection program;
- Have knowledge of the operator's airplanes; and
- Be familiar with the requirements of 14 CFR parts 25, 43, 65, 91, and 125.

2-789 COORDINATION REQUIREMENTS. This task requires coordination among Maintenance, Avionics, and Operations inspectors.

2-790 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- Parts 25, 43, and 65.
- Advisory Circular (AC) 125-1, Operations of Large Airplanes Subject to Federal Aviation Regulation Part 125.

B. Forms. None.

C. Job Aids: Air Transportation/General Aviation Job Task Analysis (AT/GA JTA) 3.3.82 (AW), Evaluate Qualifications of a 14 CFR Part 125 Operator's Management Personnel.

2-791 PROCEDURES.

A. Policies and Procedures Manual Review.

1) Ensure that there are sufficient management personnel to conduct operations in accordance with the requirements of part 125.

2) Ensure that the duties and responsibilities listed are adequate for the proposed operation.

B. Employment History, Credentials, and Experience Review.

1) Ensure that each person has thorough knowledge of the operator's aircraft maintenance inspection program.

2) Ensure that each person has knowledge of the operator's type aircraft.

C. Verification of Appropriate Certificates and Ratings. Ensure that each individual holds appropriate certificates and ratings required to perform the required duties.

1) Review the Safety Performance Analysis System (SPAS) for the following information:

a) To validate certificates.

b) To obtain the individual's enforcement history.

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c) To determine if the person held a management position in a company whose operating certificate was revoked. If so, to determine if the individual's performance contributed to the revocation.

2) Analyze findings, and investigate all unclear areas and discrepancies.

D. Conduct Debriefings.

1) Before meeting with the operator, discuss initial findings with appropriate FAA personnel to determine content of the briefing.

NOTE: Rejecting an individual is a sensitive matter. In some cases, political, media, or other national issues may be involved. The inspector should notify appropriate FAA supervisory personnel when these issues are identified.

2) Brief the operator/applicant on the results of the evaluation. Discuss any deficiencies.

2-792 TASK OUTCOMES.

A. Close the PTRS Record.

B. Complete the Task. Completion of this task will result in one of the following:

1) Accept the management personnel by accepting the manual/revision listing the individual, as appropriate.

2) Reject the management personnel by rejecting the manual/revision. Detail the reasons for rejection in a letter to the operator.

NOTE: An individual may be evaluated based on information received before a manual/revision or operations specifications (OpSpecs) are submitted (such as a Preapplication Statement of Intent (PASI) or a 10-business-day notification letter). Based on this preliminary information, the inspector may be able to determine if the person is not qualified for the position. In this case, notify the operator/applicant of the rejection as soon as possible.

2-793 FUTURE ACTIVITIES. In the case of original certification, review the Schedule of Events (SOE) to determine if a revision is necessary.

RESERVED. Paragraphs 2-794 through 2-810.

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VOLUME 2 AIR OPERATOR AND AIR AGENCY CERTIFICATION AND APPLICATION PROCESS

CHAPTER 9 CERTIFICATION OF A PART 141 PILOT SCHOOL

Section 1 Initial Certification or Renewal of a Part 141 Pilot School

2-1066 PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODE.

A. Initial Certificate. Enter 1240 in the activity code box of the PTRS Data Sheet.

B. Renew Certificate. Enter 1374 in the activity code box of the PTRS Data Sheet.

C. Reissue Certificate. Enter 1375 in the activity code box of the PTRS Data Sheet.

2-1067 OBJECTIVE. Determine whether an applicant for a Title 14 of the Code of Federal Regulations (14 CFR) part 141 pilot school meets the rules concerning the operation of a pilot or provisional pilot school. Successful completion of this task results in the issuance, renewal, or denial of Federal Aviation Administration (FAA) Form 8000-4, Air Agency Certificate. These procedures are followed for the issuance of a provisional Pilot School Certificate, for added ratings (amendments), and for certificate renewal.

2-1068 GENERAL. Before beginning any certification process, inspectors should review Volume 3, Chapter 1, Section 1, The General Process for Approval or Acceptance, and Volume 2, Chapter 1, Section 1, The Generic Process for Certificating Organizations. Definitions of the terms used in this chapter are contained in Volume 3, Chapter 53, Section 1, Introduction to Part 141 Related Tasks.

2-1069 PRE-APPLICATION PHASE. For an initial certification, inspectors should discuss the following items with an applicant during an initial inquiry about a Part 141 Certificate. These items may also be reviewed during renewal or during amendment, as necessary.

A. Pilot School Ratings. All inspectors must ensure that the pilot schools conform to the ratings as listed below.

1) Certification and Rating Courses (Appendices A through J and M).

- Recreational pilot course,
- Private pilot course,
- Instrument rating course,
- Combined private pilot and instrument rating course,
- Commercial pilot course,
- Airline transport pilot (ATP) course,
- Flight instructor course,
- Flight instructor instrument course,
- Ground instructor course,

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- Additional aircraft category or class rating course, and
- Aircraft type rating course.

2) Special Curriculum Course under Part 141, § 141.57, Special Preparation Courses (Appendix K).

- Pilot refresher course,
- Flight instructor refresher course,
- Ground instructor refresher course,
- Agricultural aircraft operations course,
- Rotorcraft external-load operations course,
- Special operations course,
- Test pilot course, and
- ATP Certification Training Program.

3) Pilot Ground School Course (Appendix L).

B. Recreational Pilot Course. The approval of one or more courses of training that result in the original issuance of a Recreational Pilot Certificate entitles the school to have a recreational pilot rating placed on its school certificate. The approval of one or all of the following certification courses entitles the school to a recreational pilot rating for the following courses, as appropriate:

- Airplane—single-engine,
- Rotorcraft—helicopter, and/or
- Rotorcraft—gyroplane.

C. Private Pilot Course. The approval of one or more courses of training that result in the original issuance of a Private Pilot Certificate entitles the school to have a private pilot rating placed on its school certificate. The approval of one or all of the following certification courses entitles the school to a private pilot rating for the following courses, as appropriate:

- Airplane—single-engine,
- Airplane—multiengine,
- Rotorcraft—helicopter,
- Rotorcraft—gyroplane,
- Powered-lift,
- Glider,
- Lighter-than-air airship, and/or
- Lighter-than-air balloon.

D. Instrument Rating Course. The approval of one or more courses of training that result in the original issuance of an instrument rating entitles the school to have an instrument rating placed on its school certificate. The approval of one or all of the following certification courses entitles the school to an instrument rating for the following courses, as appropriate:

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- Instrument—airplane,
- Instrument—helicopter, and/or
- Instrument—powered-lift.

E. Commercial Pilot Course. The approval of one or more courses of training that result in the original issuance of a Commercial Pilot Certificate entitles the school to have a commercial pilot rating placed on its school certificate. The approval of one or all of the following certification courses entitles the school to a commercial pilot rating for the following courses, as appropriate:

- Airplane—single-engine,
- Airplane—multiengine,
- Rotorcraft—helicopter,
- Rotorcraft—gyroplane,
- Powered-lift,
- Glider,
- Lighter-than-air airship, and/or
- Lighter-than-air balloon.

F. ATP Course. The approval of one or more courses of training that result in the original issuance of an ATP Certificate entitles the school to have an ATP rating placed on its school certificate. The approval of one or all of the following certification courses entitles the school to an ATP rating for the following courses, as appropriate:

- Airplane—single-engine,
- Airplane—multiengine,
- Rotorcraft—helicopter, and/or
- Powered-lift.

G. Flight Instructor Course. The approval of one or more courses of training that result in the original issuance of a Flight Instructor Certificate entitles the school to have a flight instructor rating placed on its school certificate. The approval of one or all of the following certification courses entitles the school to a flight instructor rating for the following courses, as appropriate:

- Airplane—single-engine,
- Airplane—multiengine,
- Rotorcraft—helicopter,
- Rotorcraft—gyroplane,
- Powered-lift, and/or
- Glider.

H. Flight Instructor Instrument Rating Course. The approval of one or more courses of training that result in the original issuance of a Flight Instructor Instrument Certificate entitles the school to have a flight instructor instrument rating placed on its school certificate. The

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approval of one or all of the following certification courses entitles the school to a flight instructor instrument rating for the following courses, as appropriate:

- Flight Instructor Instrument—airplane,
- Flight Instructor Instrument—helicopter, and/or
- Flight Instructor Instrument—powered-lift.

I. Ground Instructor Course. The approval of one or more courses of training that result in the original issuance of a Ground Instructor Certificate entitles the school to have a ground instructor rating placed on its school certificate. The approval of one or all of the following certification courses entitles the school to a ground instructor rating for the following courses, as appropriate:

- Ground Instructor Instrument—basic,
- Ground Instructor Instrument—advanced, and/or
- Ground Instructor Instrument—instrument.

J. Additional Aircraft Category or Class Rating Course. The approval of one or more courses of training that results in the issuance of an additional aircraft category or class rating to an existing Pilot Certificate entitles the school to have "Additional Aircraft Category or Class Rating" placed on its school certificate. The approval of one or all of the following additional aircraft rating courses entitles the school to the above listed rating.

- Airplane—single-engine,
- Airplane—multiengine,
- Rotorcraft—helicopter,
- Rotorcraft—gyroplane,
- Powered-lift,
- Glider,
- Lighter-than-air airship, and/or
- Lighter-than-air balloon.

K. Aircraft Type Rating Course. The approval of one or more courses of training that result in the issuance of an aircraft type rating entitles the school to have aircraft type rating placed on its school certificate. The approval of one or all of the following aircraft type rating courses entitles the school to an aircraft type rating for the following courses, as appropriate:

- A type rating in an airplane category, single-engine class;
- A type rating in an airplane category, multiengine class;
- A type rating in a rotorcraft category, helicopter class; and/or
- A type rating in a powered-lift category.

L. Special Preparation Course. The approval of one or more courses of training that prepares the graduate with the necessary skills, competency and proficiency to exercise safely the privileges of a certificate, rating or authorization for which the course is established entitles the school to have that special preparation course rating (e.g., pilot refresher course, agricultural

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aircraft operations course, etc.) placed on its school certificate. The approval of one or all of the following special preparation courses entitles the school to a pilot school rating for the following courses, as appropriate:

- Pilot refresher course,
- Flight instructor refresher course,
- Ground instructor refresher course,
- Agricultural aircraft operations course,
- Rotorcraft external-load operations course,
- Special operations course,
- Test pilot course, and/or
- Airline Transport Pilot Certification Training Program.

M. Pilot Ground School Course. The approval of one or more ground school courses under the provisions of part 141, appendix L entitles the school to have a pilot ground school rating placed on its school certificate.

N. Special Curriculum Course. The approval of a special curriculum course under § 141.57 entitles the school to have "Special Curriculum Course" appear on its school certificate.

O. Denied Ratings. An applicant may reapply at any time for an FAA Form 8000-4 or rating in the same manner as prescribed for initial application. At the inspector's discretion, reinspection of previously approved areas may not be necessary. However, if more than 120 days have elapsed, a complete inspection should be accomplished before issuance of the certificate.

P. Certification Team Assignment. As described in the procedures in Volume 2, Chapter 1, Section 1, the Flight Standards District Office (FSDO) manager assigns the applicant a certification team. The manager also designates one member of the team as the certification project manager (CPM).

2-1070 FORMAL APPLICATION PHASE.

A. The Formal Application Meeting. If the certification team decides to have a formal application meeting, all members of the team should be present.

B. Meeting Topics. The meeting should review, but not be limited to, the following:

- The application,
- The Schedule of Events (SOE), if applicable,
- The training course outline (TCO) and curriculum, and
- Personnel, aircraft, and facility requirements.

C. Application Denial. Denial of an application must be substantiated with documentation of the reasons for denial.

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2-1071 DOCUMENT COMPLIANCE PHASE.

A. TCOs. TCOs must be submitted in duplicate. However, during initial approval of the TCO, the inspector may request only one copy for review. Once the TCO has met all the requirements, the applicant submits the required two copies.

B. Commercially Produced Syllabuses. Commercially produced syllabuses should be submitted a minimum of 30 days before the expected training begins. Refer to §§ 141.53 and 141.55.

C. Special Curriculums. A pilot school or provisional pilot school may apply for approval to conduct a special course of pilot training provided the training curriculum is not one that is prescribed in the appendixes of part 141. A special course of airman training must contain features that can be expected to achieve a level of pilot competency equivalent in scope and depth to that achieved by the curriculum prescribed in the appendixes of part 141 or the requirements of 14 CFR part 61. A Designated Pilot Examiner (DPE) may only conduct a practical test for pilot certification provided the applicant has completed the pilot school/provisional pilot school's training course requirements and has received a graduation certificate. A pilot school may not apply for examining authority unless the training course meets the requirements set forth in the appropriate appendixes of part 141. A pilot school may not apply for a training course under § 141.55(d) or (e) unless that pilot school has held a Pilot School Certificate (emphasis added: Pilot School Certificate) for at least 24 calendar-months. If a pilot school applies for a special course of airman training with reduced training times, then that pilot school must comply with the provisions set forth in § 141.55(d) and (e). In accordance with § 141.55(d)(3) and (e)(4), a pilot school may not be approved for examining authority for a special course of airman training that has been approved for reduced training times. A provisional pilot school may not apply for a special course of airman training with reduced training times under § 141.55(d) and (e).

1) Required Documentation. An original and one copy of a proposed special curriculum must be submitted along with a cover letter requesting FAA approval at least 60 days before the training is scheduled to begin. Approval or denial should be accomplished within 30 days, allowing the school sufficient time to develop a TCO based on the special curriculum.

2) Special Curriculum Approved. When a special curriculum is approved, each page of the original and office copies should be dated and signed by the principal operations inspector (POI). The original copy of the special curriculum should be returned to the school.

3) Special Curriculum Disapproved. When a special curriculum is disapproved, the original and copy submitted to the FAA should be returned to the applicant along with a letter clearly explaining why the materials were disapproved (Figure 2-62, Letter Disapproving Special Curriculums or TCOs). A copy of the letter is retained in the school's file at the FSDO. If major changes to a special curriculum or TCO are necessary, the letter to the school should clearly state that additional time will be needed for review when resubmitted.

D. Title 14 CFR Part 141 Appendices. It is imperative that when a school applicant applies for its ratings, the TCOs be reviewed carefully against the part 141 appendixes. For

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schools that submit TCOs and meet minimum time requirements of part 141, in accordance with § 141.55(d) or (e) (as appropriate), it is imperative that these school's TCOs cover all of the aeronautical knowledge areas and areas of operations required for the certificate and ratings. The following are the certification and rating courses, special preparation courses, and pilot ground school courses contained in these part 141 appendices.

1) Certification and Rating Courses.

a) Recreational Pilot Certification Course—Appendix A prescribes the requirements for the Recreational Pilot Certificate with the following ratings:

- Airplane single-engine,
- Rotorcraft helicopter, and
- Rotorcraft gyroplane.

b) Private Pilot Certification Course—Appendix B prescribes the requirements for the Private Pilot Certificate for the following ratings:

- Airplane single-engine,
- Airplane multiengine,
- Rotorcraft helicopter,
- Rotorcraft gyroplane,
- Powered-lift,
- Glider,
- Lighter-than-air airship, and
- Lighter-than-air balloon.

c) Instrument Rating Course—Appendix C prescribes the requirements for an instrument rating for the following:

- Instrument—airplane,
- Instrument—helicopter, and
- Instrument—powered-lift.

d) Commercial Pilot Certification Course—Appendix D prescribes the requirements for the Commercial Pilot Certificate for the following ratings:

- Airplane single-engine,
- Airplane multiengine,
- Rotorcraft helicopter,
- Rotorcraft gyroplane,
- Powered-lift,
- Glider,
- Lighter-than-air airship, and
- Lighter-than-air balloon.

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e) Airline Transport Pilot Certification Course—Appendix E prescribes the requirements for the ATP Certificate for the following ratings:

- Airplane single-engine,
- Airplane multiengine,
- Rotorcraft helicopter, and
- Powered-lift.

f) Flight Instructor Certification Course—Appendix F prescribes the requirements for the Flight Instructor Certificate for the following ratings:

- Airplane single-engine,
- Airplane multiengine,
- Rotorcraft helicopter,
- Rotorcraft gyroplane,
- Powered-lift, and
- Glider.

g) Flight Instructor Instrument (for an Airplane, Helicopter, or Powered-Lift Instrument Instructor Rating, as Appropriate) Certification Course—Appendix G prescribes the requirements for the Flight Instructor Instrument Certificate for the following ratings:

- Flight Instructor Instrument—airplane,
- Flight Instructor Instrument—helicopter, and
- Flight Instructor Instrument—powered-lift.

h) Ground Instructor Certification Course—Appendix H prescribes the requirements for the Ground Instructor Certificate for the following ratings:

- Ground Instructor—Basic,
- Ground Instructor—Advanced, and
- Ground Instructor—Instrument.

i) Additional Aircraft Category or Class Rating Course—Appendix I prescribes the requirements for an additional aircraft rating for the following:

- Airplane single-engine,
- Airplane multiengine,
- Rotorcraft helicopter,
- Rotorcraft gyroplane,
- Powered-lift,
- Glider,
- Lighter-than-air airship, and
- Lighter-than-air balloon.

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j) Aircraft Type Rating Course, for Other Than an Airline Transport Pilot Certificate—Appendix J prescribes the requirements for an aircraft type rating for the following:

- A type rating in an airplane category, single-engine class;
- A type rating in an airplane category, multiengine class;
- A type rating in a rotorcraft category, helicopter class; and
- A type rating in a powered-lift category.

k) Combined Private Pilot Certification and Instrument Rating Course—Appendix M prescribes the minimum curriculum for a combined private pilot certification and instrument rating course required under this part, for the following ratings:

- Airplane single-engine,
- Airplane multiengine,
- Rotorcraft helicopter, and
- Powered-lift,

2) Special Preparation Courses—Appendix K prescribes the requirements for the following special preparation courses:

- Pilot refresher course,
- Flight instructor refresher course,
- Ground instructor refresher course,
- Agricultural aircraft operations course,
- Rotorcraft external-load operations course,
- Special operations course,
- Test pilot course, and
- Airline Transport Pilot Certification Training Program.

3) Pilot Ground School Course—Appendix L prescribes the requirements for pilot ground school courses.

E. Part 61 Amendments. If ground or flight time requirements are amended in part 61, at the time of renewal of the part 141 Pilot School Certificate, affected TCOs must be amended to meet these new training time requirements.

2-1072 DEMONSTRATION AND INSPECTION PHASE.

A. Facilities and Training Aids. A pilot school is required to have certain facilities in order to obtain and maintain an FAA Form 8000-4. Included in these facilities are the business office and main base of operations, pilot briefing areas, aeronautical knowledge training facilities, use of airports, and satellite bases.

1) The applicant having ownership of the required facilities or by having a written agreement with the facility owners may show continuous use of facilities. A written agreement must state that the applicant has the required continuous use of the necessary facilities for at least

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6 months from the date of the application for the initial certification or renewal of a school certificate.

2) Each pilot school or provisional pilot school is required to maintain a principal business office with a mailing address the same as that on the school certificate. The purpose of a principal business office is to provide a specific location for the required school files and records, and a location where the operation of school business may be conducted. This requirement should not be construed to mean that all school functions, such as scheduling flights, training functions, etc., must be conducted at the principal business office.

a) While part 141 does not require that a business office be a room with four walls and a door, the regulation does prohibit the sharing of a single business office by more than one pilot school. Therefore, walls or partitions to ensure separation from another pilot school's activity should conspicuously isolate the business office.

b) The business office should be situated so the required school files and student training records are kept up-to-date and available to students and instructors alike. This serves the purpose of providing on-the-spot information regarding training progress and other business interests.

c) If the pilot school should choose to change the location of its business office or base of operations, the school is required to notify the jurisdictional FSDO in writing of the planned move at least 30 days prior to the change. Such written notice should be accompanied by a new application, FAA Form 8420-8, Application for Pilot School Certificate, showing the change of address or the change in the base of operations as appropriate. In any case, the notice of a change of operating base must be accompanied by necessary amendments to approved TCOs.

d) Primary category aircraft (PCA) are eligible for use for flight instruction.

3) A school is required to have continuous use of a pilot briefing area at each airport where training flights originate. This does not include airports used as destinations for cross-country flight training. The briefing area must meet the requirements of § 141.43. Pilots not participating in the school's training programs can use the briefing facilities, provided that orderly school functions are maintained. However, no other pilot school may use the area during the period it is to be used by the applicant. Briefing areas are subject to FSDO approval under the provisions of § 141.43.

a) To meet the requirements of § 141.43, the equipment should include a chalkboard and tables of adequate size to lay out aeronautical charts.

b) If a school offers instrument or commercial pilot courses, it needs to have access to a Flight Service Station (FSS). A telephone in the briefing room is acceptable.

c) To preclude a disruption of schedules due to excessive travel time and a lack of communications between the flight line, business office, and briefing area, the area should be located near enough to the airport where training flights originate.

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4) The FAA recognizes that pilot training methods differ from other kinds of training. Pilot schools enroll students with widely varying backgrounds, goals, and varying degrees of motivations and aviation experience. For this reason, it is understandable that it is not always possible to schedule large classes for aeronautical knowledge training at one time. Individual instruction is often necessary for maximum benefit to a particular student. Therefore, it is anticipated that FAA-approved schools will use classrooms, small isolated rooms, training booths, or other areas with an instructor or a training aid, as appropriate. Each aeronautical knowledge training area is required to be heated, lighted, and ventilated to meet the applicable building code requirements for the area concerned. All ground instructional facilities are subject to approval by the jurisdictional FSDO under § 141.45.

5) A certificate holder may use training aids to improve communication between instructors and students.

a) Training aids are instructional aids defined by the National Education Association (NEA) as “devices that assist an instructor in the teaching and learning processes by presenting, supporting, or supplementing material, usually intermittently. They are not self-supporting.” The key factor is that such aids support, supplement, or reinforce.

b) Identified in each course outline, training aids should be easily understood, readily visible, and compatible with the learning outcomes expected in the completion standards for the lesson. They must be accurate and appropriate to the course. The effectiveness of aids is judged by their organization, sequencing, pattern of logic, and their overall effectiveness when used in support of obtaining the objectives and standards prescribed by the training syllabus.

c) Recent years have seen an abundance of excellent new material and techniques in training aids. The aids present many advantages for the school. Each school must keep in mind the teaching goals to be achieved, including the continuous monitoring of student progress necessary to develop effectively the knowledge of each student according to the training syllabus. Aids do not replace the instructor. It is not expected that students be sent off alone to learn from a training aid.

d) Notwithstanding the complexity or design of a training aid, the chief instructor or an authorized, qualified representative must determine through personal review or testing that the standards for each lesson have been attained through use of the training aid. The purpose of this personal review or testing is to ensure that students meet the completion standards and understand missed questions, if a knowledge test is given. Only through such evaluation can the instructor make a sound determination that the student should progress to the next lesson or that the student requires review of subjects or procedures previously covered. This helps in determining the effectiveness of the training aid.

6) An applicant for a pilot school or provisional Pilot School Certificate must show that it has the continuous use of each airport where training flights originate (airports where flights are dispatched or initiated, such as main or satellite bases).

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a) Airports that the applicant uses where flights originate must meet the requirements of § 141.38. Note that § 141.38(b) only applies for airports used for airplanes or gliders.

b) Landing area outline lights, water area boundary lights, or temporary lighting such as flare pots or deployed portable electric runway lighting systems do not meet the requirements of § 141.38(e).

c) Though the wind tee and tetrahedron may serve as landing direction or wind indicators, according to the FAA-H-8083-25, Pilot's Handbook of Aeronautical Knowledge, pages 12-8 and 12-9, the Aeronautical Information Manual (AIM) cautions against using the tetrahedron as a wind indicator (AIM page 4-3-4). The wind tee, under certain circumstances, may be either an active runway or wind indicator.

d) When required, the traffic direction indicator (refer to § 141.38(d)) must show the direction of traffic patterns for all runways regardless of landing or takeoff direction.

NOTE: When referring to pilot schools approved for lighter-than-air balloons, the term "airport" should be taken to mean launch site. An important training element in balloon training is proper site selection. Before the launch of a balloon, an instructor authorized by the school must approve the site. The specific equipment requirements of § 141.37, (i.e., runway lights, traffic direction indicators, and wind direction indicators) are inappropriate for lighter-than-air balloon operations. Wind direction may be determined by means of a pilot balloon. The area downwind from the launch site should be free of obstructions for 100 feet for each knot of wind. For example, a 4-knot wind requires a 400-foot area free of obstruction downwind. Landing site selection will be determined by the pilot in command (PIC).

B. Satellite Bases. A school may conduct aeronautical knowledge or flight training in an approved course of training at one or more satellite bases. An assistant chief instructor must be designated for each satellite base, and the airport, facilities, and personnel used at the satellite base must meet the requirements of part 141, including approval of the satellite base and its facilities in the approved TCOs for courses given at those bases.

1) If a valid reason exists, training may be conducted for periods up to 7 days at a satellite base without approval of the jurisdictional FSDO. For example, runways may be closed at the main operations base for maintenance, or other activities may be underway on the airport. The jurisdictional FSDO must be notified in writing if training is conducted at a satellite base for more than 7 consecutive days.

2) When the jurisdictional FSDO is notified that a school will conduct training at an unapproved satellite base for more than 7 consecutive days, an operations inspector should determine if the operations are of a temporary nature or if they will involve extended use of the unapproved base. If, in the opinion of the operations inspector, temporary use of the unapproved base will not derogate safety or the quality of training, temporary operations at that base may be authorized for a period of time not to exceed 30 days.

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3) If operations at the unapproved satellite base will exceed a period of 30 days, the school should apply to the jurisdictional FSDO for the approval of a satellite base on FAA Form 8420-8. Along with the application, two copies of the appropriate amendments for each approved training course to be given at the satellite base must be submitted.

4) Each satellite base that approval is requested for is inspected to ensure that each meets the requirements of part 141 and training, as described in each approved course of training, can be effectively accomplished. (See Volume 6, Chapter 7, Section 1, Conduct Facility Inspection of a Part 141 Pilot School.)

5) If a satellite base is located in an area under the jurisdiction of another FSDO within the same region, the FSDOs involved must coordinate directly with each other.

6) If the applicant intends to conduct training at a satellite base located in another FAA region, the FSDO where the applicant's principal business office and main operating base is located is responsible for inspection and approval of the satellite base.

a) The jurisdictional FSDO should request assistance through the regional office to make arrangements through the region where the satellite base will be located in certificating and providing surveillance of operations at the satellite base. In some FSDOs, the geographic unit may be responsible for surveillance and inspection.

b) If a region determines that it cannot provide such assistance because of inspector workload or other reasons, the region should make arrangements to allow the certificate-holding district office (CHDO) to cross regional boundaries and conduct the necessary inspections and surveillance.

c) When another region agrees to provide assistance in inspecting and surveying a satellite base, a copy of the school certificate and a list of approved courses, including a copy of each inspection report or any other action, must be furnished by the CHDO through regional channels.

d) Coordination between all FSDOs where the school maintains a satellite base must be accomplished before issuance of the FAA Form 8000-4.

7) The inspector completing FAA Form 8420-8, as shown in Figure 2-63, accomplishes approval of the satellite base. One copy of the form may be returned to the applicant, and one copy is placed in the school files at the FSDO. Amendments to each course of training to be given at the satellite base are approved individually, as appropriate.

8) When an application is disapproved, the applicant should be notified in writing (Figure 2-64, Letter Denying Satellite Base). This notification should include all of the reasons why the application was disapproved.

9) When an operator plans to conduct training at a location other than the main base of operations for more than 7 consecutive days, the CHDO must notify the FSDO having jurisdiction over the area where training will be given. The new training location is not considered a separate school operating under the main base Operating Certificate number

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designation; a separate Operating Certificate is not issued. CHDOs should coordinate efforts to ensure that standardized certification of applicants within their FSDO area occurs and that the necessary work program functions are accomplished.

C. Aircraft, Flight Simulators, Flight Training Devices (FTDs) and Aviation Training Devices (ATDs) (§§ 141.39 and 141.41). Each aircraft used for pilot training by a school located in the United States is required to be a civil aircraft of U.S. registry. Training aircraft must be certificated in the standard airworthiness category, except that aircraft used for a course of training in agricultural aircraft operations, external-load operations, and similar aerial work operations (e.g., banner towing and sky writing) may be certificated in the restricted category. If an FAA-approved flight simulator, FTD, or ATD is used in an approved training course, the details of its utilization should be clearly stated in the training syllabus and the learning objectives should be well defined. This is necessary to provide the instructor with proper guidance, and give the FAA a baseline from which to judge the adequacy of the device to be used. No other Special Airworthiness Certificate is acceptable.

1) Each aircraft used by a school for flight training must be inspected and maintained in accordance with 14 CFR part 91, §§ 91.409(b) (applies to aircraft used to give flight instruction for hire), 91.409(c)(2), or 91.409(d) or (e).

a) This requires aircraft used in an approved course of training to have 100-hour and annual inspections or to be maintained following a procedure prescribed under § 91.409(c)(2).

b) It should be clearly understood that these inspection requirements include aircraft used for dual instruction, solo, and PIC flights.

c) Aircraft to be used by pilot schools will be inspected by an airworthiness inspector.

2) When a student enrolled in an approved school provides an aircraft for personal use in an approved course, that aircraft must meet the requirements of the training aircraft described in the appropriate TCO. In addition, that aircraft must meet the same inspection requirements as aircraft operated by the approved school.

3) Aircraft used for instrument training should be equipped as follows to meet the requirements of part 141:

a) If the approved training syllabus requires flights under instrument flight rules (IFR), the aircraft used must be one in which instrument flight is authorized by its operating limitations and by its equipment.

b) If the approved training syllabus requires only simulated IFR operations, the aircraft must be equipped and maintained for IFR operations. However, IFR operations need not be authorized by its operating limitations.

c) An aircraft not completely equipped for IFR operations may be used for instruction in the control and maneuvering of an aircraft by reference to instruments if it is

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approved in the TCO. For example, an airplane need only be equipped with appropriate flight instruments needed for the basic instrument portion of a course.

4) The commercial pilot certification course (airplane), set forth in part 141, appendix D, requires flight instruction in an airplane with retractable gear, flaps, and controllable propeller.

a) Single or multiengine airplanes may be used to fulfill this requirement. Use of an appropriately equipped multiengine airplane to meet the complex airplane requirements for a Commercial Single-Engine Airplane Certificate does not result in the issuance of a multiengine rating.

b) If a school applies for a commercial pilot certification course (airplanes) with a seaplane-class rating (using seaplanes for the entire course), a special curriculum should be submitted under § 141.57 that includes the general requirements of Appendix D, Commercial Pilot Certification Course. The complex airplane used in such a course must have flaps, a controllable propeller, and floats. The use of an amphibian airplane in a commercial pilot certification or course could qualify a student for both a land and sea-class rating, provided the TCO was so approved.

5) A variety of airplanes are used in pilot training. Some are uncomplicated while others are more complicated, and their checklists vary accordingly. The requirements for a checklist defined in the terms of “pretakeoff” and “prelanding” in § 141.75(a) are broad and allow less complicated aircraft to be equipped with relatively simple checklists. The FAA expects (because of good operating practices) that schools should expand checklists for aircraft that are more complicated.

6) Under § 141.75, when the manufacturer provides a pilot’s operating handbook or Aircraft Flight Manual (AFM), it (or a copy) must be carried aboard the aircraft. The primary purpose of carrying the handbook (or a copy) aboard the aircraft is to provide the pilot with information such as performance data, servicing instructions, and weight and balance (W&B) information. Some handbooks contain checklists that may be useful in developing a standard checklist. They should be available to the pilot during emergency procedures training or an actual emergency, particularly when there is only one pilot aboard the aircraft.

7) The training syllabus should clearly state the full extent that an approved training course uses an ATD, FTDs, and/or full flight simulator (FFS). The objectives to be achieved in using the device or simulator should be well defined.

8) Section 141.41(a) prescribes the requirements that may be used to obtain the maximum flight training credit allowed for flight simulators in an approved pilot training course.

a) Section 141.41(b) provides for the use of FTD that do not meet the more complex requirements of § 141.41(a). A large number of training devices currently being used by pilot schools do not meet all of the requirements proposed in § 141.41(a). In recognition of the fact that these devices can be used to provide effective instruction in certain operations, provisions for their use have been made. Once again, however, it is imperative that the training syllabus clearly defines their use and learning objectives.

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b) Because of limitations, full credit against flight time is not allowed for instruction in FTDs not meeting all of the requirements proposed in § 141.41(a). The provisions in part 141 allow credit for instruction in FTDs and ATDs for a certain percentage of the credit of the training time.

c) Discretion must be used when approving a training syllabus that substitutes instruction in an FTD or flight simulator for the flight time required in a complex airplane. Any use of an FFS or FTD in lieu of flight time in a complex airplane must be justified with clearly stated objectives in the training syllabus that are applicable to the skills expected to be learned in a complex airplane. Approval of the TCO must be based on the ability of the FFS or FTD to provide effective training for a complex airplane.

d) Guidance from the National Simulator Program (AFS-205) in Atlanta, Georgia, may be needed to approve a school's FFS or FTD. An ATD requires a letter of authorization issued by General Aviation and Commercial Division (AFS-800).

e) In addition to the permitted use of FFSs and FTDs that are covered in the appendixes of part 141, part 61, § 61.4 also covers the approval of FFSs, FTDs and ATDs.

f) A pilot school may submit a curriculum that exceeds permitted time usages for ATDs, FTDs, or FFSs. In general, a training provider should not be discouraged from additional utilization of these devices. However, when a training course outline contains time that exceeds the permitted usage of an ATD, FTD, and/or FFS, only that time permitted by the appropriate appendix to part 141 or by the device's letter of authorization/approval, as appropriate, may be credited/logged to meet the aeronautical experience requirements for a certificate. A device's letter of authorization/approval may not exceed a regulatory limitation. For example, if the aeronautical experience requirements permit 5 hours in a training device to be credited, the device's letter of authorization/approval cannot be used to authorize crediting of more than 5 hours toward the aeronautical experience requirements.

D. Flight Instructor Responsibilities. Part 141 requires all flight instructors employed by a school to be qualified to teach each course of training they are assigned. Certain knowledge and proficiency tests, to be accomplished before being assigned to an approved course of training, are also prescribed. If the chief instructor or assistant chief instructor also flight instructs in the course they are assigned to, they must also comply with this section.

1) The instructor must satisfactorily accomplish a flight check for each course of training taught.

a) This flight check is given to the instructor by the designated chief instructor, assistant chief instructor, or check instructor.

b) The instructor must accomplish a flight check every 12 months thereafter for each course of training the instructor participates in.

c) The pilot school must maintain a record of these flight checks to show compliance with § 141.79(d).

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2) The instructor must satisfactorily accomplish a one-time practical test in each type of aircraft (e.g., Cessna 150, Cessna 172) before giving any flight instruction in the particular aircraft.

3) The chief instructor, assistant chief instructor, or check instructor must brief all instructors teaching that course on the objectives and standards of the course.

a) The pilot school must maintain a record verifying this briefing to show compliance with §§ 141.79(d) and 141.81(c).

b) At any time, an inspector may ask an instructor to explain the objectives and standards of an approved course.

4) The instructor must maintain records of instructor briefings and instructor practical tests in either a logbook or in the permanent school records at the home base of operations.

5) Student pilots cannot be authorized to start a solo practice flight from an airport until an authorized flight instructor, who is present at the airport, has approved the flight. Solo cross-country flights, when properly dispatched from the originating airport, are considered to have approval for the entire flight (§ 141.79(b)).

a) If unexpected weather or mechanical problems delay a student en route or a student intends to remain overnight, the school should either:

- Arrange for another instructor based at the point of delay to dispatch the flight, or
- Have a school instructor dispatch the flight by telephone.

b) Cross-country flights should be made to specific airports that the school determines are suitable. The operator may wish to provide students with a list of these suitable airports or include the list in the appropriate TCO.

E. Other School Personnel. Section 141.33 states that an applicant for a pilot school or provisional Pilot School Certificate must show that there are adequate personnel and authorized instructors, including a chief instructor, for each course of training. All instructors (flight or ground) must be qualified and competent to perform their assigned duties.

1) In addition, each dispatcher, aircraft handler, line crewman, and serviceman to be used must have been instructed in the procedures and responsibilities of employment. The inspector should recommend that the pilot school keep a record of this instruction in the employee’s personnel file.

2) A pilot school may elect to use verbal instructions, manuals, or any other means to ensure that dispatchers, aircraft handlers, line crewmen, and servicemen are knowledgeable and capable of performing their assigned duties. A school needs to provide only the employees necessary to conduct training adequately.

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2-1073 CERTIFICATION PHASE.

A. Ratings. FAA Form 8000-4 must list the various pilot school ratings for which a pilot school/provisional pilot school qualifies under §§ 141.11 and 141.57, if applicable. These ratings do not specifically address each approved course of training that a school may be authorized to give. Under the broad listing of pilot school ratings found in §§ 141.11 and 141.57, if applicable, a school could be authorized to conduct nearly a hundred different courses.

B. Approved Courses. The certification team issues a list of approved courses of training, identifying each authorized course by its title, along with the FAA Form 8000-4. All courses must conform to the ratings listed in §§ 141.11 and/or 141.57.

1) The list is typed on FAA stationery, in a format similar to that shown in Figure 2-65, Sample List of Approved Courses, and signed by the FSDO manager. The original is given to the school and a copy placed in the FSDO file.

2) If a list of approved courses is amended, the original is returned to the jurisdictional FSDO. The list remains in effect until it is amended or the school certificate is expired, surrendered, suspended, or revoked.

2-1074 SCHOOL ENROLLMENT AND GRADUATION.

A. Enrollment. When a certificate holder enrolls or reenrolls a student in an approved course of training, § 141.93 requires the student be furnished the following information and materials:

1) A certificate of enrollment containing the name of the course the student is enrolled in and the date of enrollment.

2) A copy of the training syllabus required under § 141.55(c)(7).

3) A copy of the safety procedures and practices developed by the school, such as procedures for the use of training aids, off-limit areas, handling of aircraft, parking instructions, and other safety instructions that the school deems necessary. These safety procedures must include the following:

a) The weather minimums required for dispatching dual and solo flights. For example, minimum ceiling visibility and wind velocities for local flights and specific weather minimums for cross-country flights;

b) The procedures for starting and taxiing aircraft on the ramp;

c) The precautions and procedures for aircraft fire;

d) The redispatch procedures after unplanned landings on and off airports. This should include emergency security of the aircraft and a list of telephone numbers of persons to contact;

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e) The procedures for listing aircraft discrepancies and how corrective action is taken, including the importance of not using an aircraft with a listed discrepancy until a properly qualified person determines its airworthiness;

f) The securing of aircraft when not in use;

g) The fuel reserves necessary for local and cross-country flights;

h) The avoidance of other aircraft in flight and on the ground;

i) The minimum altitude limitations certain minimum altitudes may be specified for teaching and practicing stalls or other maneuvers;

j) The instructions concerning simulated forced landings. Instructions should be clear on simulated emergency landings with respect to engine cooling down during prolonged glides, proper engine leaning, proper procedures for setting zero thrust, engine response with rapid throttle application, and a specific minimum altitude for terminating simulated emergency landings and other instructions deemed necessary by the school;

k) The assigned practice areas, including descriptions and diagrams of the areas and special instructions with respect to how to operate in them, how to get to them, and minimum altitudes en route; and

l) Any instructions or guidance that the school believes necessary to provide the highest standards of safety and operational control expected of an FAA-approved school.

B. Credit for Previous Training. When a student transfers from one FAA-approved school to another approved school, course credits obtained in the previous course of training may be credited in accordance with § 141.77 by the receiving school. However, the receiving school must determine the amount of credits to be allowed by flight check or knowledge test or both. Credit for ground school only instruction may be determined by an oral examination.

1) A student may not be credited with more training by the receiving school than was credited at the school the student transferred from.

2) A student who enrolls in a course of training may receive credit for 25 percent of the curriculum requirement for knowledge and experience gained in a noncertificated flight school.

3) The amount of credit for previous training allowed, whether received from an FAA-approved school or other source, must be placed in the student's enrollment record at the time of enrollment.

4) Transferred documentation must be made a part of the receiving school's permanent record.

5) When a student transfers from one FAA-approved school to another, or terminates training for any reason, the student must be given, upon request, a transcript of the results of the

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student's participation in that course of training. This transcript should be signed by the chief instructor of the course and should consist of at least the following:

- Name of the school that gave the training, including the school's certificate number, if applicable;
- Kind of training given (dual, solo, aeronautical knowledge school, ATD, time, etc.);
- Course or courses taken;
- Result of each stage and final test given; and
- Statement that the student was enrolled in that school's approved course of training before receiving the certified instruction and training.

C. Training Records. Each pilot school and provisional pilot school must keep accurate and current records of each student's participation and accomplishments in an approved course.

1) A student's personal logbook is not considered an acceptable record under § 141.101.

2) For each student, the training record should include:

- The date of the student's enrollment.
- A chronology of the student's attendance, subjects, and flights.
- The names and grades of any tests taken.
- The date of graduation, termination of training, or transfer.

3) The record should also show the credit allowed for a student transferring from another school, if applicable.

4) Whenever a student graduates, terminates training, or transfers, the chief instructor must certify the record.

5) Pilot schools must retain each student's record for at least 1 year from the date the student graduates, terminates a course, or transfers to another school.

6) On a student's request, a pilot school must make a copy of a student's record available to the student. The pilot school must also permit the FAA to view any or all student records upon request.

2-1075 RENEWAL, AMENDMENT, CANCELLATION.

A. Renewal. A pilot school or provisional Pilot School Certificate, and any associated ratings or examining authority on that certificate, expires at the end of the 24th month after the month it was issued.

1) Application for renewal of an FAA Form 8000-4 must be made at least 30 days before the certificate expires.

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a) Application is made by submitting two copies of FAA Form 8420-8, completed as shown in Figure 2-66.

b) A school may apply for the renewal of any or all of the courses (TCOs) it holds, and/or it may apply for the addition of new courses.

c) Examining authority should be renewed at the same time the school certificate is renewed.

d) An institution of higher education that holds a valid letter of authorization (LOA) issued by AFS-800 that gives it the authority to certify its graduates meet the reduced aeronautical experience requirements for an ATP Certificate will have the LOA revalidated for content and currency.

2) A school must meet the same requirements for renewal as for original certification. Therefore, upon the receipt of an application for the renewal of a school certificate, the jurisdictional FSDO should conduct the same evaluation of qualifications and inspection of facilities as required for original certification. However, if the FSDO is very familiar with the school's operation or has recently inspected it, there may be no need for an extensive reinspection or for reexamination of instructors. The FSDO always has the option of a full inspection.

3) When all requirements are met, a new FAA Form 8000-4 is issued and is valid for additional 24 calendar-months. The original certificate number is reissued and the provisional pilot school's enhanced Vital Information Database (eVID) is appropriately updated.

a) Renewal of Pilot School Certificates and ratings is discussed in § 141.27. If a pilot school does not meet the recent training ability and quality of training requirements of § 141.5(d) and (e), but otherwise meets the requirements of § 141.7 at the time of renewal, the FSDO may issue a provisional Pilot School Certificate and the eVID would be updated to reflect the change. However, a school with examining authority and/or reduced time courses loses examining authority and/or reduced time courses when downgraded to a provisional school.

b) If, after another renewal period (24 calendar-months), the school still does not meet the requirements of § 141.5(d) or (e), the school must wait a period of 180 days before reapplying for certification as a provisional school. All training conducted during that 180 days must meet the requirements of part 61, including passing knowledge and practical tests for certificates or ratings.

NOTE: In the event a provisional pilot school that is associated with an institution of higher education does not meet the requirements specified in § 141.5 at the time of certification expiration, the POI will notify the appropriate specialist in the regional technical branch of the pilot school's status. The regional technical specialist will consult with AFS-800 to address, on a case by case basis, students enrolled in the curriculum that may qualify them for an ATP Certificate with reduced aeronautical experience. Refer to § 61.160.

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4) In the event any requirement for a specific rating or approved course of training is not met, the ratings for all requirements that are met may be renewed and a new certificate issued bearing only these ratings.

a) If renewal of a rating is denied or a course of training does not meet the appropriate requirements, the applicant is notified in writing of the reasons for the denial of the rating.

b) In addition, the school must be advised, in writing, that continued training in any course of training in question cannot be used to meet 14 CFR part 141 requirements until appropriate changes are made and the courses again meet the requirements of part 141 (Figure 2-67, Notice of Course Cancellation).

5) A new list of approved courses should be issued with the same expiration date as the Air Agency Certificate (Form 8000-4).

6) Any change in the overall status of the certificate for a provisional pilot school or pilot school (e.g., the need to reissue a provisional Pilot School Certificate) associated with an institution of higher education that has the authority to certify its graduates are eligible for a reduced aeronautical experience ATP Certificate, must be conveyed to the appropriate specialist in the regional technical branch. The technical specialist will consult with AFS-800 to determine if the school's status change affects the authority of the institution of higher education.

B. Amendment. Application for amendment of an FAA Form 8000-4 is made to the jurisdictional FSDO. The FAA can also initiate the amendment under Title 49 of the United States Code (49 U.S.C.) and 14 CFR part 13.

1) Application for the approval of a course of training that results in the addition of a rating to an FAA Form 8000-4 is made by submitting two copies of FAA Form 8420-8 with the amendment checked as shown in Figure 2-68, FAA Form 8420-8, Application for Pilot School Certification, Filled Out for Amendment, two copies of the course of training, and a cover letter requesting approval of the course.

a) After review of the course, an inspection of the school's facilities and personnel should be made, as necessary, to ensure that training can be conducted in accordance with the proposed course, before it is approved.

b) If the school inspection is satisfactory, a new FAA Form 8000-4 bearing the new ratings will be issued, along with an amended list of approved courses. The amended certificate should bear the original number, the original expiration date, and the reissue date.

2) An application for the deletion of a rating from an FAA Form 8000-4 may be accepted in the form of a letter from the certificate holder.

a) Such a letter must be signed by a person authorized to sign for the school, such as the person who signed the original application or a person in a similar position in the school.

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b) No inspection is required for deletion of a rating.

c) The FSDO issues a new certificate bearing the original number, the original expiration date, and a reissue date. The deleted rating is omitted from the certificate and a new list of approved courses is issued. The old certificate should be retained in the FSDO school file for 2 years.

3) A change in the ownership of a pilot school does not terminate that certificate if the new owner applies for an appropriate amendment to the certificate by submitting two copies of FAA Form 8420-8 within 30 days after the date that the change in ownership occurs. The new ownership may not involve a change in the facilities, instructor personnel, or training course.

4) A change of ownership involving a change in the school facilities, instructor personnel, or training courses terminates the school certificate. The school may be issued another certificate when it demonstrates that it meets all the requirements for original certification.

5) When a certificated school changes its name only, and the name change involves no change in ownership, facilities, instructor personnel, or training courses, a new certificate is issued in the new name, bearing the same certificate number, ratings, and original expiration date. An inspection is not required under such circumstances.

6) An application for an amendment to a previously approved special curriculum or TCO is made by submitting two copies of the curriculum or outline pages to be amended to the jurisdictional FSDO.

a) Each proposed amendment should be accompanied by a cover letter explaining the basic changes, the intent, and requesting FAA approval.

b) Approval or disapproval is accomplished in the same manner as the original approval or disapproval.

c) If a certificate amendment requires an inspection of the aircraft to be used, all specialists should sign FAA Form 8420-8 under the “Recommendations of Inspector(s)” block.

7) Any changes to the pilot school that would cause the certificate holder to no longer be able to offer training for the instrument-airplane rating or the Commercial Pilot Certificate in the airplane category must be conveyed to the regional technical specialist. The regional technical specialist will consult with AFS-800 for any additional action.

C. Cancellation. An FAA Form 8000-4 can be canceled by the school or by the CHDO as the result of actions taken under 49 U.S.C. and part 13.

1) The jurisdictional FSDO may suspend or revoke FAA Form 8000-4 on any grounds that would be a cause for denying an application for the original certificate. In such a case the certificate must be surrendered to the FAA in a manner prescribed by the regional counsel.

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2) The holder of an FAA Form 8000-4 may request cancellation of the certificate or any rating at any time. The request should be submitted in writing to the jurisdictional FSDO, accompanied by the FAA Form 8000-4 to be canceled. The request must be signed by the person or persons authorized to sign for the certificate holder.

a) If there is no violation action pending or contemplated against the school, the FSDO may accept the certificate for cancellation.

b) If enforcement action is pending or contemplated, the applicant should be advised that acceptance for cancellation must await the decision of the regional counsel and that the school will be notified of the action taken. The school's request should then be forwarded to the regional counsel's office with a summary of the circumstances under which it was submitted. Cancellation should be effective only after clearance is received from that office.

3) If a request for the surrender of a rating or ratings on an FAA Form 8000-4 is accepted, a new certificate should be issued bearing the ratings that remain valid and the original expiration date.

4) A cancellation, suspension, or revocation of FAA Form 8000-4 issued to a pilot school associated with an institution of higher education that has the authority to certify its graduates are eligible for a reduced aeronautical experience ATP Certificate, must be conveyed to the regional technical specialist. The regional technical specialist will consult with AFS-800 for any additional action.

2-1076 PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. Requires knowledge of the regulatory requirements of part 141 and FAA policies, and qualification as an ASI (Operations).

B. Coordination. Requires coordination with the airworthiness unit, the Aviation Data Systems Branch (AFS-620); AFS-630; and possibly the National Simulator Program (AFS-205).

2-1077 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- 14 CFR parts 1, 11, 61, 91, 97, and 141;
- Advisory Circular (AC) 61-139, Institution of Higher Education's Application for Authority to Certify its Graduates for an Airline Transport Pilot Certificate with Reduced Aeronautical Experience;
- AC 61-138, Airline Transport Pilot Certification Training Program;
- AC 61-136, FAA Approval of Aviation Training Devices and Their Use for Training and Experience;
- AC 120-40, Airplane Simulator Qualification; and
- AC 141-1, Pilot School Certification.

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B. Forms:

- FAA Form 8000-4, Air Agency Certificate (Figure 2-5), and
- FAA Form 8420-8, Application for Pilot School Certificate (Figures 2-63, 2-66, 2-68, and 2-69).

C. Job Aids:

- Sample letters and figures, and
- Job Task Analysis (JTA): 3.4.7, 3.4.9, 3.4.11, 3.4.13, 3.4.17, 3.4.18, 3.4.20, 3.4.21, 3.4.22, and 3.4.23.

2-1078 PRE-APPLICATION PHASE PROCEDURES.

A. Initial Inquiry. Upon initial inquiry from an applicant, determine the following:

- The identity of applicant and address of the principal base of operations,
- Any intended satellite base,
- The type of ownership (private, corporate, etc.),
- The proposed curriculum,
- The types of aircraft,
- The intended chief instructor and that instructor's experience level,
- The possible use of ATDs,
- The possible use of commercially produced syllabuses,
- If the operator intends to request examining authority for renewing or amending only, and
- If the operator intends to use contract training.

B. Applicant Resources. Ensure the applicant has current copies of parts 61, 91, and 141 and AC 141-1. If there is any question, explain:

- The general applicability and definition of terms.
- The certification requirements.
- The operating rules of part 141.
- The required records and reports.

C. PTRS. Open PTRS file.

D. Letter of Intent. Request a letter of intent from the applicant. (See subparagraph 2-1079E below for content of letter of intent and Figure 2-70 for a sample.)

E. FSDO Review of Letter of Intent. Within 30 working days of the FAA's receipt of a letter of intent, review it to determine that it provides sufficient information for the certification process to continue. The letter of intent should contain the following:

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- A statement of intent to become an approved pilot school under part 141;
- Company legal name and any doing business as (DBA) name, principal operations base address, primary airport address, mailing address (if applicable), and telephone numbers;
- Makes and models of aircraft, how many of each, and N-numbers,
- Estimated date when operations will begin;
- Training courses to be offered;
- Name and qualifications of the proposed chief instructor and any assistant chief instructors;
- Intent to use simulators/training devices;
- Intent to use personal computers for knowledge testing (for examining authority only); and
- Three, three-letter designators (in order of preference).

F. Application. Based on the review of the letter of intent, if the applicant appears to meet the basic eligibility requirements, give the applicant at least three copies of FAA Form 8420-8.

1) Discuss how to complete these forms. Advise the applicant to review AC 141-1 and the regulations before completing and returning the application to the jurisdictional FSDO.

2) Advise the applicant to submit the original and copies with original signatures.

3) Explain the certification process to the applicant, including the requirements for:

- The Pre-Application Phase,
- The Formal Application Phase,
- The Document Compliance Phase,
- The Demonstration and Inspection Phase, and
- The Certification Phase.

G. Pre-Application Meeting.

1) Determine if a pre-application meeting is necessary, based on the following considerations about the applicant:

a) Any previous part 141 operating experience;

b) The size and scope of operation;

c) The area of operation; and

d) The applicant’s apparent ability to comply with requirements.

2) If a pre-application meeting is not necessary, schedule a date and time for a formal application meeting.

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3) If a pre-application meeting is necessary, schedule a date and time. At the meeting, discuss the following:

- The area of operation (primary airport and any satellite bases),
- The operation as an individual, corporation, or partnership,
- Any previous experience with part 141 operations,
- The categories and classes of aircraft to be used in training courses,
- The number and types of training courses to be offered,
- The possible need for any waivers or exemptions,
- The qualifications and experience of instructors,
- The applicability of parts 61, 91, and 141,
- AC 141-1, and
- Any previous or pending enforcement actions against the applicant or proposed personnel.

H. Establish a FSDO Working File. This file will form the basis for the eventual operator file if certification is successful. Place any correspondence, documents, etc., in this file.

I. Other FSDO Actions. Follow office procedures to contact the Enforcement Information System (EIS) and Accident Incident Data System (AIDS) to determine the applicant's enforcement and accident history as well as that of the proposed chief instructors and any other proposed management personnel.

1) If a certificate suspension or revocation is in effect, inform the applicant in writing (Figure 2-71) that until the enforcement action is fulfilled, the applicant is ineligible for certification.

2) Place the EIS/AIDS output in the file.

J. Terminating the Pre-Application Phase. This ends the pre-application phase. The formal application phase begins with the receipt of the completed application form.

2-1079 FORMAL APPLICATION PHASE PROCEDURES. Within 30 working days of receiving an application, the certification team should review it and determine whether it is of sufficient quality to proceed with certification.

A. Application Review. Review the application only to determine if it is of sufficient quality to continue with certification (i.e., the applicant supplied enough information on the application and/or letter of intent). Review it in depth during the document compliance phase. An example of a properly completed application for an initial certification is shown in Figure 2-69.

B. Application Incomplete or Inaccurate. If the application is not complete or not accurate, notify the applicant in writing (Figure 2-72) of changes needed before certification can continue. Return the application for any necessary corrections.

C. Need for Formal Application Meeting. Determine if the optional formal application meeting is necessary.

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1) If a formal application meeting is not necessary, schedule the certification inspections. Review the procedures required during the demonstration and inspection phase with the applicant.

2) If a formal application meeting is necessary, schedule a date and time.

D. Formal Application Meeting.

1) Discuss the following items that would have been covered in a pre-application meeting, if none was conducted:

- The application.
- The SOE, if applicable.
- The TCOs and syllabuses.
- The personnel, aircraft, and facility requirements.
- The simulator/training device approval requirement.
- An inspection of facilities related to any contractual training agreements.
- Section 141.23, Advertising limitations.

2) Discuss any discrepancies in the application and their corrective actions.

3) Discuss the requirements that must be met during the demonstration and inspection phase.

E. Terminating the Formal Application Phase. This completes the formal application phase. The next phase is the document compliance phase.

2-1080 DOCUMENT COMPLIANCE PHASE PROCEDURES. After accepting the application, the team ensures each document is complete and correct through an in-depth review.

A. Document Review. The certification team evaluates the following items.

1) Check the Application. (Note that the blocks on the application are not numbered.) Check that the application contains the following information (beginning with upper left corner):

a) The legal name and any appropriate DBA of the proposed school, telephone number, address of the principal business office, location of the main operations base, and the location of any satellite bases;

b) Whether the application is for original issuance, approval of satellite base, or change of name or ownership, appropriate boxes should be marked for issuance, renewal, or amendment of the certificate;

c) An indication of the training courses for which approval is sought. Check the space provided on the reverse of the form for additional courses;

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d) The application is signed and dated in the last section by the applicant or authorized officer (original signatures on each application form):

- A person acting as an individual should personally sign the application.
- All partners should sign an application from a partnership.
- An officer who is authorized by the corporation by-laws and certified by the corporate secretary should sign an application from a corporation.
- The president or other such officer or director should sign an application from a company, club, or association, as authorized by the organization's secretary.

e) The next section is for FAA use only. Confirm that the applicant did not mark it.

2) Check the qualifications of all proposed chief instructors, assistant chief instructors, and check instructors for each course that approval is sought for and the qualifications of all other instructors. Refer to §§ 141.35, 141.36, and 141.37.

a) If not already accomplished, following office procedures, contact EIS to determine the chief instructor's, assistant chief instructor's, and other instructors' enforcement, accident, and incident histories.

b) Verify employment history pertaining to parts 61 and 141, and other related aviation experience.

3) Evaluate the TCOs. (See Volume 3, Chapter 53, Section 2, Approve Training Course Outlines for a Part 141 Pilot School.)

4) Evaluate any commercially developed or FAA/Industry Training Standards-developed training syllabuses. Ensure that:

- The school fully understands the objectives and standards of the commercially-developed or FAA/Industry Training Standard-developed training syllabuses.
- The school can actually give the training in the manner described in the syllabus.
- The syllabus contains all required pilot operations for the related course.
- The syllabus and related training aids are on a current revision schedule.

5) Evaluate the special curriculum. Special curriculums developed under § 141.57 must be evaluated with flexibility in mind. Special curriculums may be used in experimental curriculum under research and development. When approving special curriculums, the inspector must ensure that the curriculums cover the aeronautical knowledge areas and flight proficiency areas of operations listed in the appropriate appendixes of part 141. The inspector must determine that objectives, content, and completion standards are not less than those contained in the appropriate practical test standards.

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6) Check the aircraft checklists, minimum equipment lists, safety practices and procedures, etc., when applicable. (Refer to §§ 141.75 and 141.95.)

7) Check the graduation certificates required by § 141.95 to ensure that they contain at least the information indicated in § 141.95(b).

8) Ensure that the applicant can track enrollment information (i.e., that the student was enrolled in the school's approved course of training before receiving the instruction and training that is certified).

9) Review the maintenance program (airworthiness).

B. Unsatisfactory Items. If there are any unsatisfactory items, advise the applicant in writing that they must be corrected before certification can continue.

1) Place a reasonable time limit on when the corrections must be completed.

2) If the applicant does not respond within 90 days of the time limit, send the entire application package back to the applicant with a cover letter stating that the certification process is terminated.

3) Put appropriate work entry in PTRS.

C. Terminating the Document Compliance Phase. When all documents are satisfactory, conclude the document compliance phase and arrange scheduling for the demonstration and inspection phase.

2-1081 DEMONSTRATION AND INSPECTION PROCEDURES. During the demonstration and inspection phase the team must ensure these steps are accomplished:

A. Conduct Chief Instructor Practical Tests. Administer practical test to the chief instructors and any assistant chief instructors. (See Volume 5, Chapter 12, Section 1, Conduct a Chief/Assistant Chief Instructor Practical Test for Federal Aviation Regulations Part 141 Pilot School.)

B. Recordkeeping Requirements. Inspect the applicant's recordkeeping system for compliance with §§ 141.67, 141.77, 141.85, 141.93, and 141.101.

C. Inspect Aircraft. The airworthiness inspector conducts the aircraft conformity inspection. Operations inspectors may examine each aircraft for the requirements of § 141.75.

D. Conduct a Base Inspection. See Volume 6, Chapter 7, Section 1, Conduct Facility Inspection of a Part 141 Pilot School.

E. Inspect Satellite Bases. See Volume 6, Chapter 7, Section 1, and § 141.91.

F. Inspect Flight Simulators, FTDs, Training Aids, and Other Equipment. Refer to §§ 141.41 and 141.45. If a simulator must be approved, contact AFS-205.

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G. Terminating the Demonstration and Inspection Phase. When all demonstrations and inspections are complete, the demonstration and inspection phase is concluded.

1) If any demonstrations are unsatisfactory, advise the applicant immediately of corrective actions. If necessary, confirm the discrepancies in writing (Figure 2-73). Reschedule the inspections accordingly.

2) When all demonstrations and inspections are satisfactory, proceed with the certification phase.

2-1082 CERTIFICATION PHASE PROCEDURES. When all certification requirements have been met, obtain an Air Agency Certificate number. (See Volume 2, Chapter 1, Section 3, Safety Assurance System: Obtaining and Constructing Certificate/Designator Numbers.)

A. Complete Inspection Reports and Job Aids.

1) On the application, in the section marked, "For FAA Use Only," indicate approval, provisional pilot school or pilot school, effective date of the certificate, and expiration date of the certificate. Indicate if the task was a renewal or amendment to a certificate, if applicable. Make any necessary comments and sign the application. The POI assigned to that pilot school will then sign and date the application.

2) Ensure all items on the certification/inspection job aid are resolved. Initial the job aid and place in the FSDO file.

B. Prepare and Issue the Air Agency Certificate. Use FAA Form 8000-4 (Figure 2-5).

1) Enter the certificate holder's full legal name directly below the words "This certificate is issued to." Show other names (such as any DBA) on the certificate. If necessary, list DBAs on a separate, attached letter (Figure 2-74).

2) Enter the address of the certificate holder's base of operations directly below the certificate holder's name. Use a post office box address only if the address reflects the physical location of the base of operations.

3) Enter the certificate number, as obtained in Volume 2, Chapter 1, Section 3, on the certificate.

4) Enter the date all requirements for certification are met.

5) Enter the four-character, alphanumeric designator and city and state of the jurisdictional FSDO under the signature line of the form (for example, EA21, Richmond, VA).

6) Submit the certificate to the FSDO manager for signature.

a) Use the full title of the person signing the certificate.

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b) Enter the acronym of the region, the FSDO acronym and number in the "region/office" space (for example, WP FSDO 04).

C. Prepare List of Approved Courses. Prepare a list of approved courses (Figure 2-65) and issue with the Air Agency Certificate.

D. Certificate Denial. If any certification requirement is not met, issue a letter of denial (Figure 2-75). Specify reasons for denial. On the application, in the section "For FAA Use Only" indicate disapproval. Make any necessary comments and sign. Have the FSDO manager sign and date the application.

E. Certification Report. Assemble a certification report containing the following:

- A copy of the letter of intent, if applicable,
- A certification job aid (Figure 2-76),
- The application,
- The SOE (Figure 2-77),
- A copy of the Air Agency Certificate issued, and
- A summary of any difficulty encountered during certification and its resolution.

F. Minimum Equipment List (MEL). Issue an LOA to operate with an MEL, if applicable (See Volume 4, Chapter 4, Section 2, Approve a Minimum Equipment List for a 14 CFR Part 91 Operator).

G. All Appropriate Information in the eVID Air Agency Basic File.

H. FSDO File. The certification program manager must ensure an official office file is established after certification is complete. The file must contain at least the following:

- The material from any working file used up to this point, including the TCO and syllabuses,
- The certification report and attachments,
- The EIS/AIDS profile on applicant and personnel, including a negative report, if applicable,
- The approved MELs, if applicable,
- The surveillance reports, and
- All general correspondence relevant to the school or the FAA.

I. PTRS. Make final PTRS work entry for this task.

2-1083 TASK OUTCOMES. Completion of the task results in either:

A. Certificate. A certificate issued that authorizes operations under part 141.

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B. Record. A record on file consisting of the following:

- Written notification to the applicant denying the certificate, and
- Indication of the return of all documents to the applicant.

C. Letter Confirming Termination. A letter to the applicant confirming termination of the certification process per the applicant's request (Figure 2-78).

2-1084 FUTURE ACTIVITIES.

A. Develop Post-Certification Plan. When developing a post-certification plan, perform additional surveillance or inspections during the first 90 days the organization is in business. This may require assistance from other FSDOs.

B. Conduct Surveillance. According to the established post-certification program, conduct surveillance at appropriate intervals.

C. Renewal of Certificate. Conduct a renewal certification every 2 years.

D. Amendment of Certificate. Amend the Air Agency Certificate at the operator's request or the FAA's determination.

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Figure 2-5. FAA Form 8000-4, Air Agency Certificate

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

Air Agency Certificate

Number
(Enter cert. number obtained from AFS-620)

This certificate is issued to:
(Enter name of school)
Whose business address is
(Enter address of main base of operations)

upon finding that its organization complies in all respects with the requirements of the Federal Aviation Regulations relating to the establishment of an Air Agency, and is empowered to operate an approved
(Enter the appropriate kind of school)

With the following ratings:

(List all the ratings the pilot school or provisional pilot school is authorized for)

This certificate, unless cancelled, suspended, or revoked, shall continue in effect
(Date 24 calendar-months from date of issuance)

Date issued: *By direction of the Administrator*

(MMM DD, YYYY) (Have district manager sign)

This Certificate is not Transferable, AND ANY MAJOR CHANGE IN THE BASIC FACILITIES OR IN THE LOCATION THEREOF, SHALL BE IMMEDIATELY REPORTED TO THE APPROPRIATE REGIONAL OFFICE OF THE FEDERAL AVIATION ADMINISTRATION.

Any alteration of this certificate is punishable by a fine of not exceeding $1000, or imprisonment not exceeding 3 years, or both.

FAA FORM 8000-4 (1-67) SUPERSEDES FAA FORM 390 AFS ELECTRONIC FORMS SYSTEM–V 2.2

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Figure 2-62. Letter Disapproving Special Curriculums or TCOs

FAA Letterhead

[Date]

Carolyn Brannon
Brannon Aviation
Fairfax Airport
P.O. Box 123
Fairfax, VA 23456

Dear Ms. Brannon:

We are unable to approve your [name of course] training course outline (TCO) [or special curriculum] for the following reasons:

_____
_____
_____
_____
_____

All other TCOs [and/or special curriculums] have been approved and are reflected in your list of approved courses. If you wish to continue to seek approval for the [above course or special curriculum], you may reapply when appropriate corrections have been made.

Sincerely,

[POI's Signature]

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Figure 2-63. FAA Form 8420-8, Application for Pilot School Certification

US Department of Transportation
Federal Aviation Administration

APPLICATION FOR PILOT SCHOOL CERTIFICATION

Form approved: OMB No. 2120-0009

CERT NO. *For FAA Use Only*

APPLICANT - Read submittal and signature instructions on reverse.

NAME OF SCHOOL	TELEPHONE NO.	ADDRESS OF PRINCIPAL BUSINESS OFFICE
C. Brannon d/b/a Brannon Aviation	(555) 345-3456	13206 Poplar Tree Road, Fairfax, VA 11234

LOCATION OF MAIN OPERATIONS BASE	LOCATION OF SATELLITE BASE(S)
Fairfax Airport, Fairfax, VA	Centervill Airport

APPLICATION IS HEREBY MADE FOR: **Approval of Satellite Base**

☐ Issuance of a Pilot School Certificate and associated ratings to conduct the training courses identified below, and for the approval of these courses (*three copies of each course outline are attached*); also, examining authority is requested for the courses appropriately checked.

☐ Renewal of a Pilot School Certificate and associated ratings currently numbered _____, which expires on _____
☐ without changes to the currently approved course outlines, ☐ with addition of course(s) identified below for which approval is requested (three copies of each course outline is attached), including request for examining authority for the course(s) appropriately checked; ☐ with deletion of course(s) identified below from the curriculum.

☐ Amending the current Pilot School Certificate and associated ratings numbered _____, which expires on _____
☐ by adding the course(s) identified below for which approval is requested (three copies of each course outline are attached), including request for examining authority where appropriately checked; ☐ for deletion of the course(s) identified below from the curriculum.

IDENTIFICATION OF TRAINING COURSES

NOTE.: Where examining authority for a course is desired, place and "X" in the box adjacent to the course identification. s

☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐

(*If more space is needed, continue on reverse in space provided*)

I (WE) certify that I am (we are) familiar with Part 141 of the Federal Aviation Regulations, and, to the best of my (our) knowledge, believe that my (our) school meets the requirements for certification as prescribed therein.

Signature and Title(s): *Carolyn S. Brannon*
Carolyn S. Brannon
Owner

Nov 1, 2006
Date

FOR FAA USE ONLY

☒ APPROVED- ☐ a Provisional Pilot School Certificate ☐ a Pilot School Certificate, either with associated ratings bearing the number shown above is issued effective _____ and which expires on _____ ☐ DISAPPROVED
☐ Renewal ☐ without amendments ☐ with amendments ☐ Amendments

SIGNATURE OF APPROVING OFFICIAL	TITLE	DATE
Donal L. Jones	**Supervising Inspector**	**Jan 29, 2007**

FAA Form 8420-8 (1-82) *Recommendations of Inspector(s) on reverse*

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Figure 2-64. Letter Denying Satellite Base

FAA Letterhead

[Date]

[Applicant's Name and Address]

Dear [Name]:

We are unable to approve your application for a satellite base at [location] for the following reasons:

[List reasons]

When you feel your organization meets the certification requirements for a satellite base, you may reapply to this office.

Sincerely,

[POI's Signature]

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Figure 2-65. Sample List of Approved Courses

FAA Letterhead
[Date]
[Name and Address of School]

Dear [Name]:

[Name of School] is authorized under Air Agency Certificate No. [Certificate Number] to conduct training courses under the following Pilot School Ratings:

[List each authorized Pilot School rating in bullet form] *Examples follow:*

- Private Pilot Course
- Commercial pilot course
- Instrument Rating Course
- Additional Aircraft category or Class Rating Course Special Curricula

The following are a list of authorized courses this school may conduct under each Pilot School Rating.

Rating: [List Pilot School Rating]
Course: [List each course authorized under this rating] *Examples follow:*

Rating: Private Pilot Course
Courses: Private Pilot Airplane, Single Engine land
Private Pilot Rotorcraft, Helicopter

Rating: Commercial Pilot Course
Courses: Commercial Pilot Airplane, Single Engine Land
Commercial Pilot Rotorcraft, Helicopter

Rating: Instrument Rating Course
Course: Instrument Rating Airplane, Single Engine land

Rating: Additional Aircraft Category or Class Rating Course
Courses: Private Pilot, Airplane Single Engine Sea
Commercial Pilot, Airplane Single Engine Sea
Commercial Pilot, Airplane Multi-Engine Land

Rating: Special Curricula
Course: Sport Pilot Course, Airplane Single Engine Land

This list of approved courses expires on [insert same expiration date as Form 8000-4], unless superseded, surrendered, suspended or revoked.

Sincerely,

[FSDO Manager's Signature]

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Figure 2-66. FAA Form 8420-8, Application for Pilot School Certification, Filled Out for Renewal

US Department of Transportation
Federal Aviation Administration

APPLICATION FOR PILOT SCHOOL CERTIFICATION

Form approved: OMB No. 2120-0009

CERT NO. *For FAA Use Only*

APPLICANT - Read submittal and signature instructions on reverse.

NAME OF SCHOOL	TELEPHONE NO.	ADDRESS OF PRINCIPAL BUSINESS OFFICE
C. Brannon, d/b/a Brannon Aviation	(555) 345-3456	13206 Poplar Tree Road, Fairfax, VA 11234

LOCATION OF MAIN OPERATIONS BASE	LOCATION OF SATELLITE BASE(S)
Fairfax Airport, Fairfax, VA	Centervill Airport

APPLICATION IS HEREBY MADE FOR:

☐ Issuance of a Pilot School Certificate and associated ratings to conduct the training courses identified below, and for the approval of these courses (*three copies of each course outline are attached*); also, examining authority is requested for the courses appropriately checked.

☒ Renewal of a Pilot School Certificate and associated ratings currently numbered CSB-S-025, which expires on 11/30/06

☐ without changes to the currently approved course outlines, ☐ with addition of course(s) identified below for which approval is requested (three copies of each course outline is attached), including request for examining authority for the course(s) appropriately checked; ☐ with deletion of course(s) identified below from the curriculum.

☐ Amending the current Pilot School Certificate and associated ratings numbered _____, which expires on _____

☐ by adding the course(s) identified below for which approval is requested (three copies of each course outline are attached), including request for examining authority where appropriately checked; ☐ for deletion of the course(s) identified below from the curriculum.

IDENTIFICATION OF TRAINING COURSES

NOTE.: Where examining authority for a course is desired, place and "X" in the box adjacent to the course identification. s

☒	Private Pilot	☐	
☒	Instrument Rating	☐	
☒	Commercial Pilot	☐	
☐		☐	
☐		☐	
☐		☐	

(If more space is needed, continue on reverse in space provided)

I (WE) certify that I am (we are) familiar with Part 141 of the Federal Aviation Regulations, and, to the best of my (our) knowledge, believe that my (our) school meets the requirements for certification as prescribed therein.

Signature and Title(s): Carolyn S. Brannon
Carolyn S. Brannon
Owner

10/31/06
Date

FOR FAA USE ONLY

☐ APPROVED- ☐ a Provisional Pilot School Certificate ☐ a Pilot School Certificate, either with associated ratings bearing the number shown above is issued effective _____ and which expires on _____ ☐ DISAPPROVED

☐ Renewal ☐ without amendments ☐ with amendments ☐ Amendments

SIGNATURE OF APPROVING OFFICIAL	TITLE	DATE

FAA Form 8420-8 (1-82) *Recommendations of Inspector(s) on reverse*

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Figure 2-67. Notice of Course Cancellation

FAA Letterhead

[Date]

[Applicant's Name and Address]

Dear [Name]:

After reviewing your application for renewal of your Pilot School Certificate and conducting the appropriate inspection, we require that you cease [name of course] training immediately for the following reasons:

[List reasons]

Failure to cease [Name of Course] training shall result in enforcement action against your certificate.

All other courses of training and pilot school ratings inspected at the time of renewal were acceptable, and you may continue to conduct training under them. When you feel that your organization meets the certification requirements for [name of course], you may apply for reinstatement of the course.

Sincerely,

[POI's signature]

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Figure 2-68. FAA Form 8420-8, Application for Pilot School Certification, Filled Out for Amendment

US Department of Transportation
Federal Aviation Administration

APPLICATION FOR PILOT SCHOOL CERTIFICATION

Form approved: OMB No. 2120-0009

CERT NO. *For FAA Use Only*

APPLICANT - Read submittal and signature instructions on reverse.

NAME OF SCHOOL	TELEPHONE NO.	ADDRESS OF PRINCIPAL BUSINESS OFFICE
C. Brannon d/b/a Brannon Aviation	(555) 345-3456	13206 Poplar Tree Road, Fairfax, VA 11234

LOCATION OF MAIN OPERATIONS BASE	LOCATION OF SATELLITE BASE(S)
Fairfax Airport, Fairfax, VA	Centerville Airport

APPLICATION IS HEREBY MADE FOR:

☐ Issuance of a Pilot School Certificate and associated ratings to conduct the training courses identified below, and for the approval of these courses (*three copies of each course outline are attached*); also, examining authority is requested for the courses appropriately checked.

☐ Renewal of a Pilot School Certificate and associated ratings currently numbered _____, which expires on _____
☐ without changes to the currently approved course outlines, ☐ with addition of course(s) identified below for which approval is requested (three copies of each course outline is attached), including request for examining authority for the course(s) appropriately checked; ☐ with deletion of course(s) identified below from the curriculum.

☒ Amending the current Pilot School Certificate and associated ratings numbered CSB-S-025-A, which expires on _____
☐ by adding the course(s) identified below for which approval is requested (three copies of each course outline are attached), including request for examining authority where appropriately checked; ☐ for deletion of the course(s) identified below from the curriculum.

IDENTIFICATION OF TRAINING COURSES

NOTE.: Where examining authority for a course is desired, place and "X" in the box adjacent to the course identification. s

☐ Agricultural Aircraft Operations	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐

(If more space is needed, continue on reverse in space provided)

I (WE) certify that I am (we are) familiar with Part 141 of the Federal Aviation Regulations, and, to the best of my (our) knowledge, believe that my (our) school meets the requirements for certification as prescribed therein.

Signature and Title(s): *Carolyn S. Brannon*
Carolyn S. Brannon
Owner

10/31/06
Date

FOR FAA USE ONLY

☐ APPROVED- ☐ a Provisional Pilot School Certificate ☐ a Pilot School Certificate, either with associated ratings bearing the number shown above is issued effective _____ and which expires on _____ ☐ DISAPPROVED
☐ Renewal ☐ without amendments ☐ with amendments ☐ Amendments

SIGNATURE OF APPROVING OFFICIAL	TITLE	DATE

FAA Form 8420-8 (1-82) *Recommendations of Inspector(s) on reverse*

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Check with FSIMS to verify current version before using

Figure 2-69. FAA Form 8420-8, Application for Pilot School Certification, Filled Out for Initial Certification

US Department of Transportation
Federal Aviation Administration

APPLICATION FOR PILOT SCHOOL CERTIFICATION

Form approved: OMB No. 2120-0009

CERT NO. *For FAA Use Only*

APPLICANT - Read submittal and signature instructions on reverse.

NAME OF SCHOOL	TELEPHONE NO.	ADDRESS OF PRINCIPAL BUSINESS OFFICE
C. Brannon d/b/a Brannon Aviation	**(555) 345-3456**	**13206 Poplar Tree Road, Fairfax, VA 11234**

LOCATION OF MAIN OPERATIONS BASE	LOCATION OF SATELLITE BASE(S)
Fairfax Airport, Fairfax, VA	

APPLICATION IS HEREBY MADE FOR:

[X] Issuance of a Pilot School Certificate and associated ratings to conduct the training courses identified below, and for the approval of these courses (*three copies of each course outline are attached*); also, examining authority is requested for the courses appropriately checked.

[ ] Renewal of a Pilot School Certificate and associated ratings currently numbered _____, which expires on _____
[ ] without changes to the currently approved course outlines; [ ] with addition of course(s) identified below for which approval is requested (three copies of each course outline is attached), including request for examining authority for the course(s) appropriately checked; [ ] with deletion of course(s) identified below from the curriculum.

[ ] Amending the current Pilot School Certificate and associated ratings numbered _____, which expires on _____
[ ] by adding the course(s) identified below for which approval is requested (three copies of each course outline are attached), including request for examining authority where appropriately checked; [ ] for deletion of the course(s) identified below from the curriculum.

IDENTIFICATION OF TRAINING COURSES

NOTE: Where examining authority for a course is desired, place and "X" in the box adjacent to the course identification. s

[ ]	**Private Pilot**	[ ]	
[ ]	**Instrument Rating**	[ ]	
[ ]	**Commercial Pilot**	[ ]	
[ ]	**Flight Instructor**	[ ]	
[ ]		[ ]	
[ ]		[ ]	

(If more space is needed, continue on reverse in space provided)

I (WE) certify that I am (we are) familiar with Part 141 of the Federal Aviation Regulations, and, to the best of my (our) knowledge, believe that my (our) school meets the requirements for certification as prescribed therein.

Carolyn S. Brannon

Signature and Title(s): **Carolyn S. Brannon**, **Owner**

May 10, 2006
Date

FOR FAA USE ONLY

[X] APPROVED- [ ] a Provisional Pilot School Certificate [X] a Pilot School Certificate, either with associated ratings bearing the number shown above is issued effective **11/15/06** and which expires on **11/30/08** [ ] DISAPPROVED
[ ] Renewal [ ] without amendments [ ] with amendments [ ] Amendments

SIGNATURE OF APPROVING OFFICIAL	TITLE	DATE
Barbara D. Hostetler	**Supervising Inspector**	**June 1, 2006**

FAA Form 8420-8 (1-82) *Recommendations of Inspector(s) on reverse*

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Figure 2-70. Sample Letter of Intent

RUTHIE'S FLYING SCHOOL
888 CHANDELLE CIRCLE
BELLVILLE, IL 35454
(312) 555-1212

March 15, 2006

Federal Aviation Administration
Flight Standards District Office # 3
DuPage Country Airport
West Chicago, IL 60185

Gentlemen:

This is to notify the Federal Aviation Administration (FAA) of our intent to become an approved pilot school under Title 14 of the Code of Federal Regulations (14 CFR) part 141.

We are prepared to begin operations on July 1, 2006 and are ready for your certification inspection at this time. Enclosed are three copies (an original and two facsimiles) of FAA Form 8420-8, Application for Pilot School Certificate. Operations will be confined to the DuPage County Airport. We plan to operate: two Cessna 152s, one Cessna 172, and a Piper Comanche (PA24-250), that meets the complex aircraft requirements for commercial pilot certification.

Courses identified on FAA Form 8420-8 will be supervised by our chief instructor, Mr. Robert Cartwright, holder of Airline Transport Pilot Certificate number 555121128. He meets the requirements of § 141.35 and his instructor résumé is available for verification when you conduct your certification inspection.

Also enclosed are three copies of each training course outline for your review and approval. Our requested three-letter certificate designators are EPS, ELS, and SFS, in that order of preference.

Sincerely,

Ruth Vaght
President

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Figure 2-71. Letter Indicating Certification Process Cannot Continue Because of Pending Enforcement Action

FAA Letterhead

[Date]

[Name and Address of Applicant]

Dear [Name]:

This letter is to inform you that your application for a Pilot School Certificate cannot be processed because of enforcement action [pending/taken] against [cite the specific certificate—Airman, other air operator certificate, etc.]. Until such time that this enforcement action is fulfilled, you are ineligible for certification.

Enclosed with this letter is a copy of your application and the training course outlines you submitted for approval.

Should you wish to discuss this matter, please contact this office at [telephone number].

Sincerely,

[FSDO Manager's Signature]

Figure 2-72. Letter Indicating Application Is Unsatisfactory

FAA Letterhead

[Date]

[Name and Address of Applicant]

Dear [Name of Applicant]:

The enclosed FAA Form 8420-8, Application for Pilot School Certificate, is returned because [cite discrepancies].

Enclosed are three blank application forms that you may use to reapply when the above items are corrected. In order to continue the certification process, the corrected applications must be received no later than [date, not longer than 30 days from the date of the letter]. If we do not hear from you by that date, we will consider the certification process terminated.

If you have any questions concerning this matter, please feel free to contact this office at [telephone number].

Sincerely,

[Certification Project Manager's Signature]

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Figure 2-73. Letter Indicating Discrepancies Found During Inspection

FAA Letterhead

[Date]

[Name and address of school]

Dear [Name]:

These discrepancies were found during a Title 14 of the Code of Federal Regulations (14 CFR) part 141 certification inspection conducted as part of your certification as an Air Agency under part 141.

[List each discrepancy]

[List methods of correcting the discrepancies, if appropriate]

[Indicate a reasonable length of time for the corrections to be made (not to exceed 90 days from the date of the letter)]

[Indicate that if no response is received within 90 days, the certification process will be terminated]

Sincerely,

[CPM's Signature]

Figure 2-74. Part 141 Letter Listing DBAs

FAA Letterhead

[Date]

[Air Agency's Name and Address]

Dear [Name]:

This letter, accompanied by Air Agency Certificate No. [number] issued to [legal name of school] on [date of issuance], authorizes the following additional persons to exercise the privileges and limitations of the certificate.

[List all DBA names]

Sincerely,

[FSDO Manager's Signature]

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Figure 2-75. Letter Denying Certificate

FAA Letterhead

[Date]

[Name and Address of Applicant]

Dear [Name of Applicant]:

Your application for a Pilot School Certificate is denied because of the following reasons:

[List specific items that have not been corrected in the document compliance phase or demonstration and inspection phase within a reasonable time, i.e., not to exceed 90 days from the time the applicant was notified of the discrepancy.]

[If applicable, cite any false or fraudulent information that was provided.]

[If applicable, indicate why TCOs were not approved.]

[If applicable, specifically list the lack of qualifications of personnel or deficiencies in facilities and equipment.]

If you have any questions concerning this matter, please contact this office at [telephone number].

Sincerely,

[FSDO manager's signature]

Figure 2-76. Part 141 Certification Job Aid

NAME OF SCHOOL:	**CERTIFICATION TEAM**				
	Name		Specialty		
ADDRESS:	**INSP. INITIAL**	**DATE**	**YES**	**NO**	**NA**
1. Initial contact handled by					
2. Letter of Intent					
3. Pre-Application meeting					
4. Applicant provided resources/advised how to obtain					
5. Formal application meeting					
6. Application properly completed and submitted					
7. TCOs submitted					

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a. TCO contains description of each room used for aeronautical knowledge training					
b. TCO describes all training aids					
c. TCO describes each training device/simulator used					
d. TCO lists airports at which training flights originate					
e. TCO describes minimum instructor qualifications					
f. TCO describes trainee's enrollment qualifications					
g. TCO describes each lesson's objectives and training standards					
h. TCO describes tests and checks used to measure each stage of training					
8. Verification of flight instructor's qualifications (§ 141.33/141.35)					
9. Chief instructor/assistant for ground school course has 1 year experience in approved school					
10. Enrollment method meets the requirements of § 141.93					
11. Safety procedures/practices developed (§ 141.93)					
12. Graduation certificates appropriate (§ 141.95)					
13. Method for student recordkeeping (§ 141.101)					
14. MEL approved					
15. School has use of aircraft appropriate for each course					
a. U.S.-registered standard category					
b. At least two-place with full-functioning dual controls					
c. Maintained in accordance with parts 43 and 91					
d. Inspected by Airworthiness inspector					
(1) Optional equipment installation					

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(2) Airworthiness Directive records current					
(3) In-house or contract maintenance observed					
(4) Aircraft for IFR courses properly equipped/maintained					
e. Electronic components/communications equipment inspected (Avionics)					
f. Checklists required by § 141.75					
16. Chief instructor/assistance for each course tested					
a. Knowledge test					
b. Skill test					
17. Chief instructor's method to test other instructors					
18. Pilot briefing areas (§ 141.43)					
19. Aeronautical knowledge training facilities (§ 141.45)					
20. Airports					
a. Continuous use where flights originate (§ 141.38)					
b. One runway/takeoff area for normal takeoff at full gross weight (§ 141.38)					
c. Wind direction indicator (§ 141.38)					
d. Traffic direction indicator (if required by § 141.38)					
e. Permanent runway lights (if required by § 141.38)					
21. Flight simulator or flight training devices					
a. Cockpit meets requirements of § 141.41					
b. Simulates rotation around three axes (§ 141.41)					
c. Minimum instruments/equipment required by § 91.205 (§ 141.41)					
d. For visual flight instruction (VFR) instruction, a means of simulating visual flight conditions (§ 141.41)					

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e. For IFR instruction, a means of recording flight path (§ 141.41)					
22. Training aids meet requirements of § 141.41					
23. Certificate number obtained from AFS-620					
24. Air Agency Certificate prepared and issued					
25. List of approved courses prepared					
26. Certification report and district office file prepared					
27. Surveillance plan developed					
28. Other					

REMARKS:

Figure 2-77. Part 141 Schedule of Events

NAME OF SCHOOL:	NAMES OF MANAGEMENT PERSONNEL				
	Name		Title		
ADDRESS:	SCHOOL DATE READY	FAA DATE REC'D	FAA RET'D	FAA DATE APP'D	INSP INIT
1. Letter of Intent					
2. Application (FAA Form 8420-8)					
3. TCOs					
4. Special curriculums (if applicable)					
5. Recordkeeping procedures					
6. Enrollment method					
7. Safety procedures/practices					
8. Graduation certificates					
9. Instructors' qualifications					
10. Chief instructor/assistant practical test					

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11. Base inspection (including satellite bases)					
12. Appropriate aircraft for each course					
13. Aircraft conformity inspections (Airworthiness)					
14. FFS, FTD, or ATD inspection					
15. Training aids inspection					
16. Pilot briefing areas					
17. Aeronautical knowledge training facilities					
18. Airports					
19. Proposed date to start operations					
20. Other					

Figure 2-78. Letter Confirming Termination of Certification Process at Applicant's Request

FAA Letterhead

[Date]

[Name and Address of Applicant]

Dear [Name of Applicant]:

This letter confirms your request to terminate the project to certificate you as an Air Agency under Title 14 of the Code of Federal Regulations (14 CFR) part 141.

All materials submitted for review are enclosed with this letter. Any attempt to reapply after the date of this letter will require reinitiating the entire certification process.

Sincerely,

[CPM's Signature]

RESERVED. Paragraphs 2-1085 through 2-1100.

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VOLUME 2 AIR OPERATOR AND AIR AGENCY CERTIFICATION AND APPLICATION PROCESS

CHAPTER 9 CERTIFICATION OF A PART 141 PILOT SCHOOL

Section 1 Initial Certification or Renewal of a Part 141 Pilot School

2-1066 PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODE.

A. Initial Certificate. Enter 1240 in the activity code box of the PTRS Data Sheet.

B. Renew Certificate. Enter 1374 in the activity code box of the PTRS Data Sheet.

C. Reissue Certificate. Enter 1375 in the activity code box of the PTRS Data Sheet.

2-1067 OBJECTIVE. Determine whether an applicant for a Title 14 of the Code of Federal Regulations (14 CFR) part 141 pilot school meets the rules concerning the operation of a pilot or provisional pilot school. Successful completion of this task results in the issuance, renewal, or denial of Federal Aviation Administration (FAA) Form 8000-4, Air Agency Certificate. These procedures are followed for the issuance of a provisional Pilot School Certificate, for added ratings (amendments), and for certificate renewal.

2-1068 GENERAL. Before beginning any certification process, inspectors should review Volume 3, Chapter 1, Section 1, The General Process for Approval or Acceptance of Air Operator Applications, and Volume 2, Chapter 1, Section 1, The Generic Process for Certificating Organizations. Definitions of the terms used in this chapter are contained in Volume 3, Chapter 53, Section 1, Introduction to Part 141 Related Tasks.

2-1069 PREAPPLICATION PHASE. For an initial certification, inspectors should discuss the following items with an applicant during an initial inquiry about a Part 141 Certificate. These items may also be reviewed during renewal or during amendment, as necessary.

A. Pilot School Ratings. All inspectors must ensure that the pilot schools conform to the ratings as listed below.

1) Certification and Rating Courses (Appendices A through J and M).

- Recreational pilot course,
- Private pilot course,
- Instrument rating course,
- Combined private pilot and instrument rating course,
- Commercial pilot course,
- Airline transport pilot (ATP) course,
- Flight instructor course,
- Flight instructor instrument course,
- Ground instructor course,

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- Additional aircraft category or class rating course, and
- Aircraft type rating course.

2) Special Curriculum Course under Part 141, § 141.57, Special Curricula, and Special Preparation Courses (Appendix K).

- Pilot refresher course,
- Flight instructor refresher course (FIRC),
- Ground instructor refresher course,
- Agricultural aircraft operations course,
- Rotorcraft external-load operations course,
- Special operations course,
- Test pilot course, and
- ATP Certification Training Program.

3) Pilot Ground School Course (Appendix L).

B. Recreational Pilot Course. The approval of one or more courses of training that result in the original issuance of a Recreational Pilot Certificate entitles the school to have a recreational pilot rating placed on its school certificate. The approval of one or all of the following certification courses entitles the school to a recreational pilot rating for the following courses, as appropriate:

- Airplane—single-engine,
- Rotorcraft—helicopter, and/or
- Rotorcraft—gyroplane.

C. Private Pilot Course. The approval of one or more courses of training that result in the original issuance of a Private Pilot Certificate entitles the school to have a private pilot rating placed on its school certificate. The approval of one or all of the following certification courses entitles the school to a private pilot rating for the following courses, as appropriate:

- Airplane—single-engine,
- Airplane—multiengine,
- Rotorcraft—helicopter,
- Rotorcraft—gyroplane,
- Powered-lift,
- Glider,
- Lighter than Air (LTA) airship, and/or
- LTA balloon.

D. Instrument Rating Course. The approval of one or more courses of training that result in the original issuance of an instrument rating entitles the school to have an instrument rating placed on its school certificate. The approval of one or all of the following certification courses entitles the school to an instrument rating for the following courses, as appropriate:

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- Instrument—airplane,
- Instrument—helicopter, and/or
- Instrument—powered-lift.

E. Commercial Pilot Course. The approval of one or more courses of training that result in the original issuance of a Commercial Pilot Certificate entitles the school to have a commercial pilot rating placed on its school certificate. The approval of one or all of the following certification courses entitles the school to a commercial pilot rating for the following courses, as appropriate:

- Airplane—single-engine,
- Airplane—multiengine,
- Rotorcraft—helicopter,
- Rotorcraft—gyroplane,
- Powered-lift,
- Glider,
- LTA airship, and/or
- LTA balloon.

F. ATP Course. The approval of one or more courses of training that result in the original issuance of an ATP Certificate entitles the school to have an ATP rating placed on its school certificate. The approval of one or all of the following certification courses entitles the school to an ATP rating for the following courses, as appropriate:

- Airplane—single-engine,
- Airplane—multiengine,
- Rotorcraft—helicopter, and/or
- Powered-lift.

G. Flight Instructor Course. The approval of one or more courses of training that result in the original issuance of a Flight Instructor Certificate entitles the school to have a flight instructor rating placed on its school certificate. The approval of one or all of the following certification courses entitles the school to a flight instructor rating for the following courses, as appropriate:

- Airplane—single-engine,
- Airplane—multiengine,
- Rotorcraft—helicopter,
- Rotorcraft—gyroplane,
- Powered-lift, and/or
- Glider.

H. Flight Instructor Instrument Rating Course. The approval of one or more courses of training that result in the original issuance of a Flight Instructor Instrument Certificate entitles the school to have a flight instructor instrument rating placed on its school certificate. The

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approval of one or all of the following certification courses entitles the school to a flight instructor instrument rating for the following courses, as appropriate:

- Flight Instructor Instrument—airplane,
- Flight Instructor Instrument—helicopter, and/or
- Flight Instructor Instrument—powered-lift.

I. Ground Instructor Course. The approval of one or more courses of training that result in the original issuance of a Ground Instructor Certificate entitles the school to have a ground instructor rating placed on its school certificate. The approval of one or all of the following certification courses entitles the school to a ground instructor rating for the following courses, as appropriate:

- Ground Instructor Instrument—basic,
- Ground Instructor Instrument—advanced, and/or
- Ground Instructor Instrument—instrument.

J. Additional Aircraft Category or Class Rating Course. The approval of one or more courses of training that results in the issuance of an additional aircraft category or class rating to an existing Pilot Certificate entitles the school to have "Additional Aircraft Category or Class Rating" placed on its school certificate. The approval of one or all of the following additional aircraft rating courses entitles the school to the above listed rating.

- Airplane—single-engine,
- Airplane—multiengine,
- Rotorcraft—helicopter,
- Rotorcraft—gyroplane,
- Powered-lift,
- Glider,
- LTA airship, and/or
- LTA balloon.

K. Aircraft Type Rating Course. The approval of one or more courses of training that result in the issuance of an aircraft type rating entitles the school to have aircraft type rating placed on its school certificate. The approval of one or all of the following aircraft type rating courses entitles the school to an aircraft type rating for the following courses, as appropriate:

- A type rating in an airplane category, single-engine class;
- A type rating in an airplane category, multiengine class;
- A type rating in a rotorcraft category, helicopter class; and/or
- A type rating in a powered-lift category.

L. Special Preparation Course. The approval of one or more courses of training that prepares the graduate with the necessary skills, competency and proficiency to exercise safely the privileges of a certificate, rating or authorization for which the course is established entitles the school to have that special preparation course rating (e.g., pilot refresher course, agricultural

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aircraft operations course, etc.) placed on its school certificate. The approval of one or all of the following special preparation courses entitles the school to a pilot school rating for the following courses, as appropriate:

- Pilot refresher course,
- FIRC,
- Ground instructor refresher course,
- Agricultural aircraft operations course,
- Rotorcraft external-load operations course,
- Special operations course,
- Test pilot course, and/or
- ATP Certification Training Program.

M. Pilot Ground School Course. The approval of one or more ground school courses under the provisions of part 141, appendix L entitles the school to have a pilot ground school rating placed on its school certificate.

N. Special Curriculum Course. The approval of a special curriculum course under § 141.57 entitles the school to have "Special Curriculum Course" appear on its school certificate.

O. Denied Ratings. An applicant may reapply at any time for an FAA Form 8000-4 or rating in the same manner as prescribed for initial application. At the inspector's discretion, reinspection of previously approved areas may not be necessary. However, if more than 120 days have elapsed, a complete inspection should be accomplished before issuance of the certificate.

P. Certification Team Assignment. As described in the procedures in Volume 2, Chapter 1, Section 1, the Flight Standards District Office (FSDO) manager assigns the applicant a certification team. The manager also designates one member of the team as the certification project manager (CPM).

FORMAL APPLICATION PHASE.

A. The Formal Application Meeting. If the certification team decides to have a formal application meeting, all members of the team should be present.

B. Meeting Topics. The meeting should review, but not be limited to, the following:

- The application,
- The Schedule of Events (SOE), if applicable,
- The training course outline (TCO) and curriculum, and
- Personnel, aircraft, and facility requirements.

C. Application Denial. Denial of an application must be substantiated with documentation of the reasons for denial.

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2-1071 DOCUMENT COMPLIANCE PHASE.

A. TCOs. TCOs must be submitted in duplicate. However, during initial approval of the TCO, the inspector may request only one copy for review. Once the TCO has met all the requirements, the applicant submits the required two copies.

B. Commercially-Produced Syllabuses. Commercially-produced syllabuses should be submitted a minimum of 30 days before the expected training begins. Refer to §§ 141.53 and 141.55.

C. Special Curriculums. A pilot school or provisional pilot school may apply for approval to conduct a special course of pilot training provided the training curriculum is not one that is prescribed in the appendixes of part 141. A special course of airman training must contain features that can be expected to achieve a level of pilot competency equivalent in scope and depth to that achieved by the curriculum prescribed in the appendixes of part 141 or the requirements of 14 CFR part 61. A Designated Pilot Examiner (DPE) may only conduct a practical test for pilot certification provided the applicant has completed the pilot school/provisional pilot school's training course requirements and has received a graduation certificate. A pilot school may not apply for examining authority unless the training course meets the requirements set forth in the appropriate appendixes of part 141. A pilot school may not apply for a training course under § 141.55(d) or (e) unless that pilot school has held a Pilot School Certificate (emphasis added: Pilot School Certificate) for at least 24 calendar-months. If a pilot school applies for a special course of airman training with reduced training times, then that pilot school must comply with the provisions set forth in § 141.55(d) and (e). In accordance with § 141.55(d)(3) and (e)(4), a pilot school may not be approved for examining authority for a special course of airman training that has been approved for reduced training times. A provisional pilot school may not apply for a special course of airman training with reduced training times under § 141.55(d) and (e).

1) Required Documentation. An original and one copy of a proposed special curriculum must be submitted along with a cover letter requesting FAA approval at least 60 days before the training is scheduled to begin. Approval or denial should be accomplished within 30 days, allowing the school sufficient time to develop a TCO based on the special curriculum.

2) Special Curriculum Approved. When a special curriculum is approved, each page of the original and office copies should be dated and signed by the principal operations inspector (POI). The original copy of the special curriculum should be returned to the school.

3) Special Curriculum Disapproved. When a special curriculum is disapproved, the original and copy submitted to the FAA should be returned to the applicant along with a letter clearly explaining why the materials were disapproved (Figure 2-62, Letter Disapproving Special Curriculums or TCOs). A copy of the letter is retained in the school's file at the FSDO. If major changes to a special curriculum or TCO are necessary, the letter to the school should clearly state that additional time will be needed for review when resubmitted.

D. Title 14 CFR Part 141 Appendices. It is imperative that when a school applicant applies for its ratings, the TCOs be reviewed carefully against the part 141 appendixes. For

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schools that submit TCOs and meet minimum time requirements of part 141, in accordance with § 141.55(d) or (e) (as appropriate), it is imperative that these schools' TCOs cover all of the aeronautical knowledge areas and areas of operations required for the certificate and ratings. The following are the certification and rating courses, special preparation courses, and pilot ground school courses contained in these part 141 appendices.

1) Certification and Rating Courses.

a) Recreational Pilot Certification Course—Appendix A prescribes the requirements for the Recreational Pilot Certificate with the following ratings:

- Airplane single-engine,
- Rotorcraft helicopter, and
- Rotorcraft gyroplane.

b) Private Pilot Certification Course—Appendix B prescribes the requirements for the Private Pilot Certificate for the following ratings:

- Airplane single-engine,
- Airplane multiengine,
- Rotorcraft helicopter,
- Rotorcraft gyroplane,
- Powered-lift,
- Glider,
- LTA airship, and
- LTA balloon.

c) Instrument Rating Course—Appendix C prescribes the requirements for an instrument rating for the following:

- Instrument—airplane,
- Instrument—helicopter, and
- Instrument—powered-lift.

d) Commercial Pilot Certification Course—Appendix D prescribes the requirements for the commercial pilot certificate for the following ratings:

- Airplane single-engine,
- Airplane multiengine,
- Rotorcraft helicopter,
- Rotorcraft gyroplane,
- Powered-lift,
- Glider,
- LTA airship, and
- LTA balloon.

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e) ATP Certification Course—Appendix E prescribes the requirements for the ATP Certificate for the following ratings:

- Airplane single-engine,
- Airplane multiengine,
- Rotorcraft helicopter, and
- Powered-lift.

f) Flight Instructor Certification Course—Appendix F prescribes the requirements for the Flight Instructor Certificate for the following ratings:

- Airplane single-engine,
- Airplane multiengine,
- Rotorcraft helicopter,
- Rotorcraft gyroplane,
- Powered-lift, and
- Glider.

g) Flight Instructor Instrument (for an Airplane, Helicopter, or Powered-Lift Instrument Instructor Rating, as Appropriate) Certification Course—Appendix G prescribes the requirements for the Flight Instructor Instrument Certificate for the following ratings:

- Flight Instructor Instrument—airplane,
- Flight Instructor Instrument—helicopter, and
- Flight Instructor Instrument—powered-lift.

h) Ground Instructor Certification Course—Appendix H prescribes the requirements for the Ground Instructor Certificate for the following ratings:

- Ground Instructor—Basic,
- Ground Instructor—Advanced, and
- Ground Instructor—Instrument.

i) Additional Aircraft Category or Class Rating Course—Appendix I prescribes the requirements for an additional aircraft rating for the following:

- Airplane single-engine,
- Airplane multiengine,
- Rotorcraft helicopter,
- Rotorcraft gyroplane,
- Powered-lift,
- Glider,
- LTA airship, and
- LTA balloon.

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j) Aircraft Type Rating Course, for Other Than an ATP Certificate—Appendix J prescribes the requirements for an aircraft type rating for the following:

- A type rating in an airplane category, single-engine class;
- A type rating in an airplane category, multiengine class;
- A type rating in a rotorcraft category, helicopter class; and
- A type rating in a powered-lift category.

k) Combined Private Pilot Certification and Instrument Rating Course—Appendix M prescribes the minimum curriculum for a combined private pilot certification and instrument rating course required under this part, for the following ratings:

- Airplane single-engine,
- Airplane multiengine,
- Rotorcraft helicopter, and
- Powered-lift,

2) Special Preparation Courses—Appendix K prescribes the requirements for the following special preparation courses:

- Pilot refresher course,
- FIRC,
- Ground instructor refresher course,
- Agricultural aircraft operations course,
- Rotorcraft external-load operations course,
- Special operations course,
- Test pilot course, and
- ATP Certification Training Program.

3) Pilot Ground School Course—Appendix L prescribes the requirements for pilot ground school courses.

E. Part 61 Amendments. If ground or flight time requirements are amended in part 61, at the time of renewal of the part 141 Pilot School Certificate, affected TCOs must be amended to meet these new training time requirements.

2-1072 DEMONSTRATION AND INSPECTION PHASE.

A. Facilities and Training Aids. A pilot school is required to have certain facilities in order to obtain and maintain an FAA Form 8000-4. Included in these facilities are the business office and main base of operations, pilot briefing areas, aeronautical knowledge training facilities, use of airports, and satellite bases.

1) The applicant having ownership of the required facilities or by having a written agreement with the facility owners may show continuous use of facilities. A written agreement must state that the applicant has the required continuous use of the necessary facilities for at least

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6 months from the date of the application for the initial certification or renewal of a school certificate.

2) Each pilot school or provisional pilot school is required to maintain a principal business office with a mailing address the same as that on the school certificate. The purpose of a principal business office is to provide a specific location for the required school files and records, and a location where the operation of school business may be conducted. This requirement should not be construed to mean that all school functions, such as scheduling flights, training functions, etc., must be conducted at the principal business office.

a) While part 141 does not require that a business office be a room with four walls and a door, the regulation does prohibit the sharing of a single business office by more than one pilot school. Therefore, walls or partitions to ensure separation from another pilot school's activity should conspicuously isolate the business office.

b) The business office should be situated so the required school files and student training records are kept up-to-date and available to students and instructors alike. This serves the purpose of providing on-the-spot information regarding training progress and other business interests.

c) If the pilot school should choose to change the location of its business office or base of operations, the school is required to notify the jurisdictional FSDO in writing of the planned move at least 30 days prior to the change. Such written notice should be accompanied by a new application, FAA Form 8420-8, Application for Pilot School Certificate, showing the change of address or the change in the base of operations as appropriate. In any case, the notice of a change of operating base must be accompanied by necessary amendments to approved TCOs.

d) Primary category aircraft (PCA) are eligible for use for flight instruction.

3) A school is required to have continuous use of a pilot briefing area at each airport where training flights originate. This does not include airports used as destinations for cross-country flight training. The briefing area must meet the requirements of § 141.43. Pilots not participating in the school's training programs can use the briefing facilities, provided that orderly school functions are maintained. However, no other pilot school may use the area during the period it is to be used by the applicant. Briefing areas are subject to FSDO approval under the provisions of § 141.43.

a) To meet the requirements of § 141.43, the equipment should include a chalkboard and tables of adequate size to lay out aeronautical charts.

b) If a school offers instrument or commercial pilot courses, it needs to have access to a Flight Service Station (FSS). A telephone in the briefing room is acceptable.

c) To preclude a disruption of schedules due to excessive travel time and a lack of communications between the flight line, business office, and briefing area, the area should be located near enough to the airport where training flights originate.

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4) The FAA recognizes that pilot training methods differ from other kinds of training. Pilot schools enroll students with widely varying backgrounds, goals, and varying degrees of motivations and aviation experience. For this reason, it is understandable that it is not always possible to schedule large classes for aeronautical knowledge training at one time. Individual instruction is often necessary for maximum benefit to a particular student. Therefore, it is anticipated that FAA-approved schools will use classrooms, small isolated rooms, training booths, or other areas with an instructor or a training aid, as appropriate. Each aeronautical knowledge training area is required to be heated, lighted, and ventilated to meet the applicable building code requirements for the area concerned. All ground instructional facilities are subject to approval by the jurisdictional FSDO under § 141.45.

5) A certificate holder may use training aids to improve communication between instructors and students.

a) Training aids are instructional aids defined by the National Education Association (NEA) as "devices that assist an instructor in the teaching and learning processes by presenting, supporting, or supplementing material, usually intermittently. They are not self-supporting." The key factor is that such aids support, supplement, or reinforce.

b) Identified in each course outline, training aids should be easily understood, readily visible, and compatible with the learning outcomes expected in the completion standards for the lesson. They must be accurate and appropriate to the course. The effectiveness of aids is judged by their organization, sequencing, pattern of logic, and their overall effectiveness when used in support of obtaining the objectives and standards prescribed by the training syllabus.

c) Recent years have seen an abundance of excellent new material and techniques in training aids. The aids present many advantages for the school. Each school must keep in mind the teaching goals to be achieved, including the continuous monitoring of student progress necessary to develop effectively the knowledge of each student according to the training syllabus. Aids do not replace the instructor. It is not expected that students be sent off alone to learn from a training aid.

d) Notwithstanding the complexity or design of a training aid, the chief instructor or an authorized, qualified representative must determine through personal review or testing that the standards for each lesson have been attained through use of the training aid. The purpose of this personal review or testing is to ensure that students meet the completion standards and understand missed questions, if a knowledge test is given. Only through such evaluation can the instructor make a sound determination that the student should progress to the next lesson or that the student requires review of subjects or procedures previously covered. This helps in determining the effectiveness of the training aid.

6) An applicant for a pilot school or provisional Pilot School Certificate must show that it has the continuous use of each airport where training flights originate (airports where flights are dispatched or initiated, such as main or satellite bases).

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a) Airports that the applicant uses where flights originate must meet the requirements of § 141.38. Note that § 141.38(b) only applies for airports used for airplanes or gliders.

b) Landing area outline lights, water area boundary lights, or temporary lighting such as flare pots or deployed portable electric runway lighting systems do not meet the requirements of § 141.38(e).

c) Though the wind tee and tetrahedron may serve as landing direction or wind indicators, according to the FAA-H-8083-25, Pilot's Handbook of Aeronautical Knowledge, pages 12-8 and 12-9, the Aeronautical Information Manual (AIM) cautions against using the tetrahedron as a wind indicator (AIM page 4-3-4). The wind tee, under certain circumstances, may be either an active runway or wind indicator.

d) When required, the traffic direction indicator (refer to § 141.38(d)) must show the direction of traffic patterns for all runways regardless of landing or takeoff direction.

NOTE: When referring to pilot schools approved for LTA balloons, the term "airport" should be taken to mean launch site. An important training element in balloon training is proper site selection. Before the launch of a balloon, an instructor authorized by the school must approve the site. The specific equipment requirements of § 141.37, (i.e., runway lights, traffic direction indicators, and wind direction indicators) are inappropriate for LTA balloon operations. Wind direction may be determined by means of a pilot balloon. The area downwind from the launch site should be free of obstructions for 100 feet for each knot of wind. For example, a 4-knot wind requires a 400-foot area free of obstruction downwind. Landing site selection will be determined by the pilot in command (PIC).

B. Satellite Bases. A school may conduct aeronautical knowledge or flight training in an approved course of training at one or more satellite bases. An assistant chief instructor must be designated for each satellite base, and the airport, facilities, and personnel used at the satellite base must meet the requirements of part 141, including approval of the satellite base and its facilities in the approved TCOs for courses given at those bases.

1) If a valid reason exists, training may be conducted for periods up to 7 days at a satellite base without approval of the jurisdictional FSDO. For example, runways may be closed at the main operations base for maintenance, or other activities may be underway on the airport. The jurisdictional FSDO must be notified in writing if training is conducted at a satellite base for more than 7 consecutive days.

2) When the jurisdictional FSDO is notified that a school will conduct training at an unapproved satellite base for more than 7 consecutive days, an operations inspector should determine if the operations are of a temporary nature or if they will involve extended use of the unapproved base. If, in the opinion of the operations inspector, temporary use of the unapproved base will not derogate safety or the quality of training, temporary operations at that base may be authorized for a period of time not to exceed 30 days.

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3) If operations at the unapproved satellite base will exceed a period of 30 days, the school should apply to the jurisdictional FSDO for the approval of a satellite base on FAA Form 8420-8. Along with the application, two copies of the appropriate amendments for each approved training course to be given at the satellite base must be submitted.

4) Each satellite base that approval is requested for is inspected to ensure that each meets the requirements of part 141 and training, as described in each approved course of training, can be effectively accomplished. (See Volume 6, Chapter 7, Section 1, Conduct Facility Inspection of a Part 141 Pilot School.)

5) If a satellite base is located in an area under the jurisdiction of another FSDO within the same region, the FSDOs involved must coordinate directly with each other.

6) If the applicant intends to conduct training at a satellite base located in another FAA region, the FSDO where the applicant's principal business office and main operating base is located is responsible for inspection and approval of the satellite base.

a) The jurisdictional FSDO should request assistance through the Regional Office (RO) to make arrangements through the region where the satellite base will be located in certificating and providing surveillance of operations at the satellite base. In some FSDOs, the geographic unit may be responsible for surveillance and inspection.

b) If a region determines that it cannot provide such assistance because of inspector workload or other reasons, the region should make arrangements to allow the certificate-holding district office (CHDO) to cross-regional boundaries and conduct the necessary inspections and surveillance.

c) When another region agrees to provide assistance in inspecting and surveying a satellite base, a copy of the school certificate and a list of approved courses, including a copy of each inspection report or any other action, must be furnished by the CHDO through regional channels.

d) Coordination between all FSDOs where the school maintains a satellite base must be accomplished before issuance of the FAA Form 8000-4.

7) The inspector completing FAA Form 8420-8, as shown in Figure 2-63, accomplishes approval of the satellite base. One copy of the form may be returned to the applicant, and one copy is placed in the school files at the FSDO. Amendments to each course of training to be given at the satellite base are approved individually, as appropriate.

8) When an application is disapproved, the applicant should be notified in writing (Figure 2-64, Letter Denying Satellite Base). This notification should include all of the reasons why the application was disapproved.

9) When an operator plans to conduct training at a location other than the main base of operations for more than 7 consecutive days, the CHDO must notify the FSDO having jurisdiction over the area where training will be given. The new training location is not considered a separate school operating under the main base Operating Certificate number

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designation; a separate Operating Certificate is not issued. CHDOs should coordinate efforts to ensure that standardized certification of applicants within their FSDO area occurs and that the necessary work program functions are accomplished.

C. Aircraft, Flight Simulators, Flight Training Devices (FTD), and Aviation Training Devices (ATD) (§§ 141.39 and 141.41). Each aircraft used for pilot training by a school located in the United States is required to be a civil aircraft of U.S. registry. Training aircraft must have a valid standard airworthiness certificate, Special Airworthiness Certificate in the primary category, or a Special Airworthiness Certificate in the light-sport category. Aircraft used for a course of training specific to a special operation such as agricultural aircraft operations, external-load operations, and similar aerial work operations (e.g., banner towing and sky writing) may be certificated in the restricted category (14 CFR part 91, § 91.313 and 14 CFR part 21, § 21.25(b)). If an FAA-approved flight simulator, FTD, or ATD is used in an approved training course, the details of its utilization should be clearly stated in the training syllabus and the learning objectives should be well-defined. This is necessary to provide the instructor with proper guidance, and give the FAA a baseline from which to judge the adequacy of the device to be used. No other Special Airworthiness Certificate is acceptable.

1) Each aircraft used by a school for flight training must be inspected and maintained in accordance with § 91.409(b) (applies to aircraft used to give flight instruction for hire), 91.409(c)(2), or 91.409(d) or (e).

a) This requires aircraft used in an approved course of training to have 100-hour and annual inspections or to be maintained following a procedure prescribed under § 91.409(c)(2).

b) It should be clearly understood that these inspection requirements include aircraft used for dual instruction, solo, and PIC flights.

c) Aircraft to be used by pilot schools will be inspected by an airworthiness inspector.

2) When a student enrolled in an approved school provides an aircraft for personal use in an approved course, that aircraft must meet the requirements of the training aircraft described in the appropriate TCO. In addition, that aircraft must meet the same inspection requirements as aircraft operated by the approved school.

3) Aircraft used for instrument training should be equipped as follows to meet the requirements of part 141:

a) If the approved training syllabus requires flights under instrument flight rules (IFR), the aircraft used must be one in which instrument flight is authorized by its operating limitations and by its equipment.

b) If the approved training syllabus requires only simulated IFR operations, the aircraft must be equipped and maintained for IFR operations. However, IFR operations need not be authorized by its operating limitations.

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c) An aircraft not completely equipped for IFR operations may be used for instruction in the control and maneuvering of an aircraft by reference to instruments if it is approved in the TCO. For example, an airplane need only be equipped with appropriate flight instruments needed for the basic instrument portion of a course.

4) The commercial pilot certification course (airplane), set forth in part 141, appendix D, requires flight instruction in an airplane with retractable gear, flaps, and controllable propeller.

a) Single or multiengine airplanes may be used to fulfill this requirement. Use of an appropriately equipped multiengine airplane to meet the complex airplane requirements for a Commercial Single-Engine Airplane Certificate does not result in the issuance of a multiengine rating.

b) If a school applies for a commercial pilot certification course (airplanes) with a seaplane-class rating (using seaplanes for the entire course), a special curriculum should be submitted under § 141.57 that includes the general requirements of Appendix D, Commercial Pilot Certification Course. The complex airplane used in such a course must have flaps, a controllable propeller, and floats. The use of an amphibian airplane in a commercial pilot certification or course could qualify a student for both a land and sea-class rating, provided the TCO was so approved.

5) A variety of airplanes are used in pilot training. Some are uncomplicated while others are more complicated, and their checklists vary accordingly. The requirements for a checklist defined in the terms of “pretakeoff” and “prelanding” in § 141.75(a) are broad and allow less complicated aircraft to be equipped with relatively simple checklists. The FAA expects (because of good operating practices) that schools should expand checklists for aircraft that are more complicated.

6) Under § 141.75, when the manufacturer provides a pilot’s operating handbook (POH) or Aircraft Flight Manual (AFM), it (or a copy) must be carried aboard the aircraft. The primary purpose of carrying the handbook (or a copy) aboard the aircraft is to provide the pilot with information such as performance data, servicing instructions, and Weight and Balance (W&B) information. Some handbooks contain checklists that may be useful in developing a standard checklist. They should be available to the pilot during emergency procedures training or an actual emergency, particularly when there is only one pilot aboard the aircraft.

7) The training syllabus should clearly state the full extent that an approved training course uses an ATD, FTD, and/or full flight simulator (FFS). The objectives to be achieved in using the device or simulator should be well-defined.

8) Section 141.41(a) prescribes the requirements that may be used to obtain the maximum flight training credit allowed for flight simulators in an approved pilot training course.

a) Section 141.41(b) provides for the use of FTD that do not meet the more complex requirements of § 141.41(a). A large number of training devices currently being used by pilot schools do not meet all of the requirements proposed in § 141.41(a). In recognition of the fact that these devices can be used to provide effective instruction in certain operations,

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provisions for their use have been made. Once again, however, it is imperative that the training syllabus clearly defines their use and learning objectives.

b) Because of limitations, full credit against flight time is not allowed for instruction in FTDs not meeting all of the requirements proposed in § 141.41(a). The provisions in part 141 allow credit for instruction in FTDs and ATDs for a certain percentage of the credit of the training time.

c) Discretion must be used when approving a training syllabus that substitutes instruction in an FTD or flight simulator for the flight time required in a complex airplane. Any use of an FFS or FTD in lieu of flight time in a complex airplane must be justified with clearly stated objectives in the training syllabus that are applicable to the skills expected to be learned in a complex airplane. Approval of the TCO must be based on the ability of the FFS or FTD to provide effective training for a complex airplane.

d) Guidance from the National Simulator Program Branch (AFS-205) in Atlanta, GA, may be needed to approve a school's FFS or FTD. An ATD requires a letter of authorization (LOA) issued by General Aviation and Commercial Division (AFS-800).

e) In addition to the permitted use of FFSs and FTDs that are covered in the appendixes of part 141, part 61, § 61.4 also covers the approval of FFSs, FTDs and ATDs.

f) A pilot school may submit a course curriculum that exceeds the permitted time credits for ATDs, FTDs, or FFSs. In general, a training provider should not be discouraged from providing additional training in these devices. However, when a TCO contains time that exceeds the maximum credit allowed for an ATD, FTD, and/or FFS, only the time permitted by the appropriate appendix to part 141 or by the device's LOA/approval, as appropriate, can be credited to meet the minimum aeronautical experience requirements for that certificate or rating. The FAA LOA may not exceed a regulatory limitation. For example, if the aeronautical experience requirements permit 5 hours in a training device to be credited, the device's LOA/approval cannot be used to authorize crediting of more than 5 hours toward the minimum aeronautical experience requirements.

D. Flight Instructor Responsibilities. Part 141 requires all flight instructors employed by a school to be qualified to teach each course of training they are assigned. Certain knowledge and proficiency tests, to be accomplished before being assigned to an approved course of training, are also prescribed. If the chief instructor or assistant chief instructor also flight instructs in the course they are assigned to, they must also comply with this section.

1) The instructor must satisfactorily accomplish a flight check for each course of training taught.

a) This flight check is given to the instructor by the designated chief instructor, assistant chief instructor, or check instructor.

b) The instructor must accomplish a flight check every 12 months thereafter for each course of training the instructor participates in.

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c) The pilot school must maintain a record of these flight checks to show compliance with § 141.79(d).

2) The instructor must satisfactorily accomplish a one-time practical test in each type of aircraft (e.g., Cessna 150, Cessna 172) before giving any flight instruction in the particular aircraft.

3) The chief instructor, assistant chief instructor, or check instructor must brief all instructors teaching that course on the objectives and standards of the course.

a) The pilot school must maintain a record verifying this briefing to show compliance with §§ 141.79(d) and 141.81(c).

b) At any time, an inspector may ask an instructor to explain the objectives and standards of an approved course.

4) The instructor must maintain records of instructor briefings and instructor practical tests in either a logbook or in the permanent school records at the home base of operations.

5) Student pilots cannot be authorized to start a solo practice flight from an airport until an authorized flight instructor, who is present at the airport, has approved the flight. Solo cross-country flights, when properly dispatched from the originating airport, are considered to have approval for the entire flight (§ 141.79(b)).

a) If unexpected weather or mechanical problems delay a student en route or a student intends to remain overnight, the school should either:

- Arrange for another instructor based at the point of delay to dispatch the flight, or
- Have a school instructor dispatch the flight by telephone.

b) Cross-country flights should be made to specific airports that the school determines are suitable. The operator may wish to provide students with a list of these suitable airports or include the list in the appropriate TCO.

E. Other School Personnel. Section 141.33 states that an applicant for a pilot school or provisional Pilot School Certificate must show that there are adequate personnel and authorized instructors, including a chief instructor, for each course of training. All instructors (flight or ground) must be qualified and competent to perform their assigned duties.

1) In addition, each dispatcher, aircraft handler, line crewman, and serviceman to be used must have been instructed in the procedures and responsibilities of employment. The inspector should recommend that the pilot school keep a record of this instruction in the employee's personnel file.

2) A pilot school may elect to use verbal instructions, manuals, or any other means to ensure that dispatchers, aircraft handlers, line crewmen, and servicemen are knowledgeable

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and capable of performing their assigned duties. A school needs to provide only the employees necessary to conduct training adequately.

2-1073 CERTIFICATION PHASE.

A. Ratings. FAA Form 8000-4 must list the various pilot school ratings for which a pilot school/provisional pilot school qualifies under §§ 141.11 and 141.57, if applicable. These ratings do not specifically address each approved course of training that a school may be authorized to give. Under the broad listing of pilot school ratings found in §§ 141.11 and 141.57, if applicable, a school could be authorized to conduct nearly a hundred different courses.

B. Approved Courses. The certification team issues a list of approved courses of training, identifying each authorized course by its title, along with the FAA Form 8000-4. All courses must conform to the ratings listed in §§ 141.11 and/or 141.57.

1) The list is typed on FAA stationery, in a format similar to that shown in Figure 2-65, Sample List of Approved Courses, and signed by the FSDO manager. The original is given to the school and a copy placed in the FSDO file.

2) If a list of approved courses is amended, the original is returned to the jurisdictional FSDO. The list remains in effect until it is amended or the school certificate is expired, surrendered, suspended, or revoked.

2-1074 SCHOOL ENROLLMENT AND GRADUATION.

A. Enrollment. When a certificate holder enrolls or reenrolls a student in an approved course of training, § 141.93 requires the student be furnished the following information and materials:

1) A certificate of enrollment containing the name of the course the student is enrolled in and the date of enrollment.

2) A copy of the training syllabus required under § 141.55(c)(7).

3) A copy of the safety procedures and practices developed by the school, such as procedures for the use of training aids, off-limit areas, handling of aircraft, parking instructions, and other safety instructions that the school deems necessary. These safety procedures must include the following:

a) The weather minimums required for dispatching dual and solo flights. For example, minimum ceiling visibility and wind velocities for local flights and specific weather minimums for cross-country flights;

b) The procedures for starting and taxiing aircraft on the ramp;

c) The precautions and procedures for aircraft fire;

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d) The redispatch procedures after unplanned landings on and off airports. This should include emergency security of the aircraft and a list of telephone numbers of persons to contact;

e) The procedures for listing aircraft discrepancies and how corrective action is taken, including the importance of not using an aircraft with a listed discrepancy until a properly qualified person determines its airworthiness;

f) The securing of aircraft when not in use;

g) The fuel reserves necessary for local and cross-country flights;

h) The avoidance of other aircraft in flight and on the ground;

i) The minimum altitude limitations certain minimum altitudes may be specified for teaching and practicing stalls or other maneuvers;

j) The instructions concerning simulated forced landings. Instructions should be clear on simulated emergency landings with respect to engine cooling down during prolonged glides, proper engine leaning, proper procedures for setting zero thrust, engine response with rapid throttle application, and a specific minimum altitude for terminating simulated emergency landings and other instructions deemed necessary by the school;

k) The assigned practice areas, including descriptions and diagrams of the areas and special instructions with respect to how to operate in them, how to get to them, and minimum altitudes en route; and

l) Any instructions or guidance that the school believes necessary to provide the highest standards of safety and operational control expected of an FAA-approved school.

B. Credit for Previous Training. When a student transfers from one FAA-approved school to another approved school, course credits obtained in the previous course of training may be credited in accordance with § 141.77 by the receiving school. However, the receiving school must determine the amount of credits to be allowed by flight check or knowledge test or both. Credit for ground school only instruction may be determined by an oral examination.

1) A student may not be credited with more training by the receiving school than was credited at the school the student transferred from.

2) A student who enrolls in a course of training may receive credit for 25 percent of the curriculum requirement for knowledge and experience gained in a noncertificated flight school.

3) The amount of credit for previous training allowed, whether received from an FAA-approved school or other source, must be placed in the student's enrollment record at the time of enrollment.

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4) Transferred documentation must be made a part of the receiving school's permanent record.

5) When a student transfers from one FAA-approved school to another, or terminates training for any reason, the student must be given, upon request, a transcript of the results of the student's participation in that course of training. This transcript should be signed by the chief instructor of the course and should consist of at least the following:

- Name of the school that gave the training, including the school's certificate number, if applicable;
- Kind of training given (dual, solo, aeronautical knowledge school, ATD, time, etc.);
- Course or courses taken;
- Result of each stage and final test given; and
- Statement that the student was enrolled in that school's approved course of training before receiving the certified instruction and training.

C. Training Records. Each pilot school and provisional pilot school must keep accurate and current records of each student's participation and accomplishments in an approved course.

1) A student's personal logbook is not considered an acceptable record under § 141.101.

2) For each student, the training record should include:

- The date of the student's enrollment.
- A chronology of the student's attendance, subjects, and flights.
- The names and grades of any tests taken.
- The date of graduation, termination of training, or transfer.

3) The record should also show the credit allowed for a student transferring from another school, if applicable.

4) Whenever a student graduates, terminates training, or transfers, the chief instructor must certify the record.

5) Pilot schools must retain each student's record for at least 1 year from the date the student graduates, terminates a course, or transfers to another school.

6) On a student's request, a pilot school must make a copy of a student's record available to the student. The pilot school must also permit the FAA to view any or all student records upon request.

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2-1075 RENEWAL, AMENDMENT, CANCELLATION.

A. Renewal. A pilot school or provisional Pilot School Certificate, and any associated ratings or examining authority on that certificate, expires at the end of the 24th month after the month it was issued.

1) Application for renewal of an FAA Form 8000-4 must be made at least 30 days before the certificate expires.

a) Application is made by submitting two copies of FAA Form 8420-8, completed as shown in Figure 2-66.

b) A school may apply for the renewal of any or all of the courses (TCOs) it holds, and/or it may apply for the addition of new courses.

c) Examining authority should be renewed at the same time the school certificate is renewed.

d) An institution of higher education that holds a valid LOA issued by AFS-800 that gives it the authority to certify its graduates meet the reduced aeronautical experience requirements for an ATP Certificate will have the LOA revalidated for content and currency.

2) A school must meet the same requirements for renewal as for original certification. Therefore, upon the receipt of an application for the renewal of a school certificate, the jurisdictional FSDO should conduct the same evaluation of qualifications and inspection of facilities as required for original certification. However, if the FSDO is very familiar with the school's operation or has recently inspected it, there may be no need for an extensive reinspection or for reexamination of instructors. The FSDO always has the option of a full inspection.

3) When all requirements are met, a new FAA Form 8000-4 is issued and is valid for additional 24 calendar-months. The original certificate number is reissued and the provisional pilot school's enhanced Vital Information Database (eVID) is appropriately updated.

a) Renewal of Pilot School Certificates and ratings is discussed in § 141.27. If a pilot school does not meet the recent training ability and quality of training requirements of § 141.5(d) and (e), but otherwise meets the requirements of § 141.7 at the time of renewal, the FSDO may issue a provisional Pilot School Certificate and the eVID would be updated to reflect the change. However, a school with examining authority and/or reduced time courses loses examining authority and/or reduced time courses when downgraded to a provisional school.

b) If, after another renewal period (24 calendar-months), the school still does not meet the requirements of § 141.5(d) or (e), the school must wait a period of 180 days before reapplying for certification as a provisional school. All training conducted during that 180 days must meet the requirements of part 61, including passing knowledge and practical tests for certificates or ratings.

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NOTE: In the event a provisional pilot school that is associated with an institution of higher education does not meet the requirements specified in § 141.5 at the time of certification expiration, the POI will notify the appropriate specialist in the regional technical branch of the pilot school's status. The regional technical specialist will consult with AFS-800 to address, on a case by case basis, students enrolled in the curriculum that may qualify them for an ATP Certificate with reduced aeronautical experience. Refer to § 61.160.

4) In the event any requirement for a specific rating or approved course of training is not met, the ratings for all requirements that are met may be renewed and a new certificate issued bearing only these ratings.

a) If renewal of a rating is denied or a course of training does not meet the appropriate requirements, the applicant is notified in writing of the reasons for the denial of the rating.

b) In addition, the school must be advised, in writing, that continued training in any course of training in question cannot be used to meet 14 CFR part 141 requirements until appropriate changes are made and the courses again meet the requirements of part 141 (Figure 2-67, Notice of Course Cancellation).

5) A new list of approved courses should be issued with the same expiration date as the Air Agency Certificate (Form 8000-4).

6) Any change in the overall status of the certificate for a provisional pilot school or pilot school (e.g., the need to reissue a provisional Pilot School Certificate) associated with an institution of higher education that has the authority to certify its graduates are eligible for a reduced aeronautical experience ATP Certificate, must be conveyed to the appropriate specialist in the regional technical branch. The technical specialist will consult with AFS-800 to determine if the school's status change affects the authority of the institution of higher education.

B. Amendment. Application for amendment of an FAA Form 8000-4 is made to the jurisdictional FSDO. The FAA can also initiate the amendment under Title 49 of the United States Code (49 U.S.C.) and 14 CFR part 13.

1) Application for the approval of a course of training that results in the addition of a rating to an FAA Form 8000-4 is made by submitting two copies of FAA Form 8420-8 with the amendment checked as shown in Figure 2-68, FAA Form 8420-8, Application for Pilot School Certification, Filled Out for Amendment, two copies of the course of training, and a cover letter requesting approval of the course.

a) After review of the course, an inspection of the school's facilities and personnel should be made, as necessary, to ensure that training can be conducted in accordance with the proposed course, before it is approved.

b) If the school inspection is satisfactory, a new FAA Form 8000-4 bearing the new ratings will be issued, along with an amended list of approved courses. The amended certificate should bear the original number, the original expiration date, and the reissue date.

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2) An application for the deletion of a rating from an FAA Form 8000-4 may be accepted in the form of a letter from the certificate holder.

a) Such a letter must be signed by a person authorized to sign for the school, such as the person who signed the original application or a person in a similar position in the school.

b) No inspection is required for deletion of a rating.

c) The FSDO issues a new certificate bearing the original number, the original expiration date, and a reissue date. The deleted rating is omitted from the certificate and a new list of approved courses is issued. The old certificate should be retained in the FSDO school file for 2 years.

3) A change in the ownership of a pilot school does not terminate that certificate if the new owner applies for an appropriate amendment to the certificate by submitting two copies of FAA Form 8420-8 within 30 days after the date that the change in ownership occurs. The new ownership may not involve a change in the facilities, instructor personnel, or training course.

4) A change of ownership involving a change in the school facilities, instructor personnel, or training courses terminates the school certificate. The school may be issued another certificate when it demonstrates that it meets all the requirements for original certification.

5) When a certificated school changes its name only, and the name change involves no change in ownership, facilities, instructor personnel, or training courses, a new certificate is issued in the new name, bearing the same certificate number, ratings, and original expiration date. An inspection is not required under such circumstances.

6) An application for an amendment to a previously approved special curriculum or TCO is made by submitting two copies of the curriculum or outline pages to be amended to the jurisdictional FSDO.

a) Each proposed amendment should be accompanied by a cover letter explaining the basic changes, the intent, and requesting FAA approval.

b) Approval or disapproval is accomplished in the same manner as the original approval or disapproval.

c) If a certificate amendment requires an inspection of the aircraft to be used, all specialists should sign FAA Form 8420-8 under the “Recommendations of Inspector(s)” block.

7) Any changes to the pilot school that would cause the certificate holder to no longer be able to offer training for the instrument-airplane rating or the commercial pilot certificate in the airplane category must be conveyed to the regional technical specialist. The regional technical specialist will consult with AFS-800 for any additional action.

C. Cancellation. An FAA Form 8000-4 can be canceled by the school or by the CHDO as the result of actions taken under 49 U.S.C. and part 13.

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1) The jurisdictional FSDO may suspend or revoke FAA Form 8000-4 on any grounds that would be a cause for denying an application for the original certificate. In such a case the certificate must be surrendered to the FAA in a manner prescribed by the regional counsel.

2) The holder of an FAA Form 8000-4 may request cancellation of the certificate or any rating at any time. The request should be submitted in writing to the jurisdictional FSDO, accompanied by the FAA Form 8000-4 to be canceled. The request must be signed by the person or persons authorized to sign for the certificate holder.

a) If there is no violation action pending or contemplated against the school, the FSDO may accept the certificate for cancellation.

b) If enforcement action is pending or contemplated, the applicant should be advised that acceptance for cancellation must await the decision of the regional counsel and that the school will be notified of the action taken. The school's request should then be forwarded to the regional counsel's office with a summary of the circumstances under which it was submitted. Cancellation should be effective only after clearance is received from that office.

3) If a request for the surrender of a rating or ratings on an FAA Form 8000-4 is accepted, a new certificate should be issued bearing the ratings that remain valid and the original expiration date.

4) A cancellation, suspension, or revocation of FAA Form 8000-4 issued to a pilot school associated with an institution of higher education that has the authority to certify its graduates are eligible for a reduced aeronautical experience ATP Certificate, must be conveyed to the regional technical specialist. The regional technical specialist will consult with AFS-800 for any additional action.

2-1076 PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. Requires knowledge of the regulatory requirements of part 141 and FAA policies, and qualification as an ASI (Operations).

B. Coordination. Requires coordination with the airworthiness unit, the Aviation Data Systems Branch (AFS-620); Airman Testing Standards Branch (AFS-630); and possibly the National Simulator Program (AFS-205).

2-1077 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- 14 CFR Parts 1, 11, 61, 91, 97, and 141;
- Advisory Circular (AC) 61-136, FAA Approval of Aviation Training Devices and Their Use for Training and Experience;
- AC 61-138, Airline Transport Pilot Certification Training Program;

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- AC 61-139, Institution of Higher Education's Application for Authority to Certify its Graduates for an Airline Transport Pilot Certificate with Reduced Aeronautical Experience;
- AC 120-40, Airplane Simulator Qualification; and
- AC 141-1, Pilot School Certification.

B. Forms:

- FAA Form 8000-4, Air Agency Certificate (Figure 2-5), and
- FAA Form 8420-8, Application for Pilot School Certificate (Figures 2-63, 2-66, 2-68, and 2-69).

C. Job Aids:

- Sample letters and figures, and
- Job Task Analysis (JTA): 3.4.7, 3.4.9, 3.4.11, 3.4.13, 3.4.17, 3.4.18, 3.4.20, 3.4.21, 3.4.22, and 3.4.23.

2-1078 PREAPPLICATION PHASE PROCEDURES.

A. Initial Inquiry. Upon initial inquiry from an applicant, determine the following:

- The identity of applicant and address of the principal base of operations,
- Any intended satellite base,
- The type of ownership (private, corporate, etc.),
- The proposed curriculum,
- The types of aircraft,
- The intended chief instructor and that instructor's experience level,
- The possible use of ATDs,
- The possible use of commercially-produced syllabuses,
- If the operator intends to request examining authority for renewing or amending only, and
- If the operator intends to use contract training.

B. Applicant Resources. Ensure the applicant has current copies of parts 61, 91, and 141 and AC 141-1. If there is any question, explain:

- The general applicability and definition of terms.
- The certification requirements.
- The operating rules of part 141.
- The required records and reports.

C. PTRS. Open PTRS file.

D. Letter of Intent. Request a letter of intent from the applicant. (See subparagraph 2-1079E below for content of letter of intent and Figure 2-70 for a sample.)

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E. FSDO Review of Letter of Intent. Within 30 working-days of the FAA's receipt of a letter of intent, review it to determine that it provides sufficient information for the certification process to continue. The letter of intent should contain the following:

- A statement of intent to become an approved pilot school under part 141;
- Company legal name and any doing business as (DBA) name, principal operations base address, primary airport address, mailing address (if applicable), and telephone numbers;
- Makes and models of aircraft, how many of each, and N-numbers;
- Estimated date when operations will begin;
- Training courses to be offered;
- Name and qualifications of the proposed chief instructor and any assistant chief instructors;
- Intent to use simulators/training devices;
- Intent to use personal computers for knowledge testing (for examining authority only); and
- Three three-letter designators (in order of preference).

F. Application. Based on the review of the letter of intent, if the applicant appears to meet the basic eligibility requirements, give the applicant at least three copies of FAA Form 8420-8.

1) Discuss how to complete these forms. Advise the applicant to review AC 141-1 and the regulations before completing and returning the application to the jurisdictional FSDO.

2) Advise the applicant to submit the original and copies with original signatures.

3) Explain the certification process to the applicant, including the requirements for:

- The Preapplication Phase,
- The Formal Application Phase,
- The Document Compliance Phase,
- The Demonstration and Inspection Phase, and
- The Certification Phase.

G. Preapplication Meeting.

1) Determine if a preapplication meeting is necessary, based on the following considerations about the applicant:

a) Any previous part 141 operating experience;

b) The size and scope of operation;

c) The area of operation; and

d) The applicant's apparent ability to comply with requirements.

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2) If a preapplication meeting is not necessary, schedule a date and time for a formal application meeting.

3) If a preapplication meeting is necessary, schedule a date and time. At the meeting, discuss the following:

- The area of operation (primary airport and any satellite bases),
- The operation as an individual, corporation, or partnership,
- Any previous experience with part 141 operations,
- The categories and classes of aircraft to be used in training courses,
- The number and types of training courses to be offered,
- The possible need for any waivers or exemptions,
- The qualifications and experience of instructors,
- The applicability of parts 61, 91, and 141,
- AC 141-1, and
- Any previous or pending enforcement actions against the applicant or proposed personnel.

H. Establish a FSDO Working File. This file will form the basis for the eventual operator file if certification is successful. Place any correspondence, documents, etc., in this file.

I. Other FSDO Actions. Follow office procedures to contact the Enforcement Information System (EIS) and Accident Incident Data System (AIDS) to determine the applicant's enforcement and accident history as well as that of the proposed chief instructors and any other proposed management personnel.

1) If a certificate suspension or revocation is in effect, inform the applicant in writing (Figure 2-71) that until the enforcement action is fulfilled, the applicant is ineligible for certification.

2) Place the EIS/AIDS output in the file.

J. Terminating the Preapplication Phase. This ends the preapplication phase. The formal application phase begins with the receipt of the completed application form.

2-1079 FORMAL APPLICATION PHASE PROCEDURES. Within 30 working-days of receiving an application, the certification team should review it and determine whether it is of sufficient quality to proceed with certification.

A. Application Review. Review the application only to determine if it is of sufficient quality to continue with certification (i.e., the applicant supplied enough information on the application and/or letter of intent). Review it in depth during the document compliance phase. An example of a properly completed application for an initial certification is shown in Figure 2-69.

B. Application Incomplete or Inaccurate. If the application is not complete or not accurate, notify the applicant in writing (Figure 2-72) of changes needed before certification can continue. Return the application for any necessary corrections.

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C. Need for Formal Application Meeting. Determine if the optional formal application meeting is necessary.

1) If a formal application meeting is not necessary, schedule the certification inspections. Review the procedures required during the demonstration and inspection phase with the applicant.

2) If a formal application meeting is necessary, schedule a date and time.

D. Formal Application Meeting.

1) Discuss the following items that would have been covered in a preapplication meeting, if none was conducted:

- The application.
- The SOE, if applicable.
- The TCOs and syllabuses.
- The personnel, aircraft, and facility requirements.
- The simulator/training device approval requirement.
- An inspection of facilities related to any contractual training agreements.
- Section 141.23, Advertising limitations.

2) Discuss any discrepancies in the application and their corrective actions.

3) Discuss the requirements that must be met during the demonstration and inspection phase.

E. Terminating the Formal Application Phase. This completes the formal application phase. The next phase is the document compliance phase.

2-1080 DOCUMENT COMPLIANCE PHASE PROCEDURES. After accepting the application, the team ensures each document is complete and correct through an in-depth review.

A. Document Review. The certification team evaluates the following items.

1) Check the Application. (Note that the blocks on the application are not numbered.) Check that the application contains the following information (beginning with upper left corner):

a) The legal name and any appropriate DBA of the proposed school, telephone number, address of the principal business office, location of the main operations base, and the location of any satellite bases;

b) Whether the application is for original issuance, approval of satellite base, or change of name or ownership, appropriate boxes should be marked for issuance, renewal, or amendment of the certificate;

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c) An indication of the training courses for which approval is sought. Check the space provided on the reverse of the form for additional courses;

d) The application is signed and dated in the last section by the applicant or authorized officer (original signatures on each application form):

- A person acting as an individual should personally sign the application.
- All partners should sign an application from a partnership.
- An officer who is authorized by the corporation by-laws and certified by the corporate secretary should sign an application from a corporation.
- The president or other such officer or director should sign an application from a company, club, or association, as authorized by the organization's secretary.

e) The next section is for FAA use only. Confirm that the applicant did not mark it.

2) Check the qualifications of all proposed chief instructors, assistant chief instructors, and check instructors for each course that approval is sought for and the qualifications of all other instructors. Refer to §§ 141.35, 141.36, and 141.37.

a) If not already accomplished, following office procedures, contact EIS to determine the chief instructor's, assistant chief instructor's, and other instructors' enforcement, accident, and incident histories.

b) Verify employment history pertaining to parts 61 and 141, and other related aviation experience.

3) Evaluate the TCOs. (See Volume 3, Chapter 53, Section 2, Approve Training Course Outlines for a Part 141 Pilot School.)

4) Evaluate any commercially-developed or FAA/Industry Training Standards-developed training syllabuses. Ensure that:

- The school fully understands the objectives and standards of the commercially-developed or FAA/Industry Training Standard-developed training syllabuses.
- The school can actually give the training in the manner described in the syllabus.
- The syllabus contains all required pilot operations for the related course.
- The syllabus and related training aids are on a current revision schedule.

5) Evaluate the special curriculum. Special curriculums developed under § 141.57 must be evaluated with flexibility in mind. Special curriculums may be used in experimental curriculums under research and development. When approving special curriculums, the inspector must ensure that the curriculums cover the aeronautical knowledge areas and flight proficiency areas of operations listed in the appropriate appendixes of part 141. The inspector must

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determine that objectives, content, and completion standards are not less than those contained in the appropriate practical test standards.

6) Check the aircraft checklists, minimum equipment lists, safety practices and procedures, etc., when applicable. (Refer to §§ 141.75 and 141.95.)

7) Check the graduation certificates required by § 141.95 to ensure that they contain at least the information indicated in § 141.95(b).

8) Ensure that the applicant can track enrollment information (i.e., that the student was enrolled in the school's approved course of training before receiving the instruction and training that is certified).

9) Review the maintenance program (airworthiness).

B. Unsatisfactory Items. If there are any unsatisfactory items, advise the applicant in writing that they must be corrected before certification can continue.

1) Place a reasonable time limit on when the corrections must be completed.

2) If the applicant does not respond within 90 days of the time limit, send the entire application package back to the applicant with a cover letter stating that the certification process is terminated.

3) Put appropriate work entry in PTRS.

C. Terminating the Document Compliance Phase. When all documents are satisfactory, conclude the document compliance phase and arrange scheduling for the demonstration and inspection phase.

2-1081 DEMONSTRATION AND INSPECTION PROCEDURES. During the demonstration and inspection phase the team must ensure these steps are accomplished:

A. Conduct Chief Instructor Practical Tests. Administer practical test to the chief instructors and any assistant chief instructors. (See Volume 5, Chapter 12, Section 1, Conduct a Chief/Assistant Chief Instructor Practical Test for Federal Aviation Regulations Part 141 Pilot School.)

B. Recordkeeping Requirements. Inspect the applicant's recordkeeping system for compliance with §§ 141.67, 141.77, 141.85, 141.93, and 141.101.

C. Inspect Aircraft. The airworthiness inspector conducts the aircraft conformity inspection. Operations inspectors may examine each aircraft for the requirements of § 141.75.

D. Conduct a Base Inspection. See Volume 6, Chapter 7, Section 1, Conduct Facility Inspection of a Part 141 Pilot School.

E. Inspect Satellite Bases. See Volume 6, Chapter 7, Section 1, and § 141.91.

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F. Inspect Flight Simulators, FTDs, Training Aids, and Other Equipment. Refer to §§ 141.41 and 141.45. If a simulator must be approved, contact AFS-205.

G. Terminating the Demonstration and Inspection Phase. When all demonstrations and inspections are complete, the demonstration and inspection phase is concluded.

1) If any demonstrations are unsatisfactory, advise the applicant immediately of corrective actions. If necessary, confirm the discrepancies in writing (Figure 2-73). Reschedule the inspections accordingly.

2) When all demonstrations and inspections are satisfactory, proceed with the certification phase.

2-1082 CERTIFICATION PHASE PROCEDURES. When all certification requirements have been met, obtain an Air Agency Certificate number. (See Volume 2, Chapter 1, Section 3, Safety Assurance System: Obtaining and Constructing Certificate/Designator Numbers.)

A. Complete Inspection Reports and Job Aids.

1) On the application, in the section marked, "For FAA Use Only," indicate approval, provisional pilot school or pilot school, effective date of the certificate, and expiration date of the certificate. Indicate if the task was a renewal or amendment to a certificate, if applicable. Make any necessary comments and sign the application. The POI assigned to that pilot school will then sign and date the application.

2) Ensure all items on the certification/inspection job aid are resolved. Initial the job aid and place in the FSDO file.

B. Prepare and Issue the Air Agency Certificate. Use FAA Form 8000-4 (Figure 2-5).

1) Enter the certificate holder's full legal name directly below the words "This certificate is issued to." Show other names (such as any DBA) on the certificate. If necessary, list DBAs on a separate, attached letter (Figure 2-74).

2) Enter the address of the certificate holder's base of operations directly below the certificate holder's name. Use a post office box address only if the address reflects the physical location of the base of operations.

3) Enter the certificate number, as obtained in Volume 2, Chapter 1, Section 3, on the certificate.

4) Enter the date all requirements for certification are met.

5) Enter the four-character, alphanumeric designator and city and state of the jurisdictional FSDO under the signature line of the form (for example, EA21, Richmond, VA).

6) Submit the certificate to the FSDO manager for signature.

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a) Use the full title of the person signing the certificate.

b) Enter the acronym of the region, the FSDO acronym and number in the "region/office" space (for example, WP FSDO 04).

C. Prepare List of Approved Courses. Prepare a list of approved courses (Figure 2-65) and issue with the Air Agency Certificate.

D. Certificate Denial. If any certification requirement is not met, issue a letter of denial (Figure 2-75). Specify reasons for denial. On the application, in the section "For FAA Use Only" indicate disapproval. Make any necessary comments and sign. Have the FSDO manager sign and date the application.

E. Certification Report. Assemble a certification report containing the following:

- A copy of the letter of intent, if applicable,
- A certification job aid (Figure 2-76),
- The application,
- The SOE (Figure 2-77),
- A copy of the Air Agency Certificate issued, and
- A summary of any difficulty encountered during certification and its resolution.

F. Minimum Equipment List (MEL). Issue an LOA to operate with an MEL, if applicable (See Volume 4, Chapter 4, Section 2, Approve a Minimum Equipment List for a 14 CFR Part 91 Operator).

G. All Appropriate Information in the eVID Air Agency Basic File.

H. FSDO File. The certification program manager must ensure an official office file is established after certification is complete. The file must contain at least the following:

- The material from any working file used up to this point, including the TCO and syllabuses,
- The certification report and attachments,
- The EIS/AIDS profile on applicant and personnel, including a negative report, if applicable,
- The approved MELs, if applicable,
- The surveillance reports, and
- All general correspondence relevant to the school or the FAA.

I. PTRS. Make final PTRS work entry for this task.

2-1083 TASK OUTCOMES. Completion of the task results in either:

A. Certificate. A certificate issued that authorizes operations under part 141.

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B. Record. A record on file consisting of the following:

- Written notification to the applicant denying the certificate, and
- Indication of the return of all documents to the applicant.

C. Letter Confirming Termination. A letter to the applicant confirming termination of the certification process per the applicant's request (Figure 2-78).

2-1084 FUTURE ACTIVITIES.

A. Develop Post-Certification Plan. When developing a post-certification plan, perform additional surveillance or inspections during the first 90 days the organization is in business. This may require assistance from other FSDOs.

B. Conduct Surveillance. According to the established post-certification program, conduct surveillance at appropriate intervals.

C. Renewal of Certificate. Conduct a renewal certification every 2 years.

D. Amendment of Certificate. Amend the Air Agency Certificate at the operator's request or the FAA's determination.

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Figure 2-5. FAA Form 8000-4, Air Agency Certificate

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

Air Agency Certificate

Number
(Enter cert. number obtained from AFS-620)

This certificate is issued to
(Enter name of school)
Whose business address is
(Enter address of main base of operations)

upon finding that its organization complies in all respects with the requirements of the Federal Aviation Regulations relating to the establishment of an Air Agency, and is empowered to operate an approved
(Enter the appropriate kind of school)

With the following ratings:

(List all the ratings the pilot school or provisional pilot school is authorized for)

This certificate, unless cancelled, suspended or revoked, shall continue in effect
(Date 24 calendar-months from date of issuance)

Date issued: *By direction of the Administrator*

(MMM DD, YYYY) (Have district manager sign)

This Certificate is not Transferable, AND ANY MAJOR CHANGE IN THE BASIC FACILITIES OR IN THE LOCATION THEREOF, SHALL BE IMMEDIATELY REPORTED TO THE APPROPRIATE REGIONAL OFFICE OF THE FEDERAL AVIATION ADMINISTRATION.

Any alteration of this certificate is punishable by a fine of not exceeding $1000, or imprisonment not exceeding 3 years, or both.

FAA FORM 8000-4 (1-67) SUPERSEDES FAA FORM 390 AFS ELECTRONIC FORMS SYSTEM–V 2.2

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Figure 2-62. Letter Disapproving Special Curriculums or TCOs

FAA Letterhead

[Date]

Carolyn Brannon
Brannon Aviation
Fairfax Airport
P. O. Box 123
Fairfax, VA 23456

Dear Ms. Brannon:

We are unable to approve your [name of course] training course outline (TCO) [or special curriculum] for the following reasons:

_____
_____
_____
_____
_____

All other TCOs [and/or special curriculums] have been approved and are reflected in your list of approved courses. If you wish to continue to seek approval for the [above course or special curriculum], you may reapply when appropriate corrections have been made.

Sincerely,

[POI's Signature]

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Figure 2-63. FAA Form 8420-8, Application for Pilot School Certification

US Department of Transportation
Federal Aviation Administration

APPLICATION FOR PILOT SCHOOL CERTIFICATION

Form approved: OMB No. 2120-0009

CERT NO. *For FAA Use Only*

APPLICANT - Read submittal and signature instructions on reverse.

NAME OF SCHOOL	TELEPHONE NO.	ADDRESS OF PRINCIPAL BUSINESS OFFICE
C. Brannon d/b/a Brannon Aviation	(555) 345-3456	13206 Poplar Tree Road, Fairfax, VA 11234

LOCATION OF MAIN OPERATIONS BASE	LOCATION OF SATELLITE BASE(S)
Fairfax Airport, Fairfax, VA	Centervill Airport

APPLICATION IS HEREBY MADE FOR: **Approval of Satellite Base**

☐ Issuance of a Pilot School Certificate and associated ratings to conduct the training courses identified below, and for the approval of these courses (*three copies of each course outline are attached*); also, examining authority is requested for the courses appropriately checked.

☐ Renewal of a Pilot School Certificate and associated ratings currently numbered _____, which expires on _____
☐ without changes to the currently approved course outlines, ☐ with addition of course(s) identified below for which approval is requested (three copies of each course outline is attached), including request for examining authority for the course(s) appropriately checked; ☐ with deletion of course(s) identified below from the curriculum.

☐ Amending the current Pilot School Certificate and associated ratings numbered _____, which expires on _____
☐ by adding the course(s) identified below for which approval is requested (three copies of each course outline are attached), including request for examining authority where appropriately checked; ☐ for deletion of the course(s) identified below from the curriculum.

IDENTIFICATION OF TRAINING COURSES

NOTE: Where examining authority for a course is desired, place and "X" in the box adjacent to the course identification. s

☐	☐
☐	☐
☐	☐
☐	☐
☐	☐
☐	☐

(If more space is needed, continue on reverse in space provided)

I (WE) certify that I am (we are) familiar with Part 141 of the Federal Aviation Regulations, and, to the best of my (our) knowledge, believe that my (our) school meets the requirements for certification as prescribed therein.

Signature and Title(s): *Carolyn S. Brannon*
Carolyn S. Brannon
Owner

Nov 1, 2006
Date

FOR FAA USE ONLY

☒ APPROVED- ☐ a Provisional Pilot School Certificate ☐ a Pilot School Certificate, either with associated ratings bearing the number shown above is issued effective _____ and which expires on _____
☐ Renewal ☐ without amendments ☐ with amendments ☐ Amendments

☐ DISAPPROVED

SIGNATURE OF APPROVING OFFICIAL	TITLE	DATE
Donal L. Jones	Supervising Inspector	Jan 29, 2007

FAA Form 8420-8 (1-82)

Recommendations of Inspector(s) on reverse

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Figure 2-64. Letter Denying Satellite Base

FAA Letterhead

[Date]

[Applicant's Name and Address]

Dear [Name]:

We are unable to approve your application for a satellite base at [location] for the following reasons:

[List reasons]

When you feel your organization meets the certification requirements for a satellite base, you may reapply to this office.

Sincerely,

[POI's Signature]

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Figure 2-65. Sample List of Approved Courses

FAA Letterhead
[Date]
[Name and Address of School]

Dear [Name]:

[Name of School] is authorized under Air Agency Certificate No. [Certificate Number] to conduct training courses under the following Pilot School Ratings:

[List each authorized Pilot School rating in bullet form] *Examples follow:*

- Private Pilot Course
- Commercial pilot course
- Instrument Rating Course
- Additional Aircraft category or Class Rating Course Special Curricula

The following are a list of authorized courses this school may conduct under each Pilot School Rating.

Rating: [List Pilot School Rating]
Course: [List each course authorized under this rating] *Examples follow:*

Rating: Private Pilot Course
Courses: Private Pilot Airplane, Single Engine land
Private Pilot Rotorcraft, Helicopter

Rating: Commercial Pilot Course
Courses: Commercial Pilot Airplane, Single Engine Land
Commercial Pilot Rotorcraft, Helicopter

Rating: Instrument Rating Course
Course: Instrument Rating Airplane, Single Engine land

Rating: Additional Aircraft Category or Class Rating Course
Courses: Private Pilot, Airplane Single Engine Sea
Commercial Pilot, Airplane Single Engine Sea
Commercial Pilot, Airplane Multi-Engine Land

Rating: Special Curricula
Course: Sport Pilot Course, Airplane Single Engine Land

This list of approved courses expires on [insert same expiration date as Form 8000-4], unless superseded, surrendered, suspended or revoked.

Sincerely,

[FSDO Manager's Signature]

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Figure 2-66. FAA Form 8420-8, Application for Pilot School Certification, Filled Out for Renewal

US Department of Transportation
Federal Aviation Administration

APPLICATION FOR PILOT SCHOOL CERTIFICATION

Form approved: OMB No. 2120-0009

CERT NO. *For FAA Use Only*

APPLICANT - Read submittal and signature instructions on reverse.

NAME OF SCHOOL	TELEPHONE NO.	ADDRESS OF PRINCIPAL BUSINESS OFFICE
C. Brannon, d/b/a Brannon Aviation	(555) 345-3456	13206 Poplar Tree Road, Fairfax, VA 11234

LOCATION OF MAIN OPERATIONS BASE	LOCATION OF SATELLITE BASE(S)
Fairfax Airport, Fairfax, VA	Centervill Airport

APPLICATION IS HEREBY MADE FOR:

☐ Issuance of a Pilot School Certificate and associated ratings to conduct the training courses identified below, and for the approval of these courses (*three copies of each course outline are attached*); also, examining authority is requested for the courses appropriately checked.

☒ Renewal of a Pilot School Certificate and associated ratings currently numbered CSB-S-025, which expires on 11/30/06

☐ without changes to the currently approved course outlines, ☐ with addition of course(s) identified below for which approval is requested (three copies of each course outline is attached), including request for examining authority for the course(s) appropriately checked; ☐ with deletion of course(s) identified below from the curriculum.

☐ Amending the current Pilot School Certificate and associated ratings numbered _____, which expires on _____

☐ by adding the course(s) identified below for which approval is requested (three copies of each course outline are attached), including request for examining authority where appropriately checked; ☐ for deletion of the course(s) identified below from the curriculum.

IDENTIFICATION OF TRAINING COURSES

NOTE.: Where examining authority for a course is desired, place and "X" in the box adjacent to the course identification. s

☒	Private Pilot	☐	
☒	Instrument Rating	☐	
☒	Commercial Pilot	☐	
☐		☐	
☐		☐	
☐		☐	

(If more space is needed, continue on reverse in space provided)

I (WE) certify that I am (we are) familiar with Part 141 of the Federal Aviation Regulations, and, to the best of my (our) knowledge, believe that my (our) school meets the requirements for certification as prescribed therein.

Signature and Title(s): Carolyn S. Brannon
Carolyn S. Brannon
Owner

10/31/06
Date

FOR FAA USE ONLY

☐ APPROVED- ☐ a Provisional Pilot School Certificate ☐ a Pilot School Certificate, either with associated ratings bearing the number shown above is issued effective _____ and which expires on _____ ☐ DISAPPROVED

☐ Renewal ☐ without amendments ☐ with amendments ☐ Amendments

SIGNATURE OF APPROVING OFFICIAL	TITLE	DATE

FAA Form 8420-8 (1-82) *Recommendations of Inspector(s) on reverse*

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Figure 2-67. Notice of Course Cancellation

FAA Letterhead

[Date]

[Applicant's Name and Address]

Dear [Name]:

After reviewing your application for renewal of your Pilot School Certificate and conducting the appropriate inspection, we require that you cease [name of course] training immediately for the following reasons:

[List reasons]

Failure to cease [Name of Course] training shall result in enforcement action against your certificate.

All other courses of training and pilot school ratings inspected at the time of renewal were acceptable, and you may continue to conduct training under them. When you feel that your organization meets the certification requirements for [name of course], you may apply for reinstatement of the course.

Sincerely,

[POI's signature]

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Figure 2-68. FAA Form 8420-8, Application for Pilot School Certification, Filled Out for Amendment

US Department of Transportation
Federal Aviation Administration

APPLICATION FOR PILOT SCHOOL CERTIFICATION

Form approved: OMB No. 2120-0009

CERT NO. *For FAA Use Only*

APPLICANT - Read submittal and signature instructions on reverse.

NAME OF SCHOOL	TELEPHONE NO.	ADDRESS OF PRINCIPAL BUSINESS OFFICE
C. Brannon d/b/a Brannon Aviation	(555) 345-3456	13206 Poplar Tree Road, Fairfax, VA 11234

LOCATION OF MAIN OPERATIONS BASE	LOCATION OF SATELLITE BASE(S)
Fairfax Airport, Fairfax, VA	Centerville Airport

APPLICATION IS HEREBY MADE FOR:

☐ Issuance of a Pilot School Certificate and associated ratings to conduct the training courses identified below, and for the approval of these courses (*three copies of each course outline are attached*); also, examining authority is requested for the courses appropriately checked.

☐ Renewal of a Pilot School Certificate and associated ratings currently numbered _____, which expires on _____
☐ without changes to the currently approved course outlines, ☐ with addition of course(s) identified below for which approval is requested (three copies of each course outline is attached), including request for examining authority for the course(s) appropriately checked; ☐ with deletion of course(s) identified below from the curriculum.

☒ Amending the current Pilot School Certificate and associated ratings numbered CSB-S-025-A, which expires on _____
☐ by adding the course(s) identified below for which approval is requested (three copies of each course outline are attached), including request for examining authority where appropriately checked; ☐ for deletion of the course(s) identified below from the curriculum.

IDENTIFICATION OF TRAINING COURSES

NOTE.: Where examining authority for a course is desired, place and "X" in the box adjacent to the course identification. s

☐	Agricultural Aircraft Operations	☐	
☐		☐	
☐		☐	
☐		☐	
☐		☐	
☐		☐	

(*If more space is needed, continue on reverse in space provided*)

I (WE) certify that I am (we are) familiar with Part 141 of the Federal Aviation Regulations, and, to the best of my (our) knowledge, believe that my (our) school meets the requirements for certification as prescribed therein.

Signature and Title(s): *Carolyn S. Brannon*
Carolyn S. Brannon
Owner

10/31/06
Date

FOR FAA USE ONLY

☐ APPROVED- ☐ a Provisional Pilot School Certificate ☐ a Pilot School Certificate, either with associated ratings bearing the number shown above is issued effective _____ and which expires on _____ ☐ DISAPPROVED
☐ Renewal ☐ without amendments ☐ with amendments ☐ Amendments

SIGNATURE OF APPROVING OFFICIAL	TITLE	DATE

FAA Form 8420-8 (1-82) *Recommendations of Inspector(s) on reverse*

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Figure 2-69. FAA Form 8420-8, Application for Pilot School Certification, Filled Out for Initial Certification

US Department of Transportation
Federal Aviation Administration

APPLICATION FOR PILOT SCHOOL CERTIFICATION

Form approved: OMB No. 2120-0009

CERT NO. *For FAA Use Only*

APPLICANT - Read submittal and signature instructions on reverse.

NAME OF SCHOOL	TELEPHONE NO.	ADDRESS OF PRINCIPAL BUSINESS OFFICE
C. Brannon d/b/a Brannon Aviation	(555) 345-3456	13206 Poplar Tree Road, Fairfax, VA 11234

LOCATION OF MAIN OPERATIONS BASE	LOCATION OF SATELLITE BASE(S)
Fairfax Airport, Fairfax, VA	

APPLICATION IS HEREBY MADE FOR:

[X] Issuance of a Pilot School Certificate and associated ratings to conduct the training courses identified below, and for the approval of these courses (three copies of each course outline are attached); also, examining authority is requested for the courses appropriately checked.

[ ] Renewal of a Pilot School Certificate and associated ratings currently numbered _____, which expires on _____
[ ] without changes to the currently approved course outlines; [ ] with addition of course(s) identified below for which approval is requested (three copies of each course outline is attached), including request for examining authority for the course(s) appropriately checked; [ ] with deletion of course(s) identified below from the curriculum.

[ ] Amending the current Pilot School Certificate and associated ratings numbered _____, which expires on _____
[ ] by adding the course(s) identified below for which approval is requested (three copies of each course outline are attached), including request for examining authority where appropriately checked; [ ] for deletion of the course(s) identified below from the curriculum.

IDENTIFICATION OF TRAINING COURSES

NOTE: Where examining authority for a course is desired, place and "X" in the box adjacent to the course identification. s

[ ]	Private Pilot	[ ]	
[ ]	Instrument Rating	[ ]	
[ ]	Commercial Pilot	[ ]	
[ ]	Flight Instructor	[ ]	
[ ]		[ ]	
[ ]		[ ]	

(If more space is needed, continue on reverse in space provided)

I (WE) certify that I am (we are) familiar with Part 141 of the Federal Aviation Regulations, and, to the best of my (our) knowledge, believe that my (our) school meets the requirements for certification as prescribed therein.

Signature and Title(s): *Carolyn S. Brannon*
Carolyn S. Brannon
Owner

May 10, 2006
Date

FOR FAA USE ONLY

[X] APPROVED- [ ] a Provisional Pilot School Certificate [X] a Pilot School Certificate, either with associated ratings bearing the number shown above is issued effective 11/15/06 and which expires on 11/30/08 [ ] DISAPPROVED
[ ] Renewal [ ] without amendments [ ] with amendments [ ] Amendments

SIGNATURE OF APPROVING OFFICIAL	TITLE	DATE
Barbara D. Hostetler	Supervising Inspector	June 1, 2006

FAA Form 8420-8 (1-82) *Recommendations of Inspector(s) on reverse*

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Figure 2-70. Sample Letter of Intent

RUTHIE'S FLYING SCHOOL
888 CHANDELLE CIRCLE
BELLVILLE, IL 35454
(312) 555-1212

March 15, 2006

Federal Aviation Administration
Flight Standards District Office # 3
DuPage Country Airport
West Chicago, IL 60185

Gentlemen:

This is to notify the Federal Aviation Administration (FAA) of our intent to become an approved pilot school under Title 14 of the Code of Federal Regulations (14 CFR) part 141.

We are prepared to begin operations on July 1, 2006 and are ready for your certification inspection at this time. Enclosed are three copies (an original and two facsimiles) of FAA Form 8420-8, Application for Pilot School Certificate. Operations will be confined to the DuPage County Airport. We plan to operate: two Cessna 152s, one Cessna 172, and a Piper Comanche (PA24-250), that meets the complex aircraft requirements for commercial pilot certification.

Courses identified on FAA Form 8420-8 will be supervised by our chief instructor, Mr. Robert Cartwright, holder of ATP Certificate number 555121128. He meets the requirements of § 141.35 and his instructor résumé is available for verification when you conduct your certification inspection.

Also enclosed are three copies of each training course outline (TCO) for your review and approval. Our requested three-letter certificate designators are EPS, ELS, and SFS, in that order of preference.

Sincerely,

Ruth Vaght
President

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Figure 2-71. Letter Indicating Certification Process Cannot Continue Because of Pending Enforcement Action

FAA Letterhead

[Date]

[Name and Address of Applicant]

Dear [Name]:

This letter is to inform you that your application for a Pilot School Certificate cannot be processed because of enforcement action [pending/taken] against [cite the specific certificate—Airman, other air operator certificate, etc.]. Until such time that this enforcement action is fulfilled, you are ineligible for certification.

Enclosed with this letter is a copy of your application and the training course outlines (TCOs) you submitted for approval.

Should you wish to discuss this matter, please contact this office at [telephone number].

Sincerely,

[FSDO Manager's Signature]

Figure 2-72. Letter Indicating Application Is Unsatisfactory

FAA Letterhead

[Date]

[Name and Address of Applicant]

Dear [Name of Applicant]:

The enclosed FAA Form 8420-8, Application for Pilot School Certificate, is returned because [cite discrepancies].

Enclosed are three blank application forms that you may use to reapply when the above items are corrected. In order to continue the certification process, the corrected applications must be received no later than [date, not longer than 30 days from the date of the letter]. If we do not hear from you by that date, we will consider the certification process terminated.

If you have any questions concerning this matter, please feel free to contact this office at [telephone number].

Sincerely,

[Certification Project Manager's Signature]

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Figure 2-73. Letter Indicating Discrepancies Found During Inspection

FAA Letterhead

[Date]

[Name and address of school]

Dear [Name]:

These discrepancies were found during a Title 14 of the Code of Federal Regulations (14 CFR) part 141 certification inspection conducted as part of your certification as an Air Agency under part 141.

[List each discrepancy]

[List methods of correcting the discrepancies, if appropriate]

[Indicate a reasonable length of time for the corrections to be made (not to exceed 90 days from the date of the letter)]

[Indicate that if no response is received within 90 days, the certification process will be terminated]

Sincerely,

[CPM's Signature]

Figure 2-74. Part 141 Letter Listing DBAs

FAA Letterhead

[Date]

[Air Agency's Name and Address]

Dear [Name]:

This letter, accompanied by Air Agency Certificate No. [number] issued to [legal name of school] on [date of issuance], authorizes the following additional persons to exercise the privileges and limitations of the certificate.

[List all DBA names]

Sincerely,

[FSDO Manager's Signature]

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Figure 2-75. Letter Denying Certificate

FAA Letterhead

[Date]

[Name and Address of Applicant]

Dear [Name of Applicant]:

Your application for a Pilot School Certificate is denied because of the following reasons:

[List specific items that have not been corrected in the document compliance phase or demonstration and inspection phase within a reasonable time, i.e., not to exceed 90 days from the time the applicant was notified of the discrepancy.]

[If applicable, cite any false or fraudulent information that was provided.]

[If applicable, indicate why TCOs were not approved.]

[If applicable, specifically list the lack of qualifications of personnel or deficiencies in facilities and equipment.]

If you have any questions concerning this matter, please contact this office at [telephone number].

Sincerely,

[FSDO manager's signature]

Figure 2-76. Part 141 Certification Job Aid

NAME OF SCHOOL:	**CERTIFICATION TEAM**				
	Name		Specialty		
ADDRESS:	**INSP. INITIAL**	**DATE**	**YES**	**NO**	**NA**
1. Initial contact handled by					
2. Letter of Intent					
3. Preapplication meeting					
4. Applicant provided resources/advised how to obtain					
5. Formal application meeting					
6. Application properly completed and submitted					
7. TCOs submitted					

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a. TCO contains description of each room used for aeronautical knowledge training					
b. TCO describes all training aids					
c. TCO describes each training device/simulator used					
d. TCO lists airports at which training flights originate					
e. TCO describes minimum instructor qualifications					
f. TCO describes trainee's enrollment qualifications					
g. TCO describes each lesson's objectives and training standards					
h. TCO describes tests and checks used to measure each stage of training					
8. Verification of flight instructor's qualifications (§ 141.33/141.35)					
9. Chief instructor/assistant for ground school course has 1 year experience in approved school					
10. Enrollment method meets the requirements of § 141.93					
11. Safety procedures/practices developed (§ 141.93)					
12. Graduation certificates appropriate (§ 141.95)					
13. Method for student recordkeeping (§ 141.101)					
14. MEL approved					
15. School has use of aircraft appropriate for each course					
a. U.S.-registered standard category					
b. At least two-place with full-functioning dual controls					
c. Maintained in accordance with parts 43 and 91					
d. Inspected by Airworthiness inspector					
(1) Optional equipment installation					

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(2) Airworthiness Directive records current					
(3) In-house or contract maintenance observed					
(4) Aircraft for IFR courses properly equipped/maintained					
e. Electronic components/communications equipment inspected (Avionics)					
f. Checklists required by § 141.75					
16. Chief instructor/assistance for each course tested					
a. Knowledge test					
b. Skill test					
17. Chief instructor's method to test other instructors					
18. Pilot briefing areas (§ 141.43)					
19. Aeronautical knowledge training facilities (§ 141.45)					
20. Airports					
a. Continuous use where flights originate (§ 141.38)					
b. One runway/takeoff area for normal takeoff at full gross weight (§ 141.38)					
c. Wind direction indicator (§ 141.38)					
d. Traffic direction indicator (if required by § 141.38)					
e. Permanent runway lights (if required by § 141.38)					
21. Flight simulator or FTDs					
a. Cockpit meets requirements of § 141.41					
b. Simulates rotation around three axes (§ 141.41)					
c. Minimum instruments/equipment required by § 91.205 (§ 141.41)					
d. For visual flight instruction (VFR) instruction, a means of simulating visual flight conditions (§ 141.41)					

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e. For IFR instruction, a means of recording flight path (§ 141.41)					
22. Training aids meet requirements of § 141.41					
23. Certificate number obtained from AFS-620					
24. Air Agency Certificate prepared and issued					
25. List of approved courses prepared					
26. Certification report and district office file prepared					
27. Surveillance plan developed					
28. Other					

REMARKS:

Figure 2-77. Part 141 Schedule of Events

NAME OF SCHOOL:	NAMES OF MANAGEMENT PERSONNEL				
	Name		Title		
ADDRESS:	SCHOOL DATE READY	FAA DATE REC'D	FAA RET'D	FAA DATE APP'D	INSP INIT
1. Letter of Intent					
2. Application (FAA Form 8420-8)					
3. TCOs					
4. Special curriculums (if applicable)					
5. Recordkeeping procedures					
6. Enrollment method					
7. Safety procedures/practices					
8. Graduation certificates					
9. Instructors' qualifications					
10. Chief instructor/assistant practical test					
11. Base inspection (including satellite bases)					

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12. Appropriate aircraft for each course					
13. Aircraft conformity inspections (Airworthiness)					
14. FFS, FTD, or ATD inspection					
15. Training aids inspection					
16. Pilot briefing areas					
17. Aeronautical knowledge training facilities					
18. Airports					
19. Proposed date to start operations					
20. Other					

Figure 2-78. Letter Confirming Termination of Certification Process at Applicant's Request

FAA Letterhead

[Date]

[Name and Address of Applicant]

Dear [Name of Applicant]:

This letter confirms your request to terminate the project to certificate you as an Air Agency under Title 14 of the Code of Federal Regulations (14 CFR) part 141.

All materials submitted for review are enclosed with this letter. Any attempt to reapply after the date of this letter will require reinitiating the entire certification process.

Sincerely,

[CPM's Signature]

RESERVED. Paragraphs 2-1085 through 2-1100.

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VOLUME 2 AIR OPERATOR AND AIR AGENCY CERTIFICATION AND APPLICATION PROCESS

CHAPTER 10 TRAINING CENTERS: CERTIFICATION OF PART 142 TRAINING CENTERS

Section 1 Certification of Part 142 Training Centers

2-1151 GENERAL. This process applies to the initial certification as well as the addition of satellites to existing certificates.

A. Certification Process. This section provides guidance on the certification process of Title 14 of the Code of Federal Regulations (14 CFR) part 142 training centers and the addition of a satellite(s) to a principal center's certificate. The processes outlined in this section will ensure compliance with Title 49 of the United States Code (49 U.S.C.), 14 CFR, and appropriate Federal Aviation Administration (FAA) policy and procedures. During the certification process, the certificate-holding district office (CHDO) and the assigned Training Center Program Manager (TCPM) will follow the guidance provided in this section. The CHDO and regional Flight Standards division (RFSD) offices must be confident that the applicant is capable of fulfilling the required regulatory responsibilities and willing to comply with 14 CFR in an appropriate and continuing manner. The certification of a training center follows a four-phase process composed of three gates and is similar to the air carrier certification process described in Volume 2, Chapter 1, Section 1.

B. Gate Concept. The FAA instituted the gate concept for certification processes to conserve assets and ensure an applicant's progress through their certification process in an orderly and structured manner. It also ensures that an applicant's programs, systems, and intended methods of compliance are thoroughly reviewed, evaluated, and tested. The gate process requires that an applicant complete specific phase items before progressing past a particular gate. Once the FAA accepts the items associated with a particular gate, the applicant may continue to the next phase of the certification process.

C. Certification Completion. Once completed, the gate process provides reasonable assurance that the applicant's infrastructure (programs, methods, and systems) will result in continued compliance after certification. The CHDO is responsible for ensuring that the applicant completes the certification process in accordance with these guidelines. Based on the applicant's proposal(s), the CHDO may adjust certain elements within the certification phases to facilitate the CHDO's administration of the project.

2-1152 INITIAL INQUIRIES, REQUESTS, AND PRELIMINARY DISCUSSIONS.

A. Initial Inquiries. Initial or preliminary inquiries concerning the certification of part 142 training centers may come in various formats from individuals or organizations. These inquiries may be in writing or the result of meetings with FAA personnel. Requests for applications may come from inexperienced and poorly prepared individuals, from well-prepared and financially sound organizations, or from individuals and organizations ranging between these extremes. Upon receipt of an initial inquiry, the receiving office manager will determine if his or her office has geographical responsibility for the area in which the applicant's principal business

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will be located. If the FAA office initially contacted has jurisdiction, the manager should begin the certification process. If not, the manager will direct the applicant to the proper field office. Once the appropriate CHDO has been identified, office personnel should become familiar with the certification processes outlined in this section.

NOTE: The CHDO with geographic responsibility must review the current edition of FAA Order 8000.92, AFS Certification Service Oversight Process (CSOP), to ensure the appropriate resource evaluation, workload index, and dashboard activities are completed prior to beginning the certification process.

B. Advising AFS-280. The CHDO manager or assigned certification program manager (CPM) must advise AFS-280 of the potential certification project and provide pertinent details of the applicant. As the headquarters (HQ) branch responsible for training center policy, AFS-280 will assist the certification team by providing subject matter expertise on training center regulatory, certification and oversight requirements.

C. Advising the Applicant. The FAA inspector assigned to the project (normally the TCPM) should work together with the assigned AFS-280 representative and then briefly explain the application process and the FAA requirements that the applicant is required to meet throughout the certification process. The inspector should advise the applicant to schedule a preapplication meeting when the applicant has had sufficient time to thoroughly review and understand the certification requirements. During preliminary discussions with the applicant, the assigned inspector will:

1) Provide the applicant with a brief overview of the certification process and the information that they must submit as part of their preapplication Letter of Intent (LOI).

2) Direct the applicant to AFS-280's Web site and request that they become familiar with the training center requirements in part 142, the airman certification requirements of 14 CFR parts 61, 63, and 65 (as applicable), and other regulatory guidance appropriate to the curricula and evaluations the applicant proposes to offer. This Web site provides links to several documents which will help to ensure an efficient certification and ongoing operations in a fully compliant manner.

3) Advise that all certification submissions must be provided in either electronic or hard copy. Electronic versions of the applicant's submission may be in Microsoft Word or Adobe PDF format.

4) Advise the applicant that after they have completed their review of the part 142 training center Web site, applicable regulatory guidance, completed and submitted their preapplication LOI prepared in accordance with the guidance located on the Web site, they should schedule their preapplication meeting.

5) The preapplication LOI and attachments should be forwarded to the CHDO at least two weeks before the preapplication meeting. The applicant must be advised that key management personnel are required to attend the preapplication meeting.

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2-1153 THE FOUR PHASE CERTIFICATION PROCESS INCLUDING PREAPPLICATION EVENTS.

- Phase ONE Preapplication — Gate I Complete
- Phase TWO Formal Application — Gate II Complete
- Phase THREE Document Compliance
- Phase THREE System Assessment and Validation — Gate III Complete
- Phase FOUR Administrative

A. Phase ONE—Preapplication (Gate I). Submit the preapplication LOI and all subsequent written material electronically in Microsoft Word or Adobe PDF format. The LOI should contain the following information:

- Corporate and business name, mailing address, telephone number, and email;
- Proposed schedule of events (including proposed initial start of operations);
- Proposed management personnel and position;
- Proposed training courses;
- Flight training equipment;

NOTE: Certification of a training center under part 142 requires the use of full flight simulators (FFS) and/or Level 6 or 7 flight training devices (FTD). An application that proposes to conduct training, testing, and checking using aircraft only will not be accepted.

- Proposed location of the training center and any proposed satellite centers;
- Training records; and
- Any additional information that may be required to provide a better understanding of the proposed training center and activities.

1) The applicant will be advised to become familiar with training center requirements in part 142, airman certification requirements of parts 61 and 63, and other requirements that are appropriate for the proposed airman training and evaluation to be offered.

2) Preapplication Meeting, Phase ONE, and Gate I Requirements:

a) The FAA CHDO and the applicant's management personnel will complete a preapplication meeting. This meeting will be a preliminary discussion in which the applicant will generally describe the proposed training center activities and submit the preapplication letter, including plans for personnel, facilities, and flight training equipment. The applicant should also be able to demonstrate a basic knowledge of the appropriate regulations and requirements of airman training and evaluation. The CHDO will use this opportunity to discuss in detail the entire certification process and provide the applicant with information and documentation concerning the certification and continued approval of a training center, qualification of personnel, approval of flight training equipment, and approval of training center curriculum and associated courseware.

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b) It is essential that the applicant understand which regulations are applicable to the proposed operation. The applicant and the applicant's personnel must be made aware of their responsibilities during the certification process. It is to their benefit to submit the required items as soon as they become available in order to meet Gate I requirements and to notify the CHDO immediately of any problems or changes in the proposed operation.

c) Training center applicants located outside the United States must understand that there are fees associated with the certification process. The fees are based on the time spent by FAA inspectors conducting certification, evaluator training, and inspection activities. Fees, as well as associated expenses, are provided for in part 187, and must be paid in accordance with the current edition of Advisory Circular (AC) 187-1, Flight Standards Service Schedule of Charges Outside the United States, before the issuance of the center's training specifications and training center certificate.

d) After the preapplication meeting, the CHDO will contact AFS-280 to discuss the applicant, proposed training center activities, projected timeline, and concerns.

e) Based on these preliminary meetings, discussions, and the content of the preapplication LOI, the CHDO will make an initial determination as to whether the potential applicant is qualified and intends to pursue certification. The applicant must also declare his or her intention to proceed with the certification process.

f) The CHDO will ascertain that the proposed operation is consistent with the regulatory requirements of part 142 and accept or reject the preapplication LOI. If acceptable, the applicant will be advised that the Gate I requirements have been completed and to proceed with the Formal Application phase. The CHDO will contact the Aviation Data Systems Branch (AFS-620) to obtain a precertification number. Once received, the CHDO shall notify AFS-280.

B. Phase TWO—Formal Application (Gate II).

1) Applicants must submit a formal letter of application to the FAA Flight Standards District Office (FSDO) that has jurisdiction over the area in which the applicant's principal business office will be located. The LOI and attachments must contain the following information:

a) Corporate or business name (including "doing business as"), mailing address, and telephone number of the applicant.

b) Formal schedule of events, including the updated proposed start date.

c) Proposed instructor and evaluator training program, including curriculum, courseware, procedures, and any other supporting documentation.

d) A copy of a purchase contract or adequate lease of flight training equipment, to substantiate that it has exclusive use of all simulation media for periods of time adequate to conduct all training, checking, and testing proposed in the training plan. If the applicant is the sponsor and/or operator of the proposed flight training equipment, the letter should so indicate

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that the equipment is either currently FAA qualified or that arrangements have been made for qualification.

e) Proposed evaluation authorization(s).

f) Proposed National Simulator Program (NSP) evaluation date.

g) A description of the applicant's training facilities, equipment, and qualifications of personnel to be used.

h) The proposed core and specialty training curricula and associated syllabus, including courseware, procedures, checklists, and any other supporting documentation for the training of students, instructors, and evaluators.

i) Company policy manual(s).

j) Management qualifications stated in specific terms. This document must also include acknowledgment that the applicant must notify the FAA within 10 business days of any change made in the management positions.

k) A description of a recordkeeping system that will identify and document the details of training and the qualifications and certification of students, instructors, and evaluators.

l) If the applicant proposes to provide training for a certificate or rating in fewer than the minimum hours prescribed in part 61, a method of demonstrating qualification and ability to provide training must be submitted.

m) A description of the quality control (QC) program that will identify and document the details of the QC measures to be used.

n) Training agreements.

o) Deviation and waiver requests, if applicable.

p) A compliance statement.

2) Preparation of the compliance statement benefits the applicant by systematically ensuring that all applicable regulatory aspects are appropriately addressed during the certification process. The compliance statement must be in the form of a complete listing of all appropriate 14 CFR sections (for example, parts 61, 63, and 91) pertinent to the training curricula the applicant is proposing. The compliance document must address each section within part 142. This list should reference any applicable subpart and each relevant section of the subpart. Next to each subparagraph, the applicant must provide a specific reference to a manual or other document, and may provide a brief narrative description that describes how the applicant will comply with each regulation. This is a procedures document (i.e. what system the applicant will use to ensure compliance), not a policy document. The compliance statement will be used throughout the applicant's certification process and become an ongoing source of information throughout the certificate holder's continued operations. After the certification

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process is completed, the compliance statement should be kept current as changes are incorporated in the applicant's system. This statement also serves as a master index to the applicant's manual system to expedite FAA's review and approval of the operation and manual systems.

3) The formal application must be received by the CHDO a minimum of 120 days before the start of proposed operations. The proposed schedule of events included in the applicant's LOI should be used by the CHDO as a preliminary planning tool for the certification process.

4) The following signatures are required on a completed Formal Application Letter:

- An application from an individual must be signed by that individual;
- An application from a partnership must be signed by all partners or, if applicable laws permit this authority to be delegated to one partner, by the delegated partner;
- An application from a corporation must be signed by the corporate secretary, by the president or officer(s) authorized by the corporation, and by any other designated official of the corporation who should attest to the individual's authority to sign such a document;
- An application from a partnership, club, or association must be signed by the president or such other officer or director as authorized by the organization's bylaws and attested to by the secretary; and
- The equivalent of the positions listed in the above subparagraphs as determined by the certificating FAA office for training centers located outside the United States.

NOTE: The above items must be completed prior to passing through Gate II.

5) If it becomes apparent that the applicant will not be able to prepare an acceptable formal application, the FSDO will advise the applicant that the FAA is ceasing any further efforts to certificate the applicant.

C. Phase THREE-(a)—Document Compliance (Gate III).

1) The CHDO will review the documents that the applicant has submitted to ensure compliance with regulatory requirements, policy, and other guidance material. The review will include the following areas:

a) Management Personnel.

1. The training center applicant must employ sufficient qualified and competent management personnel to perform the duties to which they are assigned.

NOTE: One method of determining if the proposed management team is qualified to provide required supervision is to evaluate the job requirements stated in the formal application, measure them against the résumés provided for each of

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the proposed managers, and ask the following question: Is it apparent that the proposed managers have the knowledge and skills required to accomplish the stated job functions? Minimally, a tabletop exercise should be run to evaluate the manager's knowledge of the requirements of an air agency certificated under part 142.

2. The applicant must provide résumés for proposed management personnel. This must include the individual's name and address, as well as the individual's qualifications and Airman Certificate number, certificates and ratings, work history, and compliance history. Medical certificate information must also be provided if it is appropriate to the position assigned.

NOTE: One method of determining if the proposed management team is qualified to provide required supervision is to evaluate the job requirements stated in the formal application, measure them against the résumés provided for each of the proposed managers, and ask the following question: Is it apparent that the proposed managers have the knowledge and skills required to accomplish the stated job functions? Minimally, a tabletop exercise should be run to evaluate the manager's knowledge of the requirements of an air agency certificated under part 142.

3. A person whose employment contributed materially to the revocation, suspension, or termination of that certificate within the previous five years should not manage, be in control of, or have substantial ownership of a training center.

b) Evaluators. Detailed guidance for the appointment of evaluators can be found in Volume 3, Chapter 54, Section 2. Persons who conduct training or an evaluation of a student must be able to read, write, understand, and fluently speak the English language.

c) Instructors.

1. Must meet the eligibility requirements of part 142, § 142.47.

2. Must complete the training prescribed by § 142.53.

3. Persons who conduct training or an evaluation of a student must be able to read, write, understand, and fluently speak the English language.

d) Required Documents. Each applicant must present the following documents for review and approval:

1. Copies of the leases, agreements, and contracts, if any, to show compliance with the exclusive use of equipment requirements of § 142.15. If the TCPM determines that it is necessary, he or she may ask the General Counsel's office to review any of these documents to determine if the intent of the exclusive use requirement is met. (Program Tracking and Reporting System (PTRS) code 1395.)

2. If a training agreement exists with a 14 CFR part 141 certificated pilot school to provide training, testing, or checking for a training center, a copy of that training

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agreement must be provided. Each training agreement should meet the requirements of part 141, § 141.26 and § 142.33. (PTRS code 1395.)

3. Deviations and waivers. Deviations and waivers issued under § 142.9 must be submitted in accordance with Volume 3, Chapter 54, Section 4. To ensure standardization and consistent application of policy, such requests must be forwarded to AFS-280 for review prior to issuing final approval to the applicant. Submissions to AFS-280 should be made no less than 15 business days in advance of the requested implementation date.

e) Approved Program for Maintenance and Inspection of Aircraft (if required). Each certificate holder must ensure that aircraft used to provide training under part 142 are maintained and inspected in accordance with part 91 subpart E (or foreign equivalent), and/or an approved program for maintenance and inspection. The FAA may assign an aviation safety inspector (ASI), Airworthiness, to verify the existence and adequacy of an approved program for maintenance and inspection. The ASI will also review the center's minimum equipment list (MEL) if the applicant seeks relief under an MEL for aircraft that the training center owns or leases. MELs are not a certification requirement of part 142. (PTRS code 1372.)

f) Simulator Component Inoperative Guide (SCIG). SCIGs are not a certification requirement of part 142, but should be submitted if one is to be used. (PTRS code 1372.)

g) Flight Simulation Training Devices (FSTD). Documentation to show qualification by the NSP, AFS-205, or a request for such evaluation and qualification must be provided. See details for inspection and demonstration in Volume 3, Chapter 54, Section 2. (PTRS code 1351.)

h) Training Program. The FAA will evaluate submitted curricula, and associated courseware in this phase. Curricula leading to the issuance of pilot certificates, ratings, and/or meeting currency requirements of parts 61 and/or 65 must be based on advanced simulation devices (see Volume 3, Chapter 54, Section 6 for approval processes and procedures). Curriculum approval and requirements will follow the general process for review and format that is found in Volume 3, Chapter 19.

1. Core and Specialty Curricula. The TCPM will review the curriculum for format and content. To indicate initial approval, the TCPM will stamp each page of the list of effective pages indicating that the curriculum has been granted initial approval. See Volume 3, Chapter 54, Section 6 for detailed guidance on curriculum approvals.

2. Courseware. The FAA must approve checklists not prepared by the manufacturer. Pictorial means of preflight inspection courseware must be approved.

i) Training Records (Recordkeeping). Training records must document training, qualification, and currency. Each certificate holder must keep records at the applicable training center, satellite training center, or other place approved by the FAA, and must provide those records to the FAA upon request or at a reasonable time. The FAA may use the following information to determine training record system adequacy. (PTRS code 1334.)

- Refer to § 142.73(a) for a checklist of trainee record requirements.

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- Refer to § 142.73(b) for a checklist of instructor record requirements.

2) QC Measures. Section 142.11(b)(9) requires that training centers present QC measures. As a required part of a training center certification process, applicants must formulate an operational strategy and provide specific process instructions as to how they plan to conduct the training center's operations. Many of a center's day-to-day operations are influenced by these measures, such as:

- Customer registration,
- Training program application,
- Simulator discrepancies,
- Recordkeeping, and
- Personnel qualification assurance.

a) QC measures provide guidance for operations, a benchmark as to their effectiveness, and usability of the training center's processes. Management personnel who are responsible for the implementation of the QC measures must be identified. QC measures are established by means of a quality assurance (QA) program and can be broken down into two categories:

1. Static QC Measures: define an overall management plan that guarantees the integrity of operations. Static QC measures must define the policies and procedures of the training center, provide guidance, and identify those personnel responsible for tasks. Static QC measures guarantee that the training center will conduct operations in accordance with regulatory requirements and the philosophy of the company.

2. Active QC Measures: gauge the effectiveness of static QC, provide a means to resolve nonconformities, and identify areas in need of improvement. Active QC measures must consist of:

- An audit program to determine the compliance and effectiveness of established procedures; and
- A process reengineering program that will identify and document nonconformities and areas in need of improvement. This program must include a followup process to ensure that nonconformities and areas in need of improvement are identified, solutions are proposed, and the responsibility for implementation of corrective action is assigned.

b) As part of the QA program, static and active QC measures must be developed for at least the following:

1. Conduct and effectiveness of all training programs.

2. Curricula:

- Control of courseware,
- Adequacy of program content, and

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- Compliance with rule requirements.

3. Recordkeeping system:

- Student and instructor/evaluator,
- Content of records,
- Security,
- Prescribed method of recordkeeping followed, and
- Documentation of completion of required events.

4. Adequacy of facilities and equipment.

5. Revision processes for curricula, courseware, and general policy guidelines.

c) Instructor and Evaluator Qualifications and Ability.

1. Effectiveness of associated training program.

2. Determination of eligibility and authorizations.

d) Effectiveness of Management:

- Delegation of authority and responsibility,
- Approachability, and
- Delineation of information.

e) FSTD Functionality and Training Suitability:

- Daily checks,
- System to identify and address discrepancies,
- Availability of simulator readiness status to end users, and
- Review documents detailing the measures to be implemented as part of the QC measures. Ensure all elements contain static and active QC measures.

D. Phase THREE-(b)—System Assessment and Validation (Gate III).

1) The FAA will conduct inspections to determine a training center's compliance with, or eligibility under, the U.S. Transportation Laws, 49 U.S.C., and the regulations. Each certificate applicant must allow the Administrator to inspect training center facilities, equipment, and records at any reasonable time and place. The CHDO should inspect those proposed training centers or satellite training centers within their area of geographic responsibility. For other inspections, the CHDO should request the services of the FSDO with geographic responsibility over the areas where the satellite training centers, equipment, or remote sites are located.

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2) The FAA will include the following specific requirements during the inspections. (PTRS codes 1334, 1351, 1371, 1603, 1607, 1612, 1621, 1626, 1629, 1630, 1640, 1641, 1642, 1643, 1644, 1645, 1646, 1647, 1649, 1650, 1652, 1653, 1654, 1662, and 1673.)

a) Facilities and equipment described in an applicant's formal application letter will be inspected to ensure that the applicant represents the facilities and equipment and that they meet the certification requirements of the regulations. (PTRS codes 1371, 1640, and 1647.)

b) Automated recordkeeping systems proposed by the applicant will be inspected. See Volume 3, Chapter 31, Section 4 for specific guidance on approval of electronic recordkeeping systems. (Although this section pertains to part 121 and 135 certificate holders, the same procedures should be used for part 142 training centers.) Operators that can adequately demonstrate their ability to use automated/electronic recordkeeping systems will receive authorization in the training specifications. (PTRS code 1334.)

c) Each FSTD used for training, checking, testing, or recency-of-experience under part 142 will be inspected for qualification and approval. (PTRS codes 1351, 1630, 1654.)

1. The NSP will qualify all Level 4 through 7 FTDs and FFSs. The NSP will qualify FSTDs in accordance with the procedures and criteria contained in 14 CFR part 60.

2. NSP qualification of the respective devices is required prior to TCPM approval for use within the center's approved curricula. The NSP will be responsible for the initial evaluation of FTDs, Levels 4 and 5, but may delegate this responsibility to the CHDO as necessary. All new FTDs manufactured or placed into service after August 6, 1996, are ineligible for conferred status and must be evaluated, qualified, and approved under the regulations that apply at the time. The previously reserved Level 1 classification for FTDs will be used to identify those devices.

3. The TCPM approves FSTDs for intended use in the center training programs. Each training center must identify each Level 1 through 3 FTD by the manufacturer's serial number, unless the FAA has issued an identification number for that purpose. FAA identification numbers must identify Level 4 through 7 FTDs and all FFSs.

4. The FAA will qualify each rotorcraft FSTD in accordance with the procedures and criteria contained in part 60.

5. Only FSTDs that have been properly qualified by the NSP or otherwise authorized by the Administrator may be approved for use in a center's curricula and listed in a center's training specifications.

6. A training center may use a FSTD for instruction if it is listed in the training center's approved training specifications and meets the flight training equipment requirements of the lesson for which it is to be used, as stated in the training center's approved curriculum.

7. A training center may offer 100 percent training, checking, and testing through approved curricula in a Level C or D FFS only when that course has approved pictorial

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courseware for 100 percent training, checking, and testing curricula. The FAA must approve pictorial courseware for each curriculum in which it is to be used.

3) QC measures:

a) Inspect the effectiveness of the QC measures and their applicability to actual operations.

b) Determine if the operations can be conducted in accordance with the proposed measures.

c) Determine if personnel understand and comply with the QC systems.

4) Validation. The following Gate III requirements must be completed prior to observing an actual class for initial approval of a training curriculum and certification of a training center:

a) Training curricula and courseware approved;

b) Sufficient instructors and evaluators trained and designated; and

c) Facilities evaluated and found satisfactory.

E. Phase Four—Administration. The CHDO will issue FAA Form 8000-43, Training Center Certificate, and training specifications after satisfactory completion of the previous phases. (PTRS code 1396.) Refer to the standardized training specifications form.

1) Training specifications are defined in Volume 3, Chapter 54, Section 1 and § 142.3. Training specifications are documents issued to a training center certificate holder by the Administrator. For international centers, all applicable part 187, § 187.1 fees must be collected prior to the issuance of the certificate and training specifications.

2) Standard training specifications are available on the Web-based Operations Safety System (WebOPSS).

NOTE: Applicants must complete the necessary training to qualify for the issuance of automated training specifications prior to the completion of the certification process.

3) Training specifications are readily available to inspectors and potential users. Consequently, in the interest of brevity, those training specifications will not be repeated in this Chapter. A list of available training specifications may be found on AFS-280's Web site.

4) The FAA may deny certification to an applicant if deficiencies exist. If so, the FSDO will state the reasons for certificate denial. The FSDO will make such denial in writing and will describe corrective actions that may lead to certification.

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a) An applicant that has been denied certification and desires to continue to seek certification should notify the FSDO in writing when corrective action has been taken. The FSDO may require a second or subsequent inspection of training center or satellite training center facilities.

b) After evaluation of the applicant's corrective actions, the FSDO will either approve or deny certification. If denied, state which requested changes have not been properly addressed. If the applicant is again denied certification, the applicant may again follow the steps described in the subparagraphs above.

5) The TCPM or their designee will assemble a certification file. The district office file shall include:

- A copy of the preapplication statement of intent (SOI) or LOI, as appropriate;
- A copy of the application;
- A copy of the training center's certificate;
- A copy of current manuals, courseware, and approved curricula;
- A copy of the completed certification job aid, if applicable;
- A copy of the training center's current training specifications (not required if training specifications are maintained in WebOPSS);
- A summary of any difficulties encountered during any phase of the certification or recommendations for future surveillance (Certification Report);
- Copies of leases, agreements, and contracts, if applicable;
- A current copy of the training center's compliance statement; and
- Any correspondence between the applicant and the FAA (in accordance with the current edition of FAA Order 1350.14, Records Management).

6) After the training center is certificated, the TCPM establishes a post certification plan using the national work program guidelines as a basis for inspection and surveillance.

7) The TCPM is responsible for assembling a Certification Report, including the names and titles of each team member. The report shall be signed by the TCPM and have a summary of difficulties, if any, encountered during the certification process and any recommendations made by the team. This report may assist in preparing surveillance plans.

RESERVED. Paragraphs 2-1154 through 2-1180.

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VOLUME 3 TECHNICAL ADMINISTRATION

CHAPTER 12 INTRODUCTION TO 14 CFR PART 91 RELATED TASKS

Section 1 General

3-311 GENERAL. Volumes 3 through 6 provide the general guidance on particular inspector tasks related to Title 14 of the Code of Federal Regulations (14 CFR) part 91, General Operating and Flight Rules. The chapters cover the issuance of waivers and authorizations and surveillance related to compliance with those waivers and authorizations, general 14 CFR part 91 surveillance, approving minimum equipment lists (MEL), and Category II/III operations.

3-312 REVISION OF 14 CFR PART 91, GENERAL OPERATION AND FLIGHT RULES.

A. Background. In August 1989 the revision of 14 CFR part 91, based on a petition for rulemaking from the Aircraft Owners and Pilots Association (AOPA), went to the Federal Register for publication.

1) The revision reorganized and realigned the sections and subsections of 14 CFR part 91 to make them more understandable and easier to use. To identify where “old” 14 CFR part 91 sections are relocated and renumbered in the revision, this chapter includes a cross-reference table in Table 3-3, Part 91 Cross-Reference Table of Old and Revised to New Sections.

2) The revision became effective in August 1990 with the following exception: part 91, § 91.203(a)(2) became effective in August 1989 but remained numbered as part 91, § 91.27(a)(2) until August 1990.

a) Section 91.203(a)(2) was amended to reflect current United States (U.S.) law and practice concerning operations of aircraft outside the United States when the aircraft have been applied for registration but the permanent registration certificate has not been received.

b) The regulations do not authorize operation outside the United States unless an actual registration certificate is in the aircraft. However, the Aircraft Registration Branch (AFS-750) will, upon request from the owner, fax a copy of the registration to the individual whose name appears on the application as the registered owner. The faxed copy may be used as a temporary registration until the owner receives original registration. As with the original registration certificate, the copy must be carried in the aircraft.

B. Substantive Change. The revision contains four substantive changes to 14 CFR part 91.

1) Part 91, § 91.117 restricts the operation of aircraft below 10,000 mean sea level (MSL) at an indicated airspeed of more than 250 knots (288 mph), unless authorized by the Administrator. If the minimum safe airspeed for any particular operation is greater than the speed described in § 91.117(a), (b), and (c), the aircraft may be operated at that minimum speed.

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a) No person may operate aircraft at or below 2,500 feet above the surface within 4 nautical miles of the primary airport of a Class C or Class D airspace area at an indicated airspeed of more than 200 knots (230 mph).

b) No person may operate an aircraft in the airspace underlying a Class B airspace area designated for an airport or in a visual flight rules (VFR) corridor designated through such a Class B airspace area, at an indicated airspeed of more than 200 knots (230 mph).

2) Part 91, § 91.905 allows operators with authorization to deviate from part 91, § 91.135(a), (b), and (c) provision under the authorization from air traffic control (ATC). Such request for deviation must be submitted in writing at least 4 days before the proposed operation.

3) Part 91, § 91.409 allows operators of turbine-powered rotorcraft to use an alternate inspection program, such as annual, progressive, or other Federal Aviation Administration (FAA)-approved inspection program.

4) Part 91, §§ 91.205, 91.509, and 91.511 define “shore” as it is used in these sections to exclude tidal flats.

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Table 3-3. Part 91 Cross-Reference Table of Old and Revised to New Sections

Old Section and Title	New Section and Title
Subpart A—General	
§ 91.1, Applicability	§ 91.1 and § 91.701, Applicability
§ 91.2, Certificate of Authorization for Certain Category II Operations	§ 91.193, Certificate of Authorization for Certain Category II Operations
§ 91.3, Responsibility and Authority of the Pilot in Command	Unchanged
§ 91.4, Pilot in Command of Aircraft Requiring More Than One Pilot	§ 91.5, Pilot in Command of Aircraft Requiring More Than One Required Pilot
§ 91.5, Preflight Action	§ 91.103, Preflight Action
§ 91.6, Category II and III Operations: General Operating Rules	§ 91.189, Category II and III operations: General Operating Rules
§ 91.7, Flightcrew Members at Stations	§ 91.105, Flightcrew Members at Stations
§ 91.8, Prohibition Against Interference with crewmembers	§ 91.11, Prohibition on Interference with Crewmembers
§ 91.9, Careless or Reckless Operation	§ 91.13, Careless or Reckless Operation
§ 91.10, Careless or Reckless Operation Other Than for the Purpose of Air Navigation	§ 91.13, Careless or Reckless Operation
§ 91.11, Alcohol and Drugs	§ 91.17, Alcohol or Drugs
§ 91.12, Carriage of Narcotic Drug, Marijuana, Depressant or Stimulant Drugs or Substances	§ 91.19, Carriage of Narcotic Drugs, Marijuana, and Depressant or Stimulant Drugs or Substances
§ 91.13, Dropping Objects	§ 91.15, Dropping Objects
§ 91.14, Use of Safety Belts and Shoulder Harnesses	§ 91.107, Use of Safety Belts, Shoulder Harnesses, and Child Restraint Systems
§ 91.15, Parachutes and Parachuting	§ 91.307, Parachutes and Parachuting
§ 91.17, Towing: Gliders	§ 91.309, Towing: Gliders
§ 91.18, Towing: Other than Under § 91.17	§ 91.311, Towing: Other than Under § 91.309
§ 91.19, Portable Electronic Devices	§ 91.21, Portable Electronic Devices
§ 91.20, Operations within the North Atlantic Minimum Navigation Performance Specifications Airspace	
§ 91.21, Flight Instruction: Simulated Instrument Flight and Certain Flight Tests	§ 91.109, Flight Instruction: Simulated Instrument Flight and Certain Flight Tests
§ 91.22, Fuel Requirements for Flight Under VFR	§ 91.151, Fuel Requirements for Flight in VFR Conditions
§ 91.23, Fuel Requirements Flight in IFR Conditions	§ 91.167, Fuel Requirements for Flight in IFR Conditions

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Old Section and Title	New Section and Title
§ 91.24, ATC Transponder and Altitude Reporting Equipment Use	§ 91.215, ATC Transponder and Altitude Reporting Equipment and Use
§ 91.25, VOR Equipment Check IFR Operations	§ 91.171, VOR Equipment Check for IFR Operations
§ 91.26, Traffic Alert and Collision Avoidance System Equipment and Use	§ 91.221, Traffic Alert and Collision Avoidance System Equipment and Use
§ 91.27, Civil Aircraft: Certifications Required	§ 91.203, Civil Aircraft: Certifications Required
§ 91.28, Special Flight Authorizations For Foreign Civil Aircraft	§ 91.715, Special Flight Authorizations for Foreign Civil Aircraft
§ 91.29, Civil Aircraft Airworthiness	§ 91.7, Civil Aircraft Airworthiness
§ 91.30, Inoperable Instruments and Equipment for Multiengine Aircraft	§ 91.213, Inoperative Instruments and Equipment
§ 91.31, Civil Aircraft Flight Manual, Marking, and Placard Requirements	§ 91.9, Civil Aircraft Flight Manual, Marking, and Placard Requirements
§ 91.32, Supplemental Oxygen	§ 91.211, Supplemental Oxygen
§ 91.33, Powered Civil Aircraft with Standard Category U.S. Airworthiness Certificates: Instrument and Equipment Requirements	§ 91.205, Powered Civil Aircraft with Standard Category U.S. Airworthiness Certificates: Instrument and Equipment Requirements
§ 91.34, Category II Manual	§ 91.191, Category II and Category III Manual
§ 91.35, Flight Recorders and Cockpit Voice Recorders	§ 91.609, Flight Recorders and Cockpit Voice Recorders
§ 91.36, Data Correspondence Between Automatically Reported Pressure Altitude Data and the Pilot’s Altitude Reference	§ 91.217, Data Correspondence Between Automatically Reported Pressure Altitude Data and the Pilots Altitude Reference
§ 91.37, Transport Category Civil Airplane Weight Limitations	§ 91.605, Transport Category Civil Airplane Weight Limitations
§ 91.38, Increased Maximum Certificated Weights for Certain Airplanes Operating in Alaska	§ 91.323, Increased Maximum Certificated Weights for Certain Airplanes Operated in Alaska
§ 91.39, Restricted Category Civil Aircraft: Operating Limitations	§ 91.313, Restricted Category Civil Aircraft: Operating Limitations
§ 91.40, Limited Category Civil Aircraft: Operating Limitations	§ 91.315, Limited Category Civil Aircraft: Operating Limitations
§ 91.41, Provisionally Certificated Civil Aircraft: Operation Limitation	§ 91.317, Provisionally Certificated Civil Aircraft: Operation Limitations
§ 91.42, Aircraft Having Experimental Certificates: Operating Limitations	§ 91.319, Aircraft Having Experimental Certificates: Operating Limitations
§ 91.43, Special Rules for Foreign Civil Aircraft	§ 91.711, Special Rules for Foreign Civil Aircraft
§ 91.45, Authorization for Ferry Flights with One Engine Inoperative	§ 91.611, Authorization for Ferry Flight with One Engine Inoperative

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§ 91.47, Emergency Exits for Airplanes Carrying Passengers For Hire	§ 91.607, Emergency Exits for Airplanes Carrying Passengers for Hire
§ 91.49, Aural Speed Warning Device	§ 91.603, Aural Speed Warning Device
§ 91.50, Reserved	Deleted
§ 91.51, Altitude Altering System or Device: Turbojet Powered Civil Airplanes	§ 91.219, Altitude Altering System or Device: Turbojet- Powered Civil Airplanes
§ 91.52, Emergency Locator Transmitter	§ 91.207, Emergency Locator Transmitters
§ 91.53, Reserved	Deleted
§ 91.54, Truth in Leasing Clause Requirement in Leases and Conditional Sales Contracts	§ 91.23, Truth-in-Leasing Clause Requirement in Leases and Conditional Sales Contracts
§ 91.55, Civil Aircraft Sonic Boom	§ 91.817, Civil Aircraft Sonic Boom
§ 91.56, Agricultural and Firefighting Airplanes: Noise Operating Limitations	§ 91.815, Agricultural and Fire fighting Airplanes: Noise Operating Limitations
§ 91.57, Aviation Safety Reporting Program: Prohibition Against Using Reports for Enforcement Purposes	§ 91.25, Aviation Safety Reporting Program: Prohibition Against Use of Reports for Enforcement Purposes
§ 91.58, Material for Compartment Interiors	§ 91.613, Materials for Compartment Interiors
§ 91.59, Carriage of Candidates in Federal Elections	§ 91.321, Carriage of Candidates in Federal Elections
Subpart B—Flight Rules	
§ 91.61, Applicability	§ 91.101, Applicability
§ 91.63, Waivers	§ 91.903, Policy and Procedures, and § 91.905, List of Rules Subject to Waivers
§ 91.65, Operating Near Other Aircraft	§ 91.111, Operating Near Other Aircraft
§ 91.67, Right of Way Rules; Except Water Operations	§ 91.113, Right-of-Way Rules: Except Water Operations
§ 91.69, Right of Way Rules; Water Operations	§ 91.115, Right-of-way rules: Water operations
§ 91.70, Aircraft Speed	§ 91.117, Aircraft Speed
§ 91.71, Acrobatic Flight	§ 91.303, Aerobatic Flight
§ 91.73, Aircraft Lights	§ 91.209, Aircraft Lights
§ 91.75, Compliance with ATC Clearances and Instructions	§ 91.123, Compliance with ATC Clearances and Instructions
§ 91.77, ATC Light Signals	§ 91.125, ATC Light Signals
§ 91.79, Minimum Safe Altitude: General	§ 91.119, Minimum Safe Altitude: General
§ 91.81, Altimeter Settings	§ 91.121, Altimeter Settings
§ 91.83, Flight Plan: Information Required	§ 91.153, VFR Flight Plan: Information Required, and

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	§ 91.169, IFR Flight Plan: Information Required
§ 91.84, Flights Between Mexico or Canada and the U.S.	§ 91.707, Flights Between Mexico or Canada and the United States
§ 91.85, Operating on or in the Vicinity of an Airport: General rules	§ 91.126, Operating on or in the Vicinity of an Airport in Class G airspace
§ 91.87, Operation at Airports with Operating Control Towers	§ 91.130, Operations in Class C airspace § 91.131, Operations in Class B airspace
§ 91.88, Airport Radar Service Areas	§ 91.129, Operations in Class D airspace
§ 91.89, Operation at Airports without Control Towers	Removed
§ 91.90, Terminal Control Areas	§ 91.127, Operating on or in the Vicinity of an Airport in Class E Airspace
§ 91.91, Temporary light restrictions	§ 91.137, Temporary Flight Restrictions in the Vicinity of Disaster/Hazard Areas
§ 91.93, Flight Test Areas	§ 91.305, Flight Test Areas
§ 91.95, Restricted and Prohibited Areas	§ 91.133, Restricted and Prohibited Areas
§ 91.97, Positive Control Areas and Route Segments	§ 91.135, Operations in Class A Airspace
§ 91.100, Emergency Air Traffic Rules	§ 91.139, Emergency Air Traffic Rules
§ 91.101, Operations to Cuba	§ 91.709, Operations to Cuba
§ 91.102, Flight Limitations in the Proximity of Space Flight Recovery Operations	§ 91.143, Flight Limitation in the Proximity of Space Flight Operations
§ 91.103, Operation of Civil Aircraft of Cuban Registry	§ 91.713, Operation of Civil Aircraft of Cuban Registry
§ 91.104, Flight Restrictions in the Proximity of the Presidential and Other Parties	§ 91.141, Flight Restrictions in the Proximity of the Presidential and Other Parties
(Visual Flight Rules) § 91.105, Basic VFR Weather Minimums	§ 91.155, Basic VFR Weather Minimums
§ 91.107, Special VFR Weather Minimums	§ 91.157, Special VFR Weather Minimums
§ 91.109, VFR Cruising Altitude or Flight Level	§ 91.159, VFR Cruising Altitude or Flight Level
§ 91.111	None
§ 91.113	None
(Instrument Flight Rules) § 91.115, ATC Clearance and Flight Plan Required	§ 91.173, ATC Clearance and Flight Plan Required
§ 91.116, Takeoff and Landing Under IFR	§ 91.175, Takeoff and Landing Under IFR
§ 91.117, Reserved	Deleted

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§ 91.119, Minimum Altitudes Operations	§ 91.177, Minimum Altitudes for IFR Operations
§ 91.121, IFR Cruising Altitude or Flight Level	§ 91.179, IFR Cruising Altitude or Flight Level
§ 91.123, Course to be Flown	§ 91.181, Course to be Flown
§ 91.125, IFR Radio Communications	§ 91.183, IFR Radio Communications
§ 91.127, IFR Operations: Two Way Radio Communications Failure	§ 91.185, IFR Operations: Two-Way Radio Communications Failure
§ 91.129, Operation Under IFR in Controlled Airspace: Malfunction Reports	§ 91.187, Operation Under IFR in Controlled Airspace: Malfunction Reports
§ 91.131-91.159, Previously not in use	
Subpart C—Maintenance, Preventive Maintenance, and Alterations	
§ 91.161, Applicability	§ 91.401, Applicability
§ 91.163, General	§ 91.403, General
§ 91.165, Maintenance Required	§ 91.405, Maintenance Required
§ 91.167, Operation After Maintenance, Preventive Maintenance, Rebuilding, or Alteration	§ 91.407, Operation After Maintenance, Preventive Maintenance, Rebuilding, or Alteration
§ 91.169, Inspections	§ 91.409, Inspections
§ 91.170, Changes to Aircraft Inspection Programs	§ 91.415, Changes to Aircraft Inspection Programs
§ 91.171, Altimeter System & Altitude Reporting Equipment Tests and Inspections	§ 91.411, Altimeter System and Altitude Reporting Equipment Tests and Inspections
§ 91.172, ATC Transponder Tests and Inspections	§ 91.413, ATC Transponder Tests and Inspections
§ 91.173 Maintenance Records	§ 91.417, Maintenance Records
§ 91.174, Transfer of Maintenance Records	§ 91.419, Transfer of Maintenance Records
§ 91.175, Rebuilt Engine Maintenance Records	§ 91.421, Rebuilt Engine Maintenance Records
§ 91.177-91.179 Previously not in use	
Subpart D—Large and Turbine-Powered Multiengine Airplanes	
§ 91.181, Applicability	§ 91.501, Applicability
§ 91.183, Flying Equipment Operating Information	§ 91.503, Flying Equipment and Operating Information
§ 91.185, Familiarity with Operating Limitations and Emergency Equipment	§ 91.505, Familiarity with Operating Limitations and Emergency Equipment
§ 91.187, Equipment Requirements: Over the Top or Night VFR Operations	§ 91.507, Equipment Requirements: Over-the-Top or Night VFR Operations
§ 91.189, Survival Equipment for Over-Water Operations	§ 91.509, Survival Equipment for Over-Water Operations
§ 91.191, Radio Equipment for Over-Water Operations	§ 91.511, Radio Equipment for Over-Water Operations

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§ 91.193, Emergency Equipment	§ 91.513, Emergency Equipment
§ 91.195, Flight Altitude Rules	§ 91.515, Flight Altitude Rules
§ 91.197, Smoking and Safety Belt Signs	§ 91.517, Passenger Information
§ 91.199, Passenger Briefing	§ 91.519, Passenger Briefing
§ 91.200, Shoulder Harness	§ 91.521, Shoulder Harness
§ 91.201, Carry-On Baggage	§ 91.523, Carry-On Baggage
§ 91.203, Carriage of Cargo	§ 91.525, Carriage Of Cargo
§ 91.205, Transport Category Airplane Weight Limitations	Deleted
§ 91.207, None	Deleted
§ 91.209, Operating in Icing	§ 91.527, Operating in Icing Conditions
§ 91.211, Flight Engineer Requirements	§ 91.529, Flight Engineer Requirements
§ 91.213, Second in Command Requirements	§ 91.531, Second in Command Requirements
§ 91.215, Flight Attendant	§ 91.533, Flight Attendant Requirements
§ 91.217-91.299, Previously not in use	
§ 91.301, Applicability: Relation to Part 36	§ 91.801, Applicability: Relation to Part 36
§ 91.302, Part 125 Operators: Designation of Applicable Regulations	§ 91.803, Part 125 Operators: Designation of Applicable Regulations
§ 91.303, Final Compliance: Subsonic Airplanes	§ 91.805, Final Compliance: Subsonic Airplanes
§ 91.305, Phased Compliance Under Parts 121 and 135: Subsonic airplanes	§ 91.807, Reserved
§ 91.306, Replacement Airplanes	§ 91.809, Reserved
§ 91.307, Service to Small Communities Exemption: Two- Engine, Subsonic Airplanes	§ 91.811, Reserved
§ 91.308, Compliance Plans and Status: U.S. Operators of Subsonic Airplanes	§ 91.813, Reserved
§ 91.309, Civil Supersonic Airplanes that Do Not Comply with Part 36	§ 91.819, Civil Supersonic Airplanes that Do Not Comply with Part 36
§ 91.311, Civil Supersonic Airplanes: Noise Limits	§ 91.821, Civil Supersonic Airplanes: Noise Limits

RESERVED. Paragraphs 3-313 through 3-330.

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VOLUME 3 GENERAL TECHNICAL ADMINISTRATION

CHAPTER 18 OPERATIONS SPECIFICATIONS

Section 1 Background Information

3-676 APPLICABILITY. This chapter contains direction and guidance for issuance of operations specifications (OpSpecs) to Title 14 of the Code of Federal Regulations (14 CFR) part 121, 125, 129, 133, 135, and 145 certificate holders. For 14 CFR part 142 certificate holders, training specifications (TSpecs) policy guidance is located in Volume 3. Direction and guidance is also included for amending, canceling, suspending, or revoking the OpSpecs for parts 121, 125, 135, and 145 certificate holders. Information on the processing of part 129 foreign air carrier OpSpecs is contained in Volume 12, Chapter 2. The policy and guidance for 14 CFR part 91K fractional owners, management specifications (MSpecs) is integrated with the OpSpecs guidance. General guidance for the issuance of other automated authorizations from the Web-based Operations Safety System (WebOPSS) is contained in Section 2 of this chapter. The WebOPSS also contains automated authorizations for part 91 operations (letters of authorization (LOA) and Letters of Deviation Authority (LODA)), 14 CFR part 141 pilot schools (Training Specifications), and 14 CFR part 137 templates used for documenting required information.

> NOTE: Unless otherwise noted, the term “operator,” when used in this chapter, applies to a general aviation operator/company conducting part 91 operations; a program manager conducting part 91K fractional ownership operations; an air carrier certificate holder conducting part 121 or 135 operations; a certificate holder or a LODA holder conducting part 125 operations; a rotorcraft external-load certificate holder conducting part 133 operations; an agricultural aircraft operator conducting part 137 operations; and/or a foreign air carrier or foreign person conducting part 129 operations, as applicable. This chapter uses the singular term “operator” for simplicity; however, uses of the term “operator” do not necessarily apply to all operations.

3-677 HISTORY OF OPSPECS. The early U.S. Civil Air Regulations (CARs) did not provide for OpSpecs. A valid certificate or temporary permit was the principal federal authorization for conducting any air commerce operations. In addition to the certificate or permit, each operator had to possess valid competency letters, or temporary letters, issued by the Secretary of Commerce. These letters, which contained information relating to the operator’s services, routes, aircraft, maintenance, airmen, and weather procedures, were appended to and considered part of the operating certificate. For example, CAR part 61.01 required each air carrier to operate in compliance with the terms, conditions, specifications, limitations, or other provisions of its certificate or temporary permit which included the competency or temporary letters. In 1953, the Civil Aeronautics Board (CAB) revised the CARs to require that each operator apply for OpSpecs at the time of application for an air carrier certificate. Air carriers that existed at that time were issued OpSpecs to be used instead of the competency or temporary letters. These revised rules specified that the OpSpecs were not part of an air carrier certificate. However, part 145, Repair Stations, does specify that the OpSpecs are a part of a Repair Station Certificate.

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In addition, part 133, Rotorcraft External-Load Operations, does not specify that the OpSpecs are a part of the certificate.

3-678 CONCEPTUAL NEED FOR OPSPECS/MSPECS. Within the air transportation industry, there is a need to establish and administer safety standards to accommodate many variables. These variables include: a wide range of aircraft, varied operator capabilities, the various situations requiring different types of air transportation, and the continual, rapid changes in aviation technology. It is impractical to address these variables through the promulgation of safety regulations for each and every type of air transport situation and the varying degrees of operator capabilities. Also, it is impractical to address the rapidly changing aviation technology and environment through the regulatory process. Safety regulations would be extremely complex and unwieldy if all possible variations and situations were addressed by regulation. Instead, the safety standards established by regulation should usually have a broad application that allows varying acceptable methods of compliance. The OpSpecs provide an effective method for establishing safety standards that address a wide range of variables. In addition, OpSpecs can be adapted to a specific certificate holder or operator's class and size of aircraft and type and kinds of operations. OpSpecs can be tailored to suit an individual certificate holder or operator's needs. Only those authorizations, limitations, standards, and procedures that are applicable to a certificate holder or operator need to be included.

3-679 LEGAL BASIS FOR OPSPECS. Title 49 of the United States Code (49 U.S.C.) (formerly, the Federal Aviation Act of 1958 (FA Act)), through the Secretary of Transportation, empowers the FAA to issue certificates to qualified air operators. Title 49 U.S.C., § 44701 requires each air carrier certificate to include the terms, conditions, and limitations reasonably necessary to ensure safety in air transportation. Included in FAA certificates issued to air operators conducting operations under parts 121, 125, 135, 142, and 145 is a stipulation that those operations must be conducted in accordance with the provisions and limitations specified in the OpSpecs. The regulations in 14 CFR part 119 require that the OpSpecs issued to parts 121, 125, and 135 certificate holders specify the authorizations, limitations, and certain procedures under which each type of operation must be conducted and under which each class and size of aircraft must be operated. Part 119 specifies in general terms the basic content of OpSpecs for each kind of operation. The regulations also state that a person engaged in operations governed by OpSpecs issued under parts 121, 125, 135, 142, or 145 may not conduct those operations either without OpSpecs or in violation of the appropriate OpSpecs. These regulations also stipulate that the Administrator may add to or amend the OpSpecs whenever necessary to address particular situations. In addition, the rule provides for the suspension or cancellation of OpSpecs for cause. For example, the OpSpecs may be suspended if the operator fails to recognize the Administrator's right of inspection. The Administrator may direct the surrender of the OpSpecs for certain activities by the operator, such as failing to be adequately equipped or terminating operations. In the event the Administrator directs the operator to surrender its OpSpecs, the Notice of Surrender must also be filed with the Director, Office of Aviation Analysis (OAA), Department of Transportation (DOT). Part 91K, Fractional Ownership Operations, was published in FAA Docket No. FAA-2001-10047, 68 FR 54561, Sept. 17, 2003, which established the legal basis for MSpecs. The above information also applies to MSpecs.

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3-680 STANDARD OPSPECS/MSPECS/TSPECS/LOAS.

C. Standard Templates. Standard templates are developed by the Flight Standards Service (AFS) at Washington headquarters (HQ). The process used at HQ for developing standard templates ensures appropriate coordination with regional flight standards personnel and with other FAA services and offices that could be affected by air carrier operations and all other air operators. The process also ensures that before the standard templates are finalized, appropriate coordination is accomplished with affected industry groups. Since standard templates specify limitations, conditions, and other provisions which operators must comply with, coordination with industry is essential to a mutual and clear understanding of the effect they will have on industry. After appropriate coordination has been completed, drafts of the new standard paragraphs/templates, or revisions to existing paragraphs/templates are finalized and incorporated into the WebOPSS.

D. Nonstandard Templates. Through the use of standard OpSpecs paragraphs, MSpecs, or other authorizing templates, the FAA and industry are assured that air operators and certificate holders conducting comparable operations with comparable equipment are held to the same standards. Occasionally, a situation may occur in which it becomes necessary to issue a certificate holder or operator a paragraph/template that is nonstandard because of a unique situation not provided for in the standard paragraphs. In those cases when a nonstandard paragraph/template is more restrictive than the standard paragraph, justifiable reasons must exist, since the operator could be placed at a competitive disadvantage. Refer to Volume 3, Chapter 18, Section 2 for the nonstandard OpSpec paragraph/template request process.

3-681 AVAILABILITY OF OPSPECS TO CREWMEMBERS AND OTHER EMPLOYEE PERSONNEL. Sections 121.135, 125.43, and 135.23 provide that the applicable portions of the OpSpecs information be included in operator manuals or made available for the certificate holder's employees to be informed of the contents. Many operators meet this requirement by including a copy of the applicable parts of the OpSpecs in the appropriate sections of their manuals. However, the language used in OpSpecs is not designed to apply to particular situations, but is written to specify absolute minimum conditions or provisions for a broad range of issues and situations. The application of a particular OpSpecs authorization, limitation, and/or provision may not be readily apparent to a particular situation. As a result, OpSpecs, which are legal documents, are not easy to use or interpret during any particular operational situation. Part 119 requires the operator to insert pertinent excerpts from the OpSpecs in the General Operations Manual (GOM) for ready use by their crewmembers and other employee personnel. The OpSpecs information in an operator's manual should pertain only to that operator's type of operation and be written in a manner that is directly applicable to the certificate holder or operator's crewmembers and/or other employee personnel. The regulations also require that when OpSpecs information is incorporated into the operator's manual, the text will clearly identify each excerpt as part of the OpSpecs and state that compliance with each OpSpec is mandatory.

RESERVED. Paragraphs 3-682 through 3-700.

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VOLUME 3 GENERAL TECHNICAL ADMINISTRATION

CHAPTER 18 OPERATIONS SPECIFICATIONS

Section 5 Part C Operations Specifications—Airplane Terminal Instrument Procedures and Airport Authorizations and Limitations

3-871 GENERAL. Part C is issued to operators who conduct Title 14 of the Code of Federal Regulations (14 CFR) part 91, 91 subpart K (part 91K), 121, 125 (including 125 Letter of Deviation Authority (LODA) holders), or 135 operations with fixed-wing airplanes. It is not issued to part 135 operators who only conduct helicopter operations. Instrument flight rules (IFR) helicopter operators are issued Part H. Part C is not usually issued to part 135 on-demand operators who are restricted to visual flight rules (VFR)-only operations. In rare situations, operations specification (OpSpec) C070 is issued to part 135 VFR-only operators who are authorized to conduct commuter operations. However, for those who operate outside the United States, a letter of authorization (LOA) may be issued to eligible part 91 operators if requested.

NOTE: All 300-series and nonstandard 500-series OpSpecs/management specifications (MSpecs)/training specifications (TSpecs)/letters of authorization (LOA) (Parts A, B, C, D, E, and H) require approval by the appropriate headquarters (HQ) policy division. Title 14 CFR parts 61, 91, 91K, 125 (including the 125 LODA holders), 133, 137, and 141 operators' nonstandard operational requests must be approved by the General Aviation and Commercial Division (AFS-800). Title 14 CFR parts 121, 135, and 142 nonstandard operational requests must be approved for issuance by the Air Transportation Division (AFS-200). Title 14 CFR parts 121, 135, and 145 repair station and all airworthiness nonstandard requests must be approved by the Aircraft Maintenance Division (AFS-300). All Weather Operations (AWO) relating to instrument procedures must be approved by the Flight Technologies and Procedures Division (AFS-400) and AFS-200 or AFS-800, as appropriate. Nonstandard authorizations for 14 CFR part 129 foreign operators require approval from the International Programs and Policy Division (AFS-50).

NOTE: All text added to an OpSpec/MSpec/TSpec or LOA through the use of nonstandard text entered in the nonstandard text block (sometimes referred to as "Text 99") must also be approved by the appropriate HQ policy division. For detailed guidance on the process for obtaining HQ approval for nonstandard authorizations, principal inspectors (PI) must read the guidance contained in Volume 3, Chapter 18, Section 2.

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OPSPEC/MANAGEMENT SPECIFICATION (MSPEC)/LETTER OF AUTHORIZATION (LOA) C048—ENHANCED FLIGHT VISION SYSTEM (EFVS) USE ON STRAIGHT-IN INSTRUMENT APPROACH PROCEDURES OTHER THAN CATEGORY II OR CATEGORY III.

A. Authorization. The C048 authorization is optional for certificate holders/operators/program managers conducting airplane operations under 14 CFR parts 91 subpart K (part 91K), 121, 125 (including the Letter of Deviation Authority (LODA) 125 operators), and 135. C048 authorizes approach to straight-in landing operations below Decision Altitude (DA) or minimum descent altitude (MDA) using a certified enhanced flight vision system (EFVS). C048 is applicable to certificate holders/operators/program managers conducting straight-in instrument approach procedures (IAP) other than Category II Approach (CAT II) or Category III Approach (CAT III), as follows:

1) OpSpec C048 is required to be issued to air carriers conducting operations under parts 121, 135, and 121/135 split certificates using the provisions specified in C048.

2) OpSpec C048 is required to be issued to certificated operators that operate under part 125 using the provisions specified in C048.

3) LOA C048 is required to be issued to operators conducting operations under part 125 that are issued a deviation from the certificate and OpSpec requirements of part 125 (125M) and who will use the provisions specified in C048.

4) MSpec MC048 is required to be issued to those program managers conducting operations under part 91K who will use the provisions specified in C048.

5) An LOA is not required to be issued to part 91 operators (except for part 91K operators who must be issued an MSpec). Part 91 operators are authorized by the regulations to conduct EFVS operations without being issued an LOA.

B. Regulations. Part 91, § 91.175(l) and (m) authorize an EFVS to be used to descend below DA or MDA on straight-in IAPs, other than CAT II or CAT III. These regulations require that the EFVS have a Federal Aviation Administration (FAA) type design approval (type certificate (TC) or Supplemental Type Certificate (STC)), or for foreign-registered aircraft, that the EFVS complies with all of the EFVS requirements of the U.S. regulations. An EFVS uses imaging sensor technologies to provide a real-time enhanced image of the forward external visual scene to the pilot. An EFVS is used by the pilot to determine that the enhanced flight visibility is not less than the visibility prescribed in the IAP to be flown and that the required visual references for descending below DA or MDA down to 100 feet above the touchdown zone elevation (TDZE) are distinctly visible and identifiable using the sensor image when the runway environment is not visible using the pilot's natural vision. EFVS also helps to verify proper runway alignment at night and in low visibility conditions.

NOTE: The authorization associated with this OpSpec, MSpec, or LOA is in keeping with the intent of § 91.175(l) and (m) and does not authorize EFVS to be used to satisfy the § 91.175(e)(2) requirement that an identifiable part of the airport be distinctly visible to the pilot during a circling maneuver at or above

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MDA, or while descending below MDA. EFVS is permitted to be used to identify the required visual references in order to descend below DA or MDA on straight in IAPs only. An instrument approach with a circle-to-land maneuver is not a straight-in IAP and does not have straight-in minima. While the regulations do not prohibit EFVS from being used during any phase of flight, they do prohibit it from being used for operational credit on anything but a straight-in IAP. EFVS may be used during a circle-to-land maneuver provided the visual references required at or above MDA and throughout the circling maneuver are distinctly visible using natural vision. Use of EFVS during a circling maneuver may enable a pilot to see much more of the external scene at night and in low visibility conditions than would be possible using natural vision, thereby enhancing situational awareness (SA).

C. Descending Below DA or MDA. In order to descend below DA or MDA, the following visual references for the runway of intended landing must be distinctly visible and identifiable to the pilot using the EFVS:

1) The Approach Light System (ALS) (if installed); or

2) The following visual references in both subparagraphs C2)a) and b) below:

a) The runway threshold, identified by at least one of the following:

1. The beginning of the runway landing surface,

2. The threshold lights, or

3. The runway end identification lights (REIL).

b) The touchdown zone (TDZ), identified by at least one of the following:

1. The runway TDZ landing surface,

2. The TDZ lights,

3. The TDZ markings, or

4. The runway lights.

3) To descend below 100 feet above the TDZE of the runway of intended landing, the pilot must be able to see the visual references required by § 91.175(l)(4) with his or her natural vision without relying on the EFVS. That is, the enhanced flight visibility observed by use of an EFVS is no longer applicable. At this point, the flight visibility only has to be sufficient for the pilot to distinctly see and identify the lights or markings of the threshold or the lights or markings of the TDZ using natural vision before continuing to a landing.

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D. Required Visual References. The required visual references in § 91.175(l) using EFVS to descend below DA or MDA are different from those required by § 91.175(c) using natural vision. Table 3-15A, Required Visual References, Part 91, § 91.175(c) and (l), provides a comparison of visual reference requirements for both natural vision and EFVS. Generally, the visual reference requirements for EFVS are more stringent than those for natural vision.
For example, § 91.175(c) allows descent below DA or MDA using natural vision when only one of the visual references listed can be seen. For EFVS, § 91.175(l) requires that a pilot either see the ALS or at least one visual reference listed for the threshold environment and one visual reference listed for the TDZ environment. When natural vision is used, the Visual Approach Slope Indicator (VASI) is permitted to be used as a required visual reference for descent below DA or MDA. Under § 91.175(l) using EFVS, however, the VASI cannot be used as a visual reference for descent below DA or MDA using EFVS because the EFVS display is monochromatic. For descent below 100 feet above TDZE using natural vision, § 91.175(c)(3) permits the approach lights to be used as a reference only if the red terminating bars or the red side row bars are visible and identifiable. For EFVS operations below 100 feet above TDZE, the approach lights with red side row bars are not permitted to be used as a visual reference, even though the pilot is required to rely only on natural vision to descend below 100 feet above TDZE. The only visual references permitted to be used for EFVS operations below 100 feet above TDZE are the lights or markings of the threshold or the lights or markings of the TDZ.

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Table 3-15A. Required Visual References, Part 91, § 91.175(c) and (l)

Required Visual References Using ***Natural Vision*** **(14 CFR 91.175(c))**	**Required Visual References Using an** ***Enhanced Flight Vision System*** **(14 CFR 91.175(l))**
For operation below DA or MDA: At least **one** of the following visual references: Approach light system Threshold Threshold markings Threshold lights Runway end identifier lights Visual approach slope indicator Touchdown zone Touchdown zone markings Touchdown zone lights Runway Runway markings Runway lights	**For operation below DA or MDA:** The following references, using the EFVS: Approach light system ***OR*** <u>BOTH</u> paragraphs A and B -- A. The runway threshold, identified by at least one of the following – • beginning of the runway landing surface, • threshold lights, or • runway end identifier lights **AND** B. The touchdown zone, identified by at least one of the following – • runway touchdown zone landing surface, • touchdown zone lights, • touchdown zone markings, or • runway lights.
Descent below 100 feet height above TDZE: At least **one** of the following visual references: Approach light system, as long as the red terminating bars or red side row bars are also distinctly visible and identifiable Threshold Threshold markings Threshold lights Runway end identifier lights Visual approach slope indicator Touchdown zone Touchdown zone markings Touchdown zone lights Runway Runway markings Runway lights	**Descent below 100 feet height above TDZE:** The following references, using natural vision: The lights or markings of the threshold ***OR*** The lights or markings of the touchdown zone

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E. Conditions of Approval. Before issuing C048 based on aircraft equipment and operation, inspectors shall ensure that each certificate holder/operator/program manager meets the following conditions:

1) The authorized aircraft must be equipped with an EFVS certified for conducting operations under § 91.175(l) and (m) and must either have an FAA type design approval (TC or STC) or, for a foreign-registered aircraft, the EFVS must comply with all of the EFVS requirements of the U.S. regulations. Field approvals for EFVS installations are not authorized. An EFVS is an installed airborne system and must include:

a) A head-up display (HUD) or equivalent display.

1. EFVS sensor imagery and aircraft flight symbology must be presented so that they are clearly visible to the Pilot Flying (PF) in his normal position, line of vision, and looking forward along the flightpath.

2. The EFVS display must be conformal. That is, the sensor imagery, aircraft flight symbology, and other cues that are referenced to the imagery and external scene must be aligned with and scaled to the external view.

b) Sensors that provide a real-time image of the forward external scene topography.

c) Computers and power supplies.

d) Indications and controls.

e) Aircraft flight symbology that includes at least the following:

1. Airspeed,

2. Vertical Speed (VS),

3. Aircraft attitude,

4. Heading,

5. Altitude,

6. Command guidance as appropriate for the approach to be flown,

7. Path deviation indications,

8. Flight Path Vector (FPV) cue, and

9. Flight Path Angle (FPA) reference cue.

NOTE: The FPA reference cue must be displayed with the pitch scale and must be selectable by the pilot for the appropriate approach descent angle.

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NOTE: An EFVS must not be confused with an Enhanced Vision System (EVS). An EVS is an electronic means to provide the flightcrew with a sensor-derived or enhanced image of the external scene (e.g., millimeter wave radar, Forward Looking Infrared (FLIR)). Unlike an EFVS, an EVS does not necessarily provide the additional flight information/symbology required by § 91.175(m). An EVS might not use an HUD and might not be able to present the image and flight symbology in the same scale and alignment as the outside view. This system can provide SA to the pilot, but does not meet the regulatory requirements of § 91.175(m). As such, an EVS cannot be used as a means to determine enhanced flight visibility and descend below the DA or MDA.

2) The pilot can continue the approach below DA or MDA to 100 feet above the TDZE if he or she determines that the enhanced flight visibility observed by the use of a certified EFVS is not less than the minimum visibility prescribed in the straight-in IAP being flown, and the pilot acquires the required visual references prescribed in § 91.175(l)(3). The pilot uses the EFVS to visually acquire the runway environment, confirm lateral alignment, maneuver to the extended runway centerline (RCL), and continue a normal descent from the DA or MDA to 100 feet above the TDZ.

a) A pilot may continue the approach below 100 feet above the TDZE as long as the flight visibility, using natural vision, is sufficient for the required visual references to be seen. In addition, the aircraft must be continuously in a position from which a descent to landing can be made on the intended runway, at a normal rate of descent using normal maneuvers, and for part 121 and 135 certificate holders, at a descent rate that allows touchdown to occur within the TDZ.

b) It should be noted that the rule does not require the EFVS to be turned off or the sensor image to be removed from the HUD in order to continue to a landing without reliance on the EFVS sensor image. In keeping with the requirements of the regulations, however, the decision to continue descending below 100 feet above the TDZE must be based on seeing the visual references required by the rule through the HUD by means of natural vision. An operator may not continue to descend beyond this point by relying on the sensor image displayed on the HUD.

c) EFVS equipage may vary. Some aircraft may be equipped with a single EFVS display. Others may have an EFVS display and a separate repeater display located in or very near the primary field of view (FOV) of the non-flying pilot. Still others may be equipped with dual EFVS displays. The regulations do not require a repeater display or a separate EFVS for the non-flying pilot, but neither do they preclude it. Certificate holders, operators, or program managers should develop procedures for EFVS operations appropriate to the equipment installed and the operation to be conducted. In establishing these procedures, both normal and abnormal or failure modes must be addressed for the various phases of the approach (e.g., before final approach fix (FAF), FAF to DA or MDA, and after reaching DA or MDA).

d) Procedures should support appropriate levels of crew coordination with special emphasis on the transition to and reliance on natural vision. Each EFVS has a specified limit to the FOV. An offset final approach or crosswinds may affect use of the EFVS as well as

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when the decision is made to rely on natural vision for the primary reference. Also, specific pilot/crew decisionmaking and coordination must be addressed in the segment from FAF to DA or MDA (or point that a decision to rely on natural vision is made) and the EFVS segment (from DA or MDA down to 100 feet height above TDZE). The transition from enhanced vision to natural vision for landing is an especially important segment. Certificate holders, operators, or program managers should describe how common SA will be achieved—either procedurally when a single EFVS is used or through a combination of procedures and equipment when a repeater display or dual EFVSs are used.

3) Training requirements with respect to aircraft type (make, model, and series (M/M/S)) and EFVS model/version shall be accomplished in accordance with the Flight Standardization Board (FSB) report for the aircraft and EFVS equipment to be used. If an FSB report was not issued for a specific aircraft type and EFVS model/version, initial EFVS training shall be accomplished in the aircraft type and EFVS model/version to be used, and additional training shall be accomplished when a different EFVS model/version is used on the same aircraft type or when the same EFVS model/version is used on a different make aircraft. It should be noted that the sensor image, fidelity, characteristics, and symbology may differ, necessitating additional training. The flightcrew must be trained in the use of EFVS and demonstrate proficiency conducting straight-in IAPs, other than CAT II or CAT III (e.g., Category I Approach (CAT I) instrument landing system (ILS), nonprecision, approach procedures with vertical guidance (APV), etc.). Part 91K, 121, and 135 operators must have approved training programs. Part 125 operators are not required to have an approved training program. However, pilots of part 125 operators must complete an EFVS training program and must be qualified for EFVS operations by a check airman or an FAA inspector.

a) Pilots should demonstrate knowledge of the regulatory requirements of § 91.175 and part 121, § 121.651, part 125, § 125.381, or part 135, § 135.225, as appropriate, for approach to straight-in landing operations below DA or MDA using an EFVS.

b) Pilots operating an EFVS should be able to demonstrate knowledge and proficiency in the use of this equipment through training and checking as required by the type of operation. As a minimum, pilots should be knowledgeable and proficient in the following areas:

1. The specific sensor technology to include limitations that impact enhanced vision under various environmental conditions (weather, system resolution, external interference, thermal characteristics, variability and unpredictability of sensor performance, etc.).

2. EFVS operational considerations:

- Use of HUD symbology.
- Preflight and warmup requirements, as applicable.
- Controls, modes, adjustments, and alignment of the EFVS/HUD.
- Importance of the Design Eye Position (DEP) in acquiring the proper EFVS image.
- System limitations and normal and abnormal procedures, including visual anomalies such as noise, blooming, and thermal crossover.

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- Use of EFVS on precision, nonprecision, and APV approaches.
- Use of caged and uncaged modes of the EFVS, if applicable, in crosswind conditions.

3. Impact of EFVS on other aircraft systems, such as autopilot minimum use height limitations.

4. Runway lightning systems and ALS.

5. Crew briefings, callouts, and crew coordination procedures.

6. Visual references required by § 91.175(l)(3) and (4).

7. Transition from EFVS imagery to natural vision and recognition of the required visual references.

8. Obstacle clearance requirements for approach and missed approach:

- Flight planning for obstacle clearance on a missed approach (e.g., go-around or balked landing) below DA or MDA;
- Use and significance of a published vertical descent angle (VDA) on IAPs;
- Vertical Path (VPATH), VASI, precision approach path indicator (PAPI), published visual descent points (VDP), calculated VDPs; and
- Use of the FPA reference cue and FPV cue.

9. Missed approach requirements include: loss of required equipment, enhanced flight visibility, or required visual references for various phases of the approach (e.g., FAF to DA or MDA, and after passing DA or MDA).

c) The flightcrew shall not conduct any operations authorized by this paragraph unless they are trained and qualified in the equipment and special procedures to be used. Each pilot in command (PIC) and second in command (SIC) must successfully complete an approved EFVS training program for parts 91K, 121, and 135 operators or a training program for part 125 operators, and must be certified as being qualified for EFVS operations by one of the certificate holder/operator/program manager's check airmen who is properly qualified for EFVS operations or an FAA inspector.

4) The Aircraft Flight Manual (AFM) must contain EFVS provisions appropriate to the EFVS operation authorized.

5) The minimum equipment list (MEL) should include EFVS provisions, if MEL relief for EFVS is sought.

6) Part 121 and 135 operators must incorporate into their maintenance program the EFVS manufacturer's requirements for maintenance and instructions for continued airworthiness. Part 91K and 125 operators must maintain the installed EFVS equipment in

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accordance with the aircraft manufacturer's or the equipment manufacturer's maintenance instructions.

OPSPEC/MSPEC C049—DESTINATION AIRPORT ANALYSIS.

A. General. OpSpec C049 is an optional authorization for 14 CFR part 135 certificate holders that have been issued OpSpec A057 as an eligible on-demand operator for reducing effective runway length requirements for turbine-engine powered, large transport-category airplanes that must be met before a flight's release, provided certain requirements are met by the operator. MSpec C049 is an optional authorization for 14 CFR part 91 subpart K (part 91K) fractional ownership operations program managers to reduce effective runway length requirements for turbine-engine powered, large transport-category airplanes that must be met before a flight's release, provided the program manager meets certain requirements.

B. Destination Airport Analysis. FAA regulations governing operations under parts 91K and 135 provide for reducing effective runway length requirements for turbine-engine powered, large transport-category airplanes that must be met before a flight's release, provided the operator meets certain requirements. For destination airports, normal landing distance requirements for part 91K and 135 operations are 60 percent of the available runway length. For alternate airport landing distance requirements, part 91K remains at 60 percent, while part 135 allows for 70 percent of the effective runway length. If an operator desires to reduce such requirements below 60 percent of the available runway length, that operator must meet regulatory requirements in two areas:

1) Part 135 eligible on-demand operator (OpSpec A057 must be issued) or part 91K program experience; and

2) FAA-approved Destination Airport Analysis Program (DAAP). The DAAP must address specific regulatory requirements and be approved for use through that operator's MSpecs or OpSpecs, as applicable.

C. Experience Requirements. An eligible on-demand operator is defined in part 135, § 135.4. Fractional ownership programs must meet the same requirements and are identified in part 91, §§ 91.1053 and 91.1055. The requirements include an on-demand or fractional ownership program operation that meets the following requirements:

1) Two-Pilot Crew. The flightcrew must consist of at least two qualified pilots employed or contracted by the certificate holder.

2) Flightcrew Experience. The crewmembers must have met the applicable requirements of 14 CFR part 61 and have the following experience and ratings:

a) Total flight time for all pilots:

- Pilot in command (PIC)—A minimum of 1,500 hours.
- Second in command (SIC)—A minimum of 500 hours.

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b) For multiengine, turbine-powered fixed-wing, and powered-lift aircraft, the following FAA certification and ratings requirements:

- PIC—Airline transport pilot (ATP) and applicable type ratings.
- SIC—Commercial pilot and instrument ratings.

c) For all other aircraft, the following FAA certification and rating requirements:

- PIC—Commercial pilot and instrument ratings.
- SIC—Commercial pilot and instrument ratings.

3) Pilot Operating Limitations. If the SIC of a fixed-wing aircraft has fewer than 100 hours of flight time as SIC flying in the aircraft make and model, a type rating is required in the type of aircraft being flown, and the PIC is not an appropriately qualified check pilot, the PIC will make all takeoffs and landings in any of the following situations:

a) Landings at the destination airport when a Destination Airport Analysis is required by part 135, § 135.385(f); and

b) In any of the following conditions:

- The prevailing visibility for the airport is at or below three-quarters of a mile;
- The Runway Visual Range (RVR) for the runway to be used is at or below 4,000 feet;
- The runway to be used has water, snow, slush, ice, or similar contamination that may adversely affect aircraft performance;
- The braking action on the runway to be used is reported to be less than “good”;
- The crosswind component for the runway to be used is in excess of 15 knots;
- Wind shear is reported in the vicinity of the airport; and
- Any other condition in which the PIC determines it to be prudent to exercise the PIC’s authority.

4) Crew Pairing. Either the PIC or the SIC must have at least 75 hours of flight time in that aircraft make or model and, if a type rating is required for that type aircraft, either as PIC or SIC.

D. Deviations. The Administrator may authorize deviations from the total flight time requirements of § 91.1053(a)(1) or crew pairing requirements of § 91.1055(b) if the FAA office that issued the OpSpecs or MSpecs, as applicable, finds that the crewmember has comparable experience and can effectively perform the functions associated with the position in accordance with the requirements of this chapter. The Administrator may, at any time, terminate any grant of deviation authority issued under this provision. Grants of deviation may be authorized after consideration of the size and scope of the operation, the qualifications of the intended operating pilots, and the following circumstances:

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1) A newly authorized certificate holder does not employ any pilots who meet the minimum requirements of § 91.1055(b).

2) An existing certificate holder adds to its fleet a new category and class aircraft not used before in its operation.

3) An existing certificate holder establishes a new base to which it assigns pilots who will be required to become qualified on the aircraft operated from that base.

E. DAAP Requirements. DAAP requirements are found in §§ 91.1025 and 135.23. Specifically, if required by § 91.1037(c) or § 135.385, as applicable, the Destination Airport Analysis establishing runway safety margins must include the following elements, supported by aircraft performance data supplied by the aircraft manufacturer for the appropriate runway conditions at the airport(s) to be used, if a reduction below 60 percent of the available runway length is planned:

1) Pilot Qualifications and Experience. The operator is responsible for including all applicable regulatory requirements to establish a pilot's eligibility to reduce effective runway planning requirements below 60 percent of the available runway length. Experience requirements address pilots with less than 100 hours of flight time in type (high minimum), total flight time, and crew pairing limitations (less than 75 hours in type).

2) Aircraft Performance Data to Include Normal, Abnormal, and Emergency Procedures as Supplied by the Aircraft Manufacturer. Landing distance calculations should be completed using FAA-approved procedures and data. Consideration must be given to abnormal and emergency procedures, as some of these procedures may increase approach speeds and consequently, landing distance requirements. Additionally, planned takeoff weight for the departure from that airport should be evaluated before operating into that airport.

3) Airport Facilities and Topography. Consider what services are available at the airport. Services such as communications, maintenance, and fueling may have an impact on operations to and from that airport. Terrain features may figure prominently in or near a particular airport. High, fast-rising terrain may require special approach or DPs, which may impact performance requirements. For example, an aircraft certification criterion uses a 3.5 degree glideslope angle in computing landing distance data. glideslope angles of 2.5 to 3 degrees are common and have the effect of lengthening actual landing distance. Airports that sit on top of hilly terrain or downwind of mountainous terrain may occasionally experience conditions that include gusty conditions or winds shifting from a headwind to a tailwind. Such conditions are an important consideration during the landing maneuver, particularly during the flare, and increase landing distance requirements.

4) Runway Conditions (including contamination). Runway features, such as slope and surface composition, can cause the actual landing distance to be longer than the calculated landing distance. Wet or slippery runways may preclude reductions from being taken and, in fact, require 115 percent of the distance derived from calculations, whether a reduction was used or not. This distance is calculated by increasing the distance required under dry conditions by an additional 15 percent (i.e., if Aircraft Flight Manual (AFM) data show the actual landing distance

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will be 2,000 feet, the effective runway length required is 3,334 feet using 60 percent in this example; if the runway is expected to be wet or slippery upon arrival, the effective runway length required is 3,834 feet). Braking action always impacts the landing distance required as it deteriorates. Always consider the most current braking action report and the likelihood of an update before the flight's arrival at a particular airport.

5) Airport or Area Weather Reporting. Some airports may not have current weather reports and forecasts available for flight planning. Others may have automated observations for operational use. Still others may depend on a nearby airport's forecast for operations. Area forecasts are also very valuable in evaluating weather conditions for a particular operation. Comparing forecasted conditions to current conditions will lend insight to changes taking place as weather systems move and forecasts are updated. Longer flight segments may lean more heavily on the forecast for the estimated time of arrival (ETA), as current conditions may change significantly as weather systems move. For example, if a flight is planned for 5 hours en route, the current conditions may not provide as much insight as a forecast for the arrival time if a cold front is expected to pass through the area while the flight is en route.

6) Appropriate Additional Runway Safety Margins, If Required. Displaced thresholds, airport construction, and temporary obstacles (such as cranes and drawbridges) may impact runway length available for landing. Notices to Airmen (NOTAM) must be consulted before conducting a flight and are a good source of information on items such as these.

7) Airplane Inoperative Equipment. Thrust reversers, on airplanes so equipped, provide some effect of reducing landing rollout distance. However, they are not considered in landing distance performance requirements and data provided by airplane manufacturers during certification. Rather, they provide an added margin of safety when used. If thrust reversers are inoperable or not installed, that additional safety margin does not exist. Also, their effectiveness is directly related to many factors, including pilot technique, reverser deployment rates, engine speeds, and environmental conditions (e.g., wet or contaminated runways in conjunction with crosswinds). Their actual effectiveness varies greatly. Other airplane systems that directly impact landing distance requirements include antiskid and ground spoilers (if installed), brake and tire condition, and landing flap selection, to name a few.

8) Environmental Conditions. Many environmental conditions directly and indirectly affect actual landing distance requirements. Frontal passage usually causes winds to shift, sometimes causing a tailwind component. Tailwinds generally have a significantly greater impact on landing distance than headwinds. Thunderstorms in the vicinity of airports can introduce wind gusts from different directions, including wind shear, to varying degrees that are difficult to predict in advance or during the actual landing maneuver itself. Density and pressure altitudes also directly impact landing distance requirements. Landing distance tables may take these factors into account. However, variations from planned conditions and actual conditions at time of landing can vary and impact actual landing distance requirements.
Stronger-than-forecasted tailwinds en route can cause the airplane to weigh more than projected, causing the actual landing distance to be longer than planned. If icing conditions were encountered while en route and temperatures above freezing are not reached before landing, any ice remaining behind removal devices or on areas that are not protected add additional weight and drag to the airplane, which in turn requires higher airspeeds and longer landing distances.

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9) Other Criteria That Affect Aircraft Performance. Many other variables affect landing distance. Approach speed, flap configuration, airplane weight, tire and brake condition, airplane equipment, and environmental conditions, to name a few, all directly impact required landing distance. With these and many other factors considered, it is the pilot who must apply them through the use of procedures and technique, the latter being highly variable. While specific additives are provided by manufacturer's landing data, a pilot usually applies techniques acquired through experience in dealing with similar circumstances. Pilots may opt for an especially smooth landing on longer runways by "floating" in ground effect, before touchdown. While possibly yielding a smooth landing, this technique will add to the landing distance requirement, as landing data provided by manufacturer's data through the certification process assumes a touchdown rate of descent of 8 feet per second. The following tables provide additional insight into factors that affect landing distance requirements and policies and procedures addressing them should be included in the operator's FAA-approved DAAP.

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Table 3-16. Reduction of Landing Distance Planning Requirements

GENERAL OPERATIONAL CONSIDERATIONS

Certification Criteria	Operational Consideration	Effect on Safety Margin
3.5 degree glideslope angle	2.5 to 3 degrees typical.	Actual landing distance will be longer than calculated landing distance.
8 ft/s touchdown rate of descent	2 to 4 ft/s typical.	Actual landing distance will be longer than calculated landing distance.
Assumes all approach speed additives bled off before reaching the 50 ft height	5 to 10 knots exceedances not uncommon.	Actual landing distance will be longer than calculated landing distance.
	Longer flare distance (“float”).	Actual landing distance will be longer than calculated landing distance.
	Less-than-full braking effort.	Actual landing distance will be longer than calculated landing distance.
	Delays in obtaining full braking configuration.	Actual landing distance will be longer than calculated landing distance.
	Higher temperatures not accounted for (temperature accountability not required).	Actual landing distance will be longer than calculated landing distance.
	Downhill runway slope not accounted for (runway slope accountability not required).	Actual landing distance will be longer than calculated landing distance.
	Icy, slippery, or contaminated runway surface.	Actual landing distance will be longer than calculated landing distance.
	Airplane heavier at time of landing than predicted at time of dispatch.	Actual landing distance will be longer than calculated landing distance.
	Airplane higher than 50 ft over the threshold.	Actual landing distance will be longer than calculated landing distance.
	Airport pressure altitude higher than predicted at time of dispatch.	Actual landing distance will be longer than calculated landing distance.

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OTHER VARIABLE CONSIDERATIONS

Steady-State Variables	Non Steady-State Variables	Actual Operations vs. Flight Test	Actual vs. Forecast Conditions
Runway slope	Wind gusts/turbulence	Flare technique	Runway or direction (affecting slope)
Temperature	Flightpath deviations	Time to activate deceleration devices	Airplane weight
Runway surface condition (dry, wet, icy, texture)		Flightpath angle	Approach speed
Brake/tire condition		Rate of descent at touch down	Environmental conditions (for example, temperature, wind, pressure altitude)
Speed additives		Approach/touchdown speed	Engine failure
Crosswinds		Height at threshold	
		Speed control	

F. Operator Responsibility. Operators are responsible for preparing their DAAP if they desire to reduce landing distance planning requirements below 60 percent of the effective runway length. Operators must ensure that their policies and procedures reflect at least minimum regulatory requirements and adequate policies and procedures before submitting their program to the FAA for approval.

G. Checklist. The checklist is available electronically in the guidance subsystem of the automated Operations Safety System (OPSS) in association with OpSpec/MSpec C049. The checklist should be used to ensure that the operator and its DAAP meet minimum regulatory requirements. This checklist should be completed by the operator and be provided to the FAA office having approval authority, along with the DAAP and request for approval and issuance of OpSpec C049 or MSpec C049, as applicable.

OPSPEC C050—SPECIAL PILOT IN COMMAND AIRPORT QUALIFICATIONS.

A. General. OpSpec C050 is used to authorize 14 CFR part 121 air carrier certificate holders to conduct instrument flight rules (IFR) operations into special airports requiring special airport qualification in accordance with the provisions and limitations of the OpSpec and part 121, § 121.445. For detailed information refer to Volume 4, Chapter 3, Section 5, paragraph 4-602.

B. Operations into Special Pilot in Command (PIC) Qualification Airports. Air carriers conducting domestic, flag, and supplemental operations require the PIC to be qualified

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for operations into special PIC qualification airports. These PICs must be qualified in accordance with § 121.445.

1) OpSpec C050 is used to authorize special PIC qualification airports for domestic, flag, and supplemental part 121 air carriers.

2) The list of special qualification airports can be found in the automated Operations Safety System (OPSS) guidance subsystem in association with OpSpec C050 and at http://fsims.faa.gov/PICResults.aspx?mode=Publication&doctype=OPSS Guidance.

C. PIC Requirements. If both the ceiling and the visibility minimums are not satisfied as detailed in § 121.445(c), then the qualification requirements of § 121.445(b) apply. Section 121.445(b) specifies that for a pilot to serve as PIC on a flight to a special qualification airport, the PIC must have the benefit of one of the following:

1) The PIC, within the preceding 12 calendar-months, has made a takeoff and landing at that airport while serving as a pilot flightcrew member;

2) The second in command (SIC), within the preceding 12 calendar-months, has made a takeoff and landing at that airport while serving as a pilot flightcrew member; or

3) Within the preceding 12 calendar-months, the PIC has qualified by using pictorial means acceptable to the Administrator for that airport.

D. Operator Assessment of Airport Factors. The operator assesses the nature and complexity of certain factors associated with the airport (e.g., high altitude, foreign airport, specific terrain features, unique weather patterns may be present singly or in combination). This assessment determines whether the airport should be included in the air carrier's airport listing in OpSpec C067 or the provisions of OpSpec C050 apply. For instance, an airport with an approved IFR and or visual flight rules (VFR) approach/departure procedure and an unusual characteristic, such as a nearby politically sensitive international boundary or high terrain, may require designation as a special PIC qualification airport. In this case, the airport would need to be listed in OpSpec C067 and the provisions of OpSpec C050 also apply. Refer to Volume 4, Chapter 3, Section 5, paragraph 4-602, and OpSpec C067.

E. Addition and Removal From the Special Airport Qualification List. The air carriers, in conjunction with the Air Transportation Division (AFS-200), will determine any airport additions or deletions from the special airport qualification list. These changes will be made on a quarterly basis.

OPSPEC/MSPEC C051—TERMINAL INSTRUMENT PROCEDURES. C051 is issued to all airplane operators who conduct any flight operations under instrument flight rules (IFR). FAA Order 8260.31, Foreign Terminal Instrument Procedures, current edition, provides direction and guidance on acceptance of foreign Terminal Instrument Procedures (TERPS). Additional information concerning TERPS is in Volume 4, Chapter 2, Section 3. For helicopter authorization, see OpSpec H101.

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OPSPEC/MSPEC/LOA C052—STRAIGHT-IN NONPRECISION, APV, AND CATEGORY I PRECISION APPROACH AND LANDING MINIMA—ALL AIRPORTS.

A. Applicability. OpSpec/MSpec/LOA C052 is applicable to all operators conducting airplane operations under 14 CFR parts 91, 91 subpart K (part 91K), 121, 125 (including the Letter of Deviation Authority (LODA) 125 operators), and 135. C052 specifies the types of instrument approaches the operator is authorized to conduct under instrument flight rules (IFR) and prohibits the use of other types of instrument approaches, and authorizes the lowest straight-in, nonprecision approach procedures with vertical guidance (APV), and Category (CAT) I Approach precision approach and landing minima. OpSpec/MSpec/LOA C052 is applicable to operators as follows:

1) OpSpec C052 is:

- Required to be issued to operators conducting operations under part 121 or 125;
- Required to be issued to operators using turbojets in operations under part 135; and
- Optional for operators conducting operations under part 135 with all other aircraft.

2) LOA C052 is required for operators conducting operations under part 125 that are issued a deviation from the certificate and OpSpec requirements of part 125 (125M).

3) MSpec C052 is required to be issued to those program managers conducting operations under part 91K.

4) For helicopter authorization, see OpSpecs H101, H103, and H117.

5) An optional LOA template is provided to satisfy a request from foreign regulatory authorities for evidence of training and approval to fly Global Navigation Satellite System (GNSS)-based approaches. Unlike the other C052 templates, the inspector only has the option of GNSS Landing System (GLS) or area navigation (RNAV) (GNSS) approaches to lateral navigation (LNAV), LNAV/vertical navigation (VNAV), Localizer Performance with Vertical Guidance (LPV), or Localizer Performance (LP) lines of minima. As a result, this LOA is not a comprehensive list of authorized approaches for the operator, but only a subset to address foreign GNSS-based approaches. The inspector should ensure the applicant presents documentation of capability to perform these operations. Additionally, the inspector should verify evidence of training. After completing these actions, the inspector may select the appropriate lines of minima in Table 1 of the LOA. The inspector may find these resources helpful: information detailed in this section and the current edition of Advisory Circular (AC) 90-107, Guidance for Localizer Performance with Vertical Guidance and Localizer Performance without Vertical Guidance Approach Operations in the U.S. National Airspace System, paragraphs 7, 8, and 9, to determine GNSS-based approach eligibility. Finally, the inspector may also reference Aeronautical Information Manual (AIM) paragraphs 1-1-18 and 1-1-19, and FAA's Performance-Based Flight Systems Branch Web page, for more details.

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NOTE: Technical questions regarding the approaches authorized by C052 should be directed to the Flight Technologies and Procedures Division (AFS-400) at 202-267-8790. Questions regarding the issuance of C052, including operational and training requirements, should be directed to the Air Transportation Division (AFS-200) at 202-267-8166, or General Aviation and Commercial Division (AFS-800) at 202-267-1100.

B. Types of Instrument Approaches Authorized. In OpSpec/MSpec/LOA C052, Table 1 specifies the types of instrument approaches the operator is authorized to conduct under IFR and prohibits the use of other types of instrument approaches. In the Web-based Operations Safety System (WebOPSS), the principal operations inspector (POI) will select the approaches that apply to the operator. Reference the AIM for a detailed description of each approach.

1) Before authorizing a type of instrument approach procedure (IAP), the POI, principal maintenance inspector (PMI), and principal avionics inspector (PAI) must ensure that the operator has revised the training and operations manuals, established that flightcrew training and checking requirements have been met, and that the equipment and systems are appropriate for the types of approaches to be authorized.

2) See Volume 4, Chapter 2, Section 1 for information on required training for various types of approaches.

3) All the approaches approved by OpSpec/MSpec/LOA C052 must be published in accordance with 14 CFR part 97 or the Foreign State Authority.

4) If the certificate holder/program manager/operator is authorized to conduct Global Positioning System (GPS) procedures as listed in Table 1 of OpSpec/MSpec/LOA C052, the aircraft and equipment must be listed in Table 1 of OpSpec/MSpec/LOA B034.

5) Required Navigation Performance (RNP) approaches.

a) RNAV (RNP) approaches are different from RNAV (GPS) approaches. Due to the equipment qualifications and the associated procedures and training for the lower minima of the RNAV (RNP) approaches, they are labeled as “special aircraft and aircrew authorization required (SAAAR).” C052 does not authorize RNP SAAAR operations. Authorization for RNAV (RNP) approaches is through nonstandard OpSpecs (300-series OpSpecs, which require FAA headquarters (HQ) approval), such as OpSpec C384. (Refer to the current edition of AC 90-101, Approval Guidance for RNP Procedures with AR.)

b) Foreign RNP-like procedures not designed to U.S. RNP SAAAR criteria are authorized with a nonstandard C358 authorization. This is a nonstandard OpSpec paragraph that requires FAA HQ approval.

6) Three groups of IAPs may be authorized in OpSpec/MSpec/LOA C052:

a) Column one specifies the Nonprecision Approaches (NPA) without vertical guidance that are authorized by OpSpec/MSpec/LOA C052. Operators must ensure the aircraft

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will not go below the minimum descent altitude (MDA) without the required visual references specified in part 91, § 91.175.

1. Operators authorized OpSpec/MSpec/LOA C073, Vertical Navigation (VNAV) Instrument Approach Procedures (IAP) Using Minimum Descent Altitude (MDA) as a Decision Altitude (DA)/Decision Height (DH), in conjunction with C052 may momentarily descend below the MDA when executing a missed approach.

2. The International Civil Aviation Organization (ICAO) term for an airport surveillance radar (ASR) approach is surveillance radar approach (SRA). Belgium labels these approaches as "SRE." Select "ASR/SRA/SRE" in column one to authorize these approaches.

b) Column two of OpSpec/MSpec/LOA C052 provides for the authorization of APV. These approaches provide vertical guidance, but do not meet the same standards as precision approach systems (e.g., instrument landing system (ILS) and Ground Based Augmentation System (GBAS) Landing System (GLS)). These APVs are trained using an approved method that allows descent to a published decision altitude (DA).

1. APV approaches may contain LPV minima requiring wide area augmentation system (WAAS) and LNAV/VNAV minima that may be flown with either barometric vertical navigation (baro-VNAV) or WAAS-based VNAV. These are authorized in column two of Table 1 of OpSpec/MSpec/LOA C052. See subparagraph C to determine applicable lines of minima. The AIM and the approach chart legend also have this information.

2. Aircraft accomplishing RNP approaches (RNAV (GPS) or RNAV (GNSS) are required to monitor lateral and, if approved for operational credit, vertical guidance deviations. For baro-VNAV approach operations on an RNP approach using the LNAV/VNAV minima, the current vertical deviation limits are +100/-50 feet. Aircraft qualified using the current edition of AC 20-138, Airworthiness Approval of Positioning and Navigation Systems, deviation display requirements for navigation, may use a vertical deviation limit of ±75 feet (or a smaller value). This information must be published in the Airplane Flight Manual (AFM), a Supplemental Type Certificate (STC), or verified by the Aircraft Evaluation Group (AEG).

3. To authorize RNAV APVs, select "RNAV (GPS)" (for part 97 approaches) or "RNAV (GNSS)" (for foreign approaches) from the selectable menu for column two of Table 1 of the OpSpec/MSpec/LOA C052 template.

c) Column three of OpSpec/MSpec/LOA C052 provides for the authorization of CAT I precision IAPs from an electronic glideslope (ILS or GLS).

1. "RNAV/ILS" in column three may only be selected in C052, if the operator meets the requirements in OpSpec/MSpec/LOA C063. For example, the United Arab Emirates publishes approach plates for Dubai titled, "RNAV ILS" or "ILS RNAV." The RNAV portion of the approach constitutes an RNAV Standard Terminal Arrival Route (STAR).

2. For pilot qualifications, the initial qualification segment of the certificate holder's approved ILS precision runway monitor (PRM) training program must be successfully completed prior to conducting ILS PRM approach and landing operations. Initial training

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materials must include published ILS PRM approach chart materials, the AIM, related Notices to Airmen (NOTAM), and the latest available FAA-produced and -approved ILS PRM video titled "ILS PRM Approach for Air Carriers" that each pilot must view, and which appears on the FAA Web site at http://www.faa.gov/training_testing/training/prm/. Pilots trained in PRM operations under previous guidance are not required to retrain using the new version of the video. However, pilots are required to know the change in operations of Traffic Alert and Collision Avoidance System (TCAS) during PRM operations, as well as the required actions in response to a controller instruction. Testing of knowledge objectives is required as part of initial and recurrent qualification training. See subparagraph K.

Figure 3-66E. Sample OpSpec/MSpec/LOA C052 Table 1

Table 1 - Authorized Instrument Approach Procedures

Nonprecision Approaches Without Vertical Guidance	Approaches With Vertical Guidance (APV)	Precision Approach Procedures (ILS & GLS)
ASR/SRA/SRE	LDA w/glideslope	ILS
AZI	RNAV (GPS)	ILS/PRM
AZI/DME	RNAV (GNSS)	PAR
AZI/DME Back Course	LDA PRM	ILS/DME
GPS	LDA PRM DME	RNAV/ILS
LDA	SDF w/glideslope	GLS
LDA/DME	LOC BC w/glideslope	
LOC	RNAV (GPS) PRM	
LOC BC		
LOC/DME		
NDB		
NDB/DME		
RNAV (GPS)		
VOR/DME RNAV		
SDF		
TACAN		
VOR		
VOR/DME		
LOC/BC/DME		

C. GPS Authorization. Volume 4, Chapter 1, Section 2 provides more extensive guidance on GPS and GPS WAAS equipment. The applicant must show that it has the ability to safely conduct GPS operations.

1) Background. GPS approach procedures have evolved from overlays of existing conventional approaches to standalone GPS approaches. (Overlay approaches are predicated upon the design criteria of the ground-based Navigational Aid (NAVAID) used as the basis of the approach and do not adhere to the design criteria for standalone GPS approaches.) Due to this transition, the FAA has revised the titles of the approach procedures to reflect these upgrades. The titles of all remaining GPS overlay procedures have been revised on the approach charts to read "…or GPS" (e.g., very high frequency omni-directional range (VOR) or GPS RWY 24). Therefore, all the approaches that can be used by GPS now contain "GPS" in the title (e.g., "VOR or GPS RWY 24," "GPS RWY 24," or "RNAV (GPS) RWY 24"). During these GPS

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approaches, underlying ground-based NAVAIDs are not required to be operational and associated aircraft avionics need not be installed, operational, turned on, or monitored (although monitoring of the underlying approach is suggested when equipment is available and operational). Existing overlay approaches may be requested using the GPS title. For example, request "GPS RWY 24" to fly the VOR or GPS RWY 24 approach.

NOTE: VOR/distance measuring equipment (DME) RNAV approaches will continue to be identified as VOR/DME RNAV RWY (Number) (e.g., VOR/DME RNAV RWY 24). VOR/DME RNAV, procedures which can be flown by GPS will be annotated with "or GPS" (e.g., VOR/DME RNAV or GPS RWY 24).

2) WAAS. As the satellite navigation evolution continues, WAAS has been developed to improve the accuracy, integrity and availability of GPS signals. WAAS receivers support all basic GPS approach functions and will provide additional capabilities. One of the major improvements provided by WAAS is the ability to generate an electronic glidepath, independent of ground equipment or barometric aiding. There are differences in the capabilities of the WAAS receivers. Some approach-certified receivers will only support a glidepath with performance similar to baro-VNAV, and are authorized to fly the LNAV/VNAV line of minima on the RNAV (GPS) approach charts. Receivers with additional capabilities, such as update rate and integrity limits are authorized to fly the LPV or LP line of minima. WAAS approach procedures may provide LPV, LNAV/VNAV, LP, and LNAV minima, and are charted as RNAV (GPS) RWY (Number) (e.g., RNAV (GPS) RWY 24). For further guidance, please see the AIM or contact AFS-400 at FAA HQ.

NOTE: Some WAAS installations do not support approaches at all, while some do not support LPV or LP lines of minima.

3) Local Area Augmentation System (LAAS). An additional augmentation system, LAAS has been developed to provide precision approaches similar to ILS at airfields. These precise approaches are based on GPS signals augmented by ground equipment. The international term for LAAS is GBAS and the approaches that use the equipment are referred to as GLS or GNSS Landing System approaches. LAAS equipment consists of a GBAS Ground Facility (GGF) supported by a minimum of four accurately surveyed reference stations and an uplink antenna called the very high frequency (VHF) Data Broadcast (VDB) antenna, as well as an aircraft LAAS receiver. The GGF can support multiple runway ends or landing areas served by procedures that are within the service coverage.

a) Similar to LPV and ILS approaches, GLS provides lateral and vertical guidance. By design, LAAS was developed as an "ILS look-alike" system from the pilot perspective. Unlike WAAS, LAAS may support approaches to CAT III Approach minima in the future due to its nearly identical performance standards to ILS in terms of accuracy, integrity, availability, and continuity. Portions of the GLS approach prior to and after the Final Approach Segment (FAS) may be based on RNAV or RNP segments. Therefore, a switch transition between RNAV or RNP and GLS modes may be required. In the future, the GGF may be able to support portions of the procedure outside the FAS.

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b) There are also a few differences from LPV, GLS, and ILS approaches in terms of charting, procedure selection, and identification. The LAAS procedure is titled "GLS Rwy XX" on the approach chart. In the aircraft, pilots will select a five-digit GBAS channel number or associated approach within the flight management system (FMS) menu. Selection of the GBAS channel number by pilot or FMS also tunes the VDB. The VDB provides information to the airborne receiver where the guidance is synthesized. The LAAS procedure is identified by a four alpha-numeric character field referred to as the Reference Path Indicator (RPI) or approach ID. This identifier is analogous with the IDENT feature of the ILS. The RPI is charted. Following procedure selection, confirmation that the correct LAAS procedure is loaded can be accomplished by cross-checking the charted RPI with the cockpit displayed RPI or audio identification of the RPI with Morse code (for some systems). Once selected and identified, the pilot will fly the GLS approach using the same techniques as an ILS.

c) Additional training may be required to authorized GLS approach and landing operations for commercial operators. If the operator is authorized to fly GLS approaches, flightcrews must be able to tune, identify, and conduct all stages of a GLS approach, including different types of missed approaches. However, some or all of these requirements may be demonstrated when conducting other operations, and may require little or no additional training. For example, an RNAV Missed Approach Segment (MAS) on a GLS may be demonstrated on another required approach, and the actions required to tune and identify GLS may require nearly identical actions on the part of the crew, based on the type of avionics used. Inspector guidance will be updated as GLS policy and procedures continue to evolve. If you have any questions on GLS training issues, contact AFS-400 at 202-267-8806.

D. Crew Training and Qualification. Crew training and qualification for all authorized instrument approach operations should meet the requirements in:

- Volume 3, Chapter 19;
- AC 120-53, Guidance for Conducting and Use of Flight Standardization Board Evaluations (current edition);
- Title 14 CFR parts 61, 91, 121, 125, and 135; and
- Advanced Qualification Program (AQP) requirements, if applicable.

E. Authorized Criteria for Approved IAPs. For operations to all U.S. airports, operators are authorized to execute instrument approach operations on IAPs that have been published:

1) Under part 97.

2) Under criteria in the current edition of FAA Order 8260.3, United States Standard for Terminal Instrument Procedures (TERPS).

3) Under any other criteria authorized by AFS-400.

4) By the U.S. military agency operating the U.S. military airport.

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NOTE: All published Standard Instrument Approach Procedures (SIAP) in the United States meet this requirement.

F. Runway Visual Range (RVR). Touchdown zone (TDZ) RVR is controlling for all operations authorized in C052. All other RVR reports are advisory. A mid-field RVR report may substitute for an inoperative TDZ RVR report, except for Special Authorization (SA) CAT I operations as described in subparagraph J.

G. Continuous Descent Final Approach (CDFA) Technique. CDFA is a specific technique for flying the FAS of an IAP as a continuous descent, without level off, from an altitude at or above the final approach fix (FAF) altitude, typically to a point approximately 50 feet above the runway threshold or the point where the flare will begin. For approaches that do not use LNAV/VNAV, LPV, or an ILS/GLS glidepath, a CDFA technique is recommended. When electronic or a prestored computed vertical guidance is not used, Vertical Speed (VS) or Flight Path Angle (FPA) may be used to achieve a CDFA profile. Compared to the "step down" descent approach technique, where the aircraft descends step-by-step prior to the next minimum altitude, a CDFA technique has safety and operational advantages, such as standardization of procedures, simplification of the decision process (one technique and one decision at one point), and use of a stable flightpath. However, precision approach obstacle penetration is not provided.

1) When using a CDFA technique, the decision point to determine if the flightcrew has the required visual references in sight to continue below the MDA may only be treated like a DA in reference to approach profiles and procedures. The operator must add an altitude increment to the MDA (e.g., 50 feet) to determine the altitude at which the missed approach must be initiated in order to prevent descent below the MDA or flight beyond the missed approach point (MAP).

2) The operator should ensure, prior to conducting CDFA, each flightcrew member intending to fly CDFA profiles undertakes training appropriate to the aircraft, equipment, and the different kinds of IAPs to be flown.

H. Reduced Precision CAT I Landing Minima. C052 specifies the equipment usage requirements and part 97 SIAP depiction required for reduced CAT I landing minima. Credit is given for flight director (FD), autopilot, and Head-Up Display (HUD) usage. The POI should allow the use of 1800 RVR minima to runways without centerline (CL) lighting or TDZ lighting, provided the SIAP contains a straight-in ILS minimum with the chart note, "RVR 1800 Authorized with use of FD or AP or HUD to DA." Additionally, the operator issued C052 is allowed to continue to use 1800 RVR line of minima on SIAPs without the above procedural note when the TDZ and/or CL lights are inoperative, if the approach is conducted in accordance with the equipment requirements outlined in C052. This is also reflected in the published inoperative components table for IAPs.

1) FAA Approval. Operators may continue to use the standard CAT I minima based solely on ground lighting systems without alteration of current authorizations or procedures. Operators can utilize reduced CAT I landing minima, provided the SIAP contains a straight-in ILS minimum with the chart note, "RVR 1800 Authorized with use of FD or AP or HUD to DA."

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2) Conditions of Approval. Before issuing the C052 authorization to use reduced CAT I minima based on aircraft equipment and operation, inspectors shall ensure that each operator meets the following conditions:

a) Aircraft and Associated Aircraft Systems. The authorized aircraft must be equipped with an FD, autopilot, or HUD that provides guidance to DA. The FD, autopilot, or HUD must be used in approach mode (e.g., tracking the Localizer (LOC) and glideslope). Inspectors must establish that the FD, autopilot, or HUD are certified for use down to an altitude of 200 feet above ground level (AGL) or lower.

b) Flightcrew Procedures. The flightcrew must use the FD, autopilot, or HUD to DA or to the initiation of a missed approach, unless visual references with the runway environment are established, thus allowing safe continuation to a landing. If the FD, autopilot, or HUD malfunctions or becomes disconnected, the flightcrew must execute a missed approach unless the runway environment is in sight.

c) Flightcrew Qualification. Each member of the flightcrew must have demonstrated proficiency using the FD, autopilot, or HUD (as appropriate) on the most recent instrument proficiency check (IPC) required in part 61, §§ 61.57(e)(2) and 61.58; part 91, § 91.1069; part 121, § 121.441; part 125, § 125.291; and part 135, § 135.297 (as applicable), or in an approved AQP.

I. SA CAT I. OpSpec/MSpec/LOA C052 contains selectable text which authorizes SA CAT I ILS approaches to runways without TDZ or runway centerline (RCL) lights with a radar altimeter DH as low as 150 feet and a visibility minimum as low as RVR 1400 when using HUD to DH. The operator must meet all of the following requirements:

1) Aircraft Requirements. To be approved for SA CAT I, each airplane must be certified and maintained for CAT II Approach operations. Those airplanes and equipment must be listed in Table 2 of OpSpec C059. The authorized airplane(s) must be equipped with the HUD that is approved for CAT II or CAT III operations.

2) Training Requirements. The flightcrew must be current and qualified for CAT II operations. The flightcrew must demonstrate proficiency in ILS approaches and landings to this minimum or to a lower minimum using the HUD prior to commencing any SA CAT I operations. This requirement applies both to initial eligibility for SA CAT I, as well as recurrent training.

3) Operational Requirements.

a) The flightcrew must use the HUD to DH in a mode used for CAT II or CAT III operations. This mode provides greater lateral and vertical flightpath accuracy and more sensitive alarm limits.

b) The flightcrew must use the HUD to DH or to the initiation of a missed approach, unless adequate visual references with the runway environment are established that allow safe continuation to a landing. Should the HUD malfunction during the approach, the

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flightcrew must execute a missed approach unless visual reference to the runway environment has been established.

c) The crosswind component on the landing runway must be 15 knots or less, unless the AFM's crosswind limitations are more restrictive.

d) The part 97 SIAP must have a published SA CAT I minimum.

e) Unlike the other approaches authorized in C052, the mid RVR report may not be substituted for the TDZ RVR report when using SA CAT I minima.

f) Single-pilot operators are prohibited from using SA CAT I landing minima.

J. Instrument Approach Operations at Foreign Airports. C052 specifies the requirements for nonprecision, APV, and precision approach criteria at foreign airports.

1) The procedure must be constructed by the foreign state using criteria that is derived from (or based on) U.S. TERPS or ICAO Doc 8168, Procedures for Air Navigation Services, or it must be based on other criteria approved by AFS-400.

2) Visibility minima must be based on U.S. criteria, European Union (EU) or European Aviation Safety Agency (EASA) criteria, or the criteria in ICAO Doc 9365, Manual of All-Weather Operations.

3) The MDA/minimum descent height (MDH) or DA/H must be at least 200 feet height above touchdown (HAT) or height above threshold (HATh) unless otherwise authorized by an OpSpec/MSpec/LOA.

4) Sequenced flashing lights are not required when determining if the Approach Light System (ALS) is equivalent to U.S. standards.

5) This section also specifies the requirements for determining DA/MDA when an Obstacle Clearance Limit (OCL) or Obstacle Clearance Altitude (OCA) is specified.

K. PRM. The FAA began the Multiple Parallel Approach Program (MPAP) to research whether ILS approaches to parallel runways would improve capacity. The objective was to achieve improvements in airport arrival rates through the conduct of simultaneous, closely spaced parallel approaches. That objective is being met using PRM.

1) ILS PRM, Localizer-Type Directional Aid (LDA) PRM and RNAV (GPS) PRM Approaches with Vertical Guidance. Where parallel RCLs are less than 4,300 feet apart, but not less than 3,000 feet apart, simultaneous ILS PRM approaches may be conducted. Similarly, where parallel RCLs are less than 3,000 feet apart, but no less than 750 feet apart, simultaneous offset instrument approaches (SOIA) may be conducted using an ILS and an LDA approach with glideslope. Those approaches are labeled "ILS PRM" and "LDA PRM," respectively, on instrument approach charts. Air traffic control (ATC) provides one PRM monitor controller for each runway to provide intrusion protection for the no transgression zone (NTZ) located between the two final approach courses. Whenever the runway spacing

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(or in the case of SOIA, the approach course spacing) is less than 3,600 feet and at least 3,000 feet, NTZ monitoring is accomplished using a special PRM radar. Utilization of vertical guidance is required for all PRM approaches. RNAV (GPS) PRM approaches may be substituted for the ILS PRM and/or the LDA PRM approach. Pilots must have completed PRM training prior to conducting any PRM approach. An ILS PRM and its overlayed RNAV (GPS) PRM approach are procedurally equivalent. LDA PRM and its overlayed RNAV (GPS) PRM approach are procedurally equivalent. Pilots may request the RNAV (GPS) PRM approach in lieu of the ILS PRM or LDA PRM approach; however, they may only conduct the approach when specifically cleared to do so by ATC.

2) The Breakout Maneuver. Working with industry, the FAA conducted extensive analyses of simulation data and determined that the implementation of PRM and SOIA approach operations to closely spaced parallel runways requires additional crew training. The primary focus of this training is to raise each pilot's situational awareness in ILS PRM, LDA PRM, and RNAV (GPS) PRM operations. The breakout maneuver must be flown manually.

a) Traffic Alert. One important element of the additional training is the pilot's understanding of the difference between a normal missed approach initiated by a pilot, and a breakout initiated by a PRM final monitor controller. It must be clear to flightcrews that the words "Traffic Alert," when used by the final monitor controller, signal critical instructions that the pilot must act on promptly to preserve adequate separation from an airplane straying into the adjoining approach path.

b) ATC Breakout Maneuver Command to Turn and/or Descend, Climb, or Maintain Altitude. The flightcrew must immediately follow the final monitor controller's vertical (climb/descend/maintain altitude) and horizontal (turn) commands. If the flightcrew is operating the TCAS in the Traffic Advisory (TA)/Resolution Advisory (RA) mode and receives a TCAS RA at any time while following the final monitor controller's command, the flightcrew will simultaneously continue to turn to the controller's assigned heading and follow the vertical guidance provided by the TCAS RA.

c) Time-to-Turn Standard. Regardless of airplane type, tests and data analysis revealed that pilots normally passed through an angle of bank of at least 3 degrees while rolling into a breakout turn within 10 seconds of receiving a breakout command. (Bank angles of between 20 and 30 degrees were normally achieved during the breakout.) The operator must show that its pilots can readily meet this time-to-initiate-turn standard prior to the POI authorizing ILS/PRM or LDA/PRM approaches in OpSpec/MSpec/LOA C052. Flightcrews are required to manually fly the breakout maneuver unless otherwise approved by AFS-200 or AFS-800, as appropriate (AFS-200 and AFS-800 must have concurrence from AFS-400 to approve breakout in auto modes). The air carrier should demonstrate its ability to meet this standard by having representative pilots perform the breakout maneuver while the POI or the POI's designated representative observes. The demonstration should conform to procedures contained in the air carrier's approved operating manual for its flightcrews. The commercial operator should submit procedures to its POI for this authorization.

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NOTE: In a breakout, ATC will never command a descent below the applicable minimum vector altitude (MVA), thus assuring that no flight will be commanded to descend below 1,000 feet above the highest obstacle during a breakout.

3) ILS/PRM, LDA/PRM, RNAV (GPS) PRM and the Use of TCAS. TCAS may be operated in TA/RA mode while executing ILS PRM, LDA PRM or RNAV (GPS) PRM approaches. However, when conducting these operations, pilots must understand that the final monitor controller's instruction to turn is the primary means for ensuring safe separation from another airplane. Pilots must bear in mind that TCAS does not provide separation in the horizontal plane. TCAS accomplishes separation by commands solely in the vertical plane. Therefore, during final approach only the final monitor controller has the capability to command a turn for lateral separation. Flightcrews are expected to follow any ATC instruction to turn.

a) ATC Command to Turn with TCAS RA. In the unlikely event that a flightcrew should simultaneously receive a final monitor controller's command to turn and a TCAS RA, the flightcrew must follow both the final monitor controller's turn command and the TCAS RA's climb or descent command.

b) TCAS RA Alone. In the extremely unlikely event that an RA occurs without a concurrent breakout instruction from the final monitor controller, the pilot should follow the RA and advise the controller of the action taken as soon as possible. In this instance, it is likely that a breakout command would follow.

c) TCAS Not Required. An operative TCAS is not required to conduct ILS/PRM or LDA/PRM approaches.

4) Pilot Training. See Volume 4, Chapter 2, Section 5 for information on pilot training required prior to authorizing PRM approaches.

5) ILS PRM, LDA PRM, and RNAV (GPS) PRM Authorizations. Operators will be authorized ILS PRM, LDA PRM, and RNAV (GPS) PRM approaches in the OpSpec/MSpec/LOA C052 templates. A definition of RNAV (GPS) PRM has been added to the A002 template.

OPSPEC/LOA C054—SPECIAL LIMITATIONS AND PROVISIONS FOR INSTRUMENT APPROACH PROCEDURES AND IFR LANDING MINIMUMS.

A. General. C054 is issued to all operators conducting operations under 14 CFR part 121, 125, and 125 (LODA A125). It is also issued to operators who conduct turbine-powered airplane operations under 14 CFR part 135. It is not issued to part 135 operators who do not operate turbine-powered airplanes unless that operator also conducts operations under part 121. C054 specifies the Runway Visual Range (RVR) landing minimum equivalent to the published RVR landing minimum that must be used by high-minimum pilots (less than 100 hours in aircraft type).

B. PIC Qualifications. For part 121 and part 135 operations, C054 also specifies that before a pilot in command (PIC) of a turbojet can conduct an instrument approach with visibility conditions reported to be below ¾ statute mile or RVR 4000 (basic turbojet landing minimums),

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the pilot must be specifically qualified and authorized to use standard landing minimums. See Volume 4, Chapter 2 for information on the qualification and authorization requirements to use the standard landing minimums.

C. PIC Takeoff Guidance. Further, for part 121 and part 135 operations, after the PIC has been qualified to use lower landing minimums, and the destination visibility conditions are forecast to be less than ¾ statute mile or RVR 4000, the pilot of a turbojet airplane shall not take off unless:

1) The destination runway length has been determined prior to takeoff to be at least 115 percent of the runway field length required by the provisions of part 121, § 121.195(b) or part 135, § 135.385(b), as appropriate, and

2) Precision instrument (all weather) runway markings or runway centerline (RCL) lights must be operational on that runway.

3) Once airborne, additional consideration of landing field length by the flightcrew is not required for normal operations. If unforecasted adverse weather or failures occur, the crew and aircraft dispatchers should consider any adverse consequences that may result from a decision to make a landing. The runway length needed in these changed circumstances must be determined considering the runway in use, runway conditions, current weather, Aircraft Flight Manual (AFM) limitations, operational procedures, and aircraft equipment status at the time of landing.

OPSPEC/MSPEC C055—ALTERNATE AIRPORT IFR WEATHER MINIMUMS.

A. Applicability. OpSpec/MSpec/LOA C055 is an optional authorization available to all operators conducting airplane operations under 14 CFR parts 91 subpart K (part 91K), 121, 125 (including the Letter of Deviation Authority (LODA) 125 operators), and 135. C055 provides a table from which the operator, during the initial dispatch or flight release planning segment of a flight, derives alternate airport instrument flight rules (IFR) weather minimums in those cases that require an alternate airport.

NOTE: Direct questions regarding the issuance of C055 to the Air Transportation Division (AFS-200) at 202-267-8166, the Flight Technologies and Procedures Division (AFS-400) at 202-385-4625, or the General Aviation and Commercial Division (AFS-800) at 202-267-8212.

B. Airports With At Least One Operational Navigation Facility. The first part of the table is for airports with at least one operational navigation facility providing a straight-in Nonprecision Approach (NPA) procedure, a Category (CAT) I precision approach, or, when applicable, a circling maneuver from an instrument approach procedure (IAP). Operators obtain the required ceiling and visibility by adding 400 feet to the minimum descent altitude/height (MDA/H) or, when applicable, the authorized decision altitude/height (DA/H) and by adding 1 statute mile or 1,600 meters to the authorized landing minimum. Additives are applied only to the height value to determine the required ceiling.

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C. Airports With at Least Two Operational Navigation Facilities. The second part of the table is for airports with at least two operational navigation facilities, each providing a straight-in NPA procedure or a straight-in CAT I precision approach procedure to different suitable runways. Operators obtain the required ceiling and visibility by adding 200 feet to the higher MDA/H or DA/H of the two approaches used and by adding one-half statute mile or 800 meters of visibility to the higher authorized landing minimum of the two approaches used. Additives are applied only to the height value to determine the required ceiling.

D. Higher Alternate Minimums When Using Two Operational Navigation Facilities. In some cases, it is possible to have higher alternate minimums when using two operational navigation facilities than when using one.

1) For example, an airport with one straight-in NPA procedure with an MDA/H of 400 feet and 1 statute mile visibility would have alternate minimums of 800 feet and 2 statute mile visibility (400 feet + 400 feet and 1 statute mile + 1 statute mile).

2) On the other hand, an airport with two straight-in approaches, one a straight-in precision approach with a DA/H of 200 feet and one-half statute mile visibility, and the other a straight-in NPA with an MDA/H of 700 feet and 1 statute mile visibility would have alternate minimums of 900 feet and 1 1/2 statute mile visibility (200 feet + 700 feet and one-half statute mile + 1 statute mile).

3) Since the OpSpecs require that operators use the higher ceiling and visibility, the minimums for the airport with two straight-in approaches are higher than for the airport with only one straight-in approach. When this situation exists, the operator may elect to consider the airport as having only one straight-in approach procedure and may add the higher buffer requirement (400 feet and 1 statute mile) to whichever straight-in approach procedure provides for the lowest possible ceiling and visibility minimums.

E. Using Two Different Runways. Two different runways may be the different ends of the same physical runway surface (for example, runway 4 and runway 22 are two different runways). When determining the suitability of a runway, wind, including gust, must be forecast to be within operating limits, including reduced visibility limits, and should be within the manufacturer's maximum demonstrated crosswind. All conditional forecast elements below the lowest applicable operating minima must be taken into account. The operator should also take into account any other potential runway limitations, such as Notices to Airmen (NOTAM), which may affect the landing at the estimated time of arrival (ETA).

F. Credit for Alternate Minimums. OpSpec/MSpec C055 (see revision history in the automated Operations Safety System (OPSS) guidance subsystem) now allows credit for alternate minimums based on engine inoperative CAT II or CAT III capability. This change is in the third row of the Alternate Airport Table. Flightcrews having that capability may take credit for engine inoperative CAT II/III qualified aircraft and adjust minimums accordingly. The alternate minimums are based on CAT III engine inoperative requirements. The following are some, but not all, of those requirements. See criteria in the current edition of AC 120-28, Criteria for Approval of Category III Weather Minima for Takeoff, Landing, and Rollout, for further engine inoperative requirements.

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1) Aircraft receives approval for engine inoperative CAT III.

2) Operators establish appropriate procedures.

3) The flightcrew receives performance and obstruction clearance information.

4) The flightcrew receives appropriate aircraft configuration information, wind limits, and other appropriate information.

G. Use of Area Navigation (RNAV) Global Positioning System (GPS) Minima at a Destination Alternate. Pilots may plan to use any instrument approach authorized for use with wide area augmentation system (WAAS) avionics at a required alternate if the aircraft has GPS WAAS equipment certified in accordance with Technical Standard Order (TSO) C145a, Airborne Navigation Sensors Using The Global Positioning System (GPS) Augmented By The Wide Area Augmentation System (WAAS), TSO/C146a, Stand-Alone Airborne Navigation Equipment Using The Global Positioning System (GPS) Augmented By The Wide Area Augmentation System (WAAS), or a later revision that meets or exceeds the accuracy of this TSO/revision, as approved by the Administrator. When using WAAS at an alternate airport, flight planning must be based on flying the RNAV (GPS) lateral navigation (LNAV) minimums line, minimums on a GPS approach procedure, or a conventional approach procedure with "or GPS" in the title. Also, RNAV (GPS)—or RNAV Global Navigation Satellite System (GNSS)—is based on a single navigational facility when determining the approach facility configuration in Table 1, even if there are two or more RNAV (GPS) approaches to different suitable runways. Upon arrival at an alternate, when the WAAS navigation system indicates that LNAV/vertical navigation (VNAV) or localizer performance with vertical guidance (LPV) service is available, operators may use vertical guidance to complete the approach using the displayed level of service. The FAA is removing the *NA* (alternate minimums not authorized) symbol from select RNAV (GPS) and GPS approach procedures so that operators with approach-approved WAAS receivers may use them at alternate airports. Some approach procedures will still require the *NA* symbol for other reasons (e.g., no weather reporting); therefore, the FAA cannot remove it from all procedures. Because every procedure must receive individual evaluations, removal of *NA* from RNAV (GPS) and GPS procedures will take some time.

H. Definition of "Two Operational Facilities." Question: "Does the FAA consider an ILS facility that contains a single transmitter frequency for an ILS, but with two different ILS identifications (depending on which runway is used), as one or two navigational facilities?"

1) The words "two operational facilities" mean that in the event there is a single failure of one facility, the other would be operational. In the situation where both instrument landing system (ILS) facilities share a single transmitter, they are "one operational navigational facility" because both ILSs would become inoperative in the event of a single transmitter failure.

2) The two ILS identifiers would have to be different even though the ILS transmitter frequency is the same for both. The instrument approach charts indicate to the pilot whether there is one frequency or two. Thus, one or two navigational facilities.

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I. Selectable Text and Tables. There are two selectable rows that can be loaded into Table 1 and the two paragraphs of selectable text in C055:

1) The two selectable rows in Table 1 authorize lower alternate minimums when planning to use either a CAT II or CAT III approach at the alternate airport. If a CAT II or CAT III credit is authorized, the first selectable text paragraph must be loaded as well.

2) The first selectable text paragraph states requirements for CAT II and CAT III credit applicable to alternate airport flight planning, and must be loaded if the operator has the CAT II or CAT III credit authorization described in subparagraph I1).

3) The second selectable text paragraph authorizes operators equipped with WAAS to use GPS approaches when determining an alternate, and lists the restrictions associated with using GPS approaches in alternate planning.

4) There are three selectable text options:

a) "1(a). Load this text if the operator is authorized CAT II or III alternate mins; OR"

b) "1(b). Load this text if the operator is authorized GPS/WAAS alternate mins; OR"

c) "1(c). Load this text if the operator is authorized CAT II or III AND GPS/WAAS alternate mins."

J. Helicopter Authorizations. For helicopter authorizations, see OpSpec/MSpec H105.

OPSPEC C056—IFR TAKEOFF MINIMUMS, PART 121 OPERATIONS—ALL AIRPORTS. C056 is issued to all operators who conduct operations under 14 CFR part 121.

A. General. C056 did not change in policy but was split into two paragraphs for programming purposes in the new automated Operations Safety System (OPSS): C056 and C078/C079.

B. Using Lower-Than-Standard Takeoff Minimums. If an operator is not authorized to use lower-than-standard takeoff minimums, C078 will not be issued. See Volume 4, Chapter 2 for information concerning requirements an operator must meet before being authorized to use lower–than-standard takeoff minimums. If an operator conducts operations under both 14 CFR parts 121 and 135, C056 and C057 may need to be issued. For more information, see the following:

- Part 121, §§ 121.649 and 121.651(a)(1).
- Title 14 CFR part 91, § 91.175(f).
- Volume 4, Chapter 2.
- Flight Standardization Board (FSB) report for specific aircraft.

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C. Availability to Part 91 Subpart K (Part 91K) Program Managers. This is not available or applicable to part 91K program managers. See § 91.1039(e).

OPSPEC C057—IFR TAKEOFF MINIMUMS, PART 135 OPERATIONS—ALL AIRPORTS. C057 is issued to all 14 CFR part 135 operators who conduct instrument flight rules (IFR) airplane operations to authorize an operator to use takeoff minimums equal to the lowest straight-in landing minimums (part 135, § 135.225(h)).

A. Issuance for Conducting IFR Standard Takeoff Minimums. C057 is issued for conducting IFR standard takeoff minimums, which are defined as 1 statute mile visibility or Runway Visual Range (RVR) 5,000 for airplanes having two engines or fewer, and one-half statute mile visibility or RVR 2,400 for airplanes having more than two engines. RVR reports, when available for a particular runway, must be used for all takeoff operations on that runway. All takeoff operations, based on RVR, must use RVR reports from the locations along the runway specified in this paragraph.

B. Single Engine IFR (SEIFR) Authorization. The principal operations inspector (POI), principal maintenance inspector (PMI), and principal avionics inspector (PAI) must coordinate the issuance of OpSpecs A046, C057, and D071 once the operator has met the requirements for SEIFR operations. All three OpSpec paragraphs must be issued for SEIFR authorization.

1) OpSpec A046 contains specific maintenance and operational limitations and provisions necessary for the authority to operate under IFR while carrying passengers in a single-engine airplane.

2) The standard OpSpec paragraph C079 is not authorized for SEIFR operations. SEIFR part 135 passenger-carrying operations are not authorized lower-than-standard takeoff minimums at any airport without concurrence and authorization from FAA headquarters (HQ). Thus, for SEIFR operations there is no automatic relief from the requirements of § 135.225(e).

3) OpSpec D071 contains requirements for airplanes operated in SEIFR operations.

C. Subparagraph Selectable for Issuance of C057. The following subparagraph is selectable for issuance in C057, if applicable:

> "c. When takeoff minimums are equal to or less than the applicable standard takeoff minimum, the certificate holder is authorized to use a takeoff minimum equal to the lowest authorized straight in CAT I IFR landing minimum applicable to the certificate holder for that particular airport. The Touchdown Zone RVR report, if available, is controlling."

D. Subparagraph Selectable for Issuance of C057 for Turbine-Powered, Single-Engine Airplanes. The following subparagraph is selectable for issuance in C057 for turbine-powered, single-engine airplanes only:

> "d. Notwithstanding the requirements of the "NOTE" in subparagraph b above, the certificate holder is authorized lower than standard takeoff minimums for its

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part 135 single engine passenger carrying operations in its turbine powered single engine airplanes only per the limitations and provisions of C057 including subparagraph c."

E. Authorizing Part 135 Operators to Use Takeoff Minimums Lower Than One-Half Mile or RVR 1,800. OpSpec C079 is applicable for authorizing the part 135 operator to use takeoff minimums lower than one-half mile or RVR 1,800. See the current edition of Advisory Circular (AC) 120-29, Criteria for Approval of Category I and Category II Weather Minima for Approach, for information concerning requirements an operator must meet before being authorized to use lower-than-standard takeoff minimums.

F. Other Applicability and Authorizations. C057 is not applicable or available for 14 CFR part 91 subpart K (part 91K) program managers. See part 91, § 91.1039(e). For helicopter authorizations, see OpSpecs H106 and H116.

OPSPEC C058—SPECIAL RESTRICTIONS FOR FOREIGN TERMINAL INSTRUMENT PROCEDURES.

A. General. C058 is issued only when the principal operations inspector (POI) (or region responsible for the geographic area where a foreign airport is located) finds it necessary to place special restrictions on a foreign terminal instrument procedure.

B. Purpose and Applicability of Restrictions. These special restrictions to foreign Terminal Instrument Procedures (TERPS) are applicable to U.S. air carriers (14 CFR parts 121 and 135) and program managers (14 CFR part 91 subpart K (part 91K)). The purpose of these special restrictions is to establish an equivalency between the foreign terminal instrument procedure and the International Civil Aviation Organization (ICAO) Procedures for Air Navigation Services Aircraft Operations (PANS-OPS) or TERPS criteria.

C. Other Guidance. FAA Order 8260.31, Foreign Terminal Instrument Procedures, current edition, provides direction and guidance on how to place restrictions on foreign instrument procedures. This order also contains a list of foreign TERPS that are currently restricted. If an operator conducts flights to any airport listed in the appendices of this order, the POI must issue C058 with the name of the airport, airport identification, procedure identification, and special restrictions listed.

D. Considerations and Procedures for Chek Lap Kok Airport. On July 6, 1998, Hong Kong's new airport (Chek Lap Kok) opened; at the same time, Hong Kong's old airport (Kai Tak) closed. Since there has been no revision to the appendices of Order 8260.31, we recommend removing the reference to Kai Tak airport from C058 and referencing the Chek Lap Kok airport. Consideration and procedures will be established for the following at the new Chek Lap Kok airport:

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1) Loss of navigation capability;

2) Severe reduction of aircraft climb performance due to engine or aircraft system failures; and

3) Escape paths for the above situations.

E. Helicopter Authorization. For helicopter authorization, see OpSpec/MSpec H107.

OPSPEC/MSPEC/LOA C059—CATEGORY II INSTRUMENT APPROACH AND LANDING OPERATIONS (OPTIONAL: 14 CFR PARTS 91, 121, 125, 125M, 135, AND 91K OPERATORS) AND SPECIAL AUTHORIZATION CATEGORY I INSTRUMENT APPROACH AND LANDING OPERATIONS (OPTIONAL: PART 91 OPERATORS).

NOTE: NextGen Tracking. Applications for approvals for this paragraph must be entered in the Regional NextGen Tracker as indicated in the General Procedures Section (Volume 3, Chapter 1, Section 1).

A. General. Category (CAT) II operations are approved by issuance of OpSpec C059 to certificate holders for 14 CFR parts 121, 125, and 135; MSpec C059 to program managers for 14 CFR part 91 subpart K (part 91K) fractional ownership operations; and LOA C059 to operators for parts 91 and 125M operations. Guidance for authorizing helicopter CAT II/CAT III operations can be found in Volume 4, Chapter 2, Sections 2 and 3.

B. Authorization for CAT II Airplane Operations. All initial CAT II authorizations for each operator/program manager and each airplane type used by that operator/program manager require regional Flight Standards division (RFSD) Next Generation Air Transportation System (NextGen) branch review and concurrence before issuing OpSpec/MSpec/LOA C059. RFSD concurrence is also required before amending OpSpec/MSpec/LOA C059 to include an airplane make, model, and series (M/M/S) new to the operator/program manager. CAT II operations are evaluated for authorization with reference to the following:

1) Advisory Circular (AC) 120-29, Criteria for Approval of Category I and Category II Weather Minima for Approach (current edition).

2) Approval of U.S. Operators for Special Authorization Category I and All Category II/III Operations—Parts 91 (Large Aircraft), 91K, 121, 125, and 135.

3) Approval of Small Category A Aircraft for Category II Operations—Part 91.

4) Volume 4, Chapter 2, Section 6, Category II Operations.

5) Applicable Lower Landing Minimums (LLM) maintenance program approved by the assigned avionics inspector in accordance with Volume 4, Chapter 2, Section 10.

C. Approved Airplanes. Each airplane type (M/M/S) used in CAT II operations must be listed in Table 1 of C059 and have an acceptable LLM maintenance program. The

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approach/landing system used, lowest decision height (DH), lowest touchdown zone (TDZ) Runway Visual Range (RVR) authorized for each airplane type, and any special equipment and other limitations must also be specified. The example in Table 3-17, Example of Category II Approach and Landing Minimums, illustrates the method for authorizing each airplane in OpSpec/MSpec/LOA C059.

Table 3-17. Example of Category II Approach and Landing Minimums

Airplane M/M/S	Approach/Landing System	DH	TDZ RVR	Special Operational Equipment and Limitations
DC-9-31	Autopilot	100 ft	1,600	N/A
B 727-217	Autopilot	100 ft	1,600	
ERJ-190-100	Manual (HUD)	100 ft	1,200	Dual HUD A3 Mode All engines and autothrottle operating
CL-600-2D24	Autopilot	100 ft	1,200	AFM supplement 4 equipment operating
A-320-12	Autopilot	100 ft	1,200	N/A
DHC-8-402	Manual (HUD)	100 ft	1,000	N/A
B-737-200	Autoland	100 ft	1,000	
B-777-F	Autopilot	100 ft	1,000	Autoland required for RVR 1000 (300m)

NOTE: Refer to Table 1 of OpSpec C059.

D. CAT II Approach and Landing Systems. The equipment required to conduct either manually or automatically flown CAT II operations is specified in Table 1 of OpSpec/MSpec/LOA C059 (see sample in Table 3-17 above). The equipment required is established in accordance with the applicable regulations, the approved Aircraft Flight Manual (AFM) (if applicable), and AC 120-29. There are two acceptable methods of demonstrating that an airplane meets the technical qualifications and is eligible for CAT II operations. These acceptable methods are by approval under the type certificate (TC) or Supplemental Type Certificate (STC) holder, or an operation demonstration conducted by an operator/program manager. Type design approval is discussed in AC 120-29, paragraphs 5.19 through 5.19.3, and paragraph 10.5.

1) TC or STC Approval. The approved AFM (or Aircraft Flight Manual Supplement (AFMS)) identified in the airplane type design typically contains a statement that the airborne systems and equipment meet performance requirements, a statement regarding reliability and/or redundancy, and affirmation that such systems and equipment have been demonstrated to be eligible for CAT II operations. The AFM or AFMS also may specify that certain equipment is required for airworthiness approval of the various kinds of CAT II operations. Some AFMs or AFMSs also may indicate that acceptable CAT II performance was demonstrated, both with and without certain equipment (e.g., “autothrottles w/wo”). AC 120-29 also specifies that certain types of equipment are required for operations approval of the various kinds of CAT II operations (manual/autopilot). Therefore, the approved AFM or AFMS and

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AC 120-29 must be considered in determining if the additional equipment requirement meets the criteria. The equipment must be listed (specified) in Table 1 of OpSpec/MSpec/LOA C059. See Table 3-17.

a) Equipment that is explicitly required by the airplane certification regulations (14 CFR parts 23 and 25), the operating regulations (parts 91, 91K, 121, 125, and 135) and/or the approved AFM or AFMS *should not be listed* in Table 1 of the OpSpec/MSpec/LOA. The standard text of C059 requires that this equipment be installed and operational. The additional equipment or operational requirement that must be listed (specified) in OpSpec/MSpec/LOA C059 is determined by cross-checking the equipment required by regulations and the approved AFM or AFMS against the equipment required by AC 120-29 for the kinds of proposed CAT II operations.

b) Enter into Table 1 of OpSpec/MSpec/LOA C059 all additional equipment for the M/M/S and kind(s) of CAT II operations authorized. Include additional equipment required by any of the following (current editions):

- AC 120-29, Criteria for Approval of Category I and Category II Weather Minima for Approach,
- TC or STC, and
- FAA Order 8400.13, Procedures for the Evaluation and Approval of Facilities for Special Authorization Category I Operations and All Category II and III Operations.

c) If the AFM or AFMS describes acceptable performance both with and without certain items of equipment (that are not explicitly required by AC 120-29), it must be determined how the operator/program manager intends to conduct CAT II operations and train flightcrews with those items of equipment. If the operator/program manager proposes to conduct operations both with and without certain equipment (such as autothrottle, autopilot), flightcrews must be trained for both situations and the equipment does not need to be listed in Table 1 of OpSpec/MSpec/LOA C059.

2) Operational Demonstration of Equipment Eligibility. This method is used when equipment eligibility is not stated in the AFM, the AFMS, or the Flight Standardization Board (FSB) report. The operational demonstration method is only appropriate for airplanes and equipment that do not have CAT II reflected in the TC or STC. If the operational demonstration method is used:

a) Conduct the operational demonstration as described in AC 120-29. A part 121, 125, or 135 operator, or a part 91K program manager should request that its Flight Standards District Office (FSDO) provide assistance in the eligibility assessment.

b) The operator or program manager should provide the FSDO with the aircraft make, model, and serial number; any evidence of instrument flight rules (IFR) approach approval; and pertinent information from flightcrew operating procedures.

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c) If the FSDO cannot determine equipment eligibility from the provided documentation (e.g., TC, STC, or AFM), it should forward the request and supporting data through its RFSD to the appropriate Aircraft Evaluation Group (AEG). The AEG will verify that the aircraft, its landing system, and equipment meet the criteria for CAT II operations, and that the system can safely fly the CAT II approach procedures. The AEG will provide written documentation (e.g., amended FSB report or other official documentation) to verify the eligibility of that equipment.

d) The equipment determined by an operational demonstration to be eligible and required to conduct either manually or automatically flown CAT II operations should be listed in Table 1.

E. Specify the Approach/Landing System in Table 1 of OpSpec/MSpec C059. The kind of CAT II approach/landing system (manual head-up display (HUD), i.e., manual control using a HUD to touchdown; autopilot, i.e., approach coupler used to DH, followed by manual control landing; or autoland) must be specified for each airplane listed in Table 1 of OpSpec/MSpec/LOA C059. The principal operations inspector (POI) will select the appropriate phrase to place in the Approach/Landing System column: Manual (HUD), Autopilot, or Autoland.

F. Operational RVR Minimums. Table 2 in OpSpec/MSpec/LOA C059, shown as Table 3-18, Example of Category II Runway Visual Range Minimums, below, is a summary of the required RVR minimums for each type of CAT II operation.

1) Row 1 of Table 3-18 shows that for Standard CAT II operations at 1600 RVR, only the touchdown RVR report is required. During the 6-month Operator Use Suitability Demonstration, 1600 RVR is commonly authorized for new CAT II operators. Also, if the rollout RVR is out of service, CAT II approaches may still be flown to 1600 RVR. Note, the intention of this requirement is not that rollout and mid RVR reports may be ignored and CAT II approaches may still be flown to 1600 RVR. If these reports are available, minimum RVR values shown in the lower rows of Table 3-18 must be used (i.e., if mid or rollout RVR reports are available, they must be equal to or greater than the values shown in the lower rows of Table 3-18.).

2) Rows 2–4 of Table 3-18 show the TDZ RVR requirements for other, lower visibility CAT II operations. While TDZ RVR report requirements remain unchanged, mid and rollout RVR report requirements are new as of May 2013. Mid RVR equal to 600 and rollout RVR equal to 300 are the lowest values that may be reported to conduct Standard CAT II, CAT II to 1000 RVR (TDZ), or Special Authorization (SA) CAT II operations. All available RVR reports are now controlling, and a TDZ and rollout report are required in order to conduct CAT II operations below 1600 RVR. If the rollout report is not available, the mid or far-end report may be substituted. Midfield reports substituted for unavailable rollout reports must report 600 RVR or greater; far-end reports substituted for unavailable rollout reports must report 300 RVR or greater.

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Table 3-18. Example of Category II Runway Visual Range Minimums

CAT II RVR Minimums			
Type of Operation	**TDZ RVR**	**Mid RVR**	**Rollout RVR**
Standard CAT II	1600 (500 m)	NR	NR
Standard CAT II	1200 (350 m)	600 (175 m)#	300 (75 m)
CAT II to 1000 RVR	1000 (300 m)	600 (175 m)#	300 (75 m)
Special Authorization CAT II	1200 (350 m)	600 (175 m)#	300 (75 m)

NOTE: NR = Not Required; # = If available.

G. Runway Field Length Requirements.

1) For all CAT II operations, the required field length (determined prior to takeoff) is at least 1.15 times the field length required by:

- Part 91K, § 91.1037(b) and the AFM,
- Part 121, § 121.195(b),
- The AFM for parts 91 and 125, or
- Part 135, § 135.385(b).

2) Once airborne, additional consideration of CAT II landing field length by the flightcrew is not required for normal operations. If unforecasted adverse weather or failures occur, the crew and aircraft dispatchers should consider any adverse consequences that may result from a decision to make a CAT II landing. The runway length needed in these changed circumstances must be determined considering the runway in use, runway conditions, current weather, AFM limitations, operational procedures, and aircraft equipment status at the time of landing.

3) Runway field length requirements for parts 121 and 135 are no longer contained in OpSpec C059. **They have been moved to OpSpec C054, and any part 121 or 135 operators issued OpSpec C059 *must* also be issued OpSpec C054.**

H. Airplane Maintenance. For CAT II authorization, the operator or program manager must have an approved LLM maintenance program, as described in subparagraph B5). The maintenance program should detail a specific maintenance interval, periodic tests, and inspections required on systems and equipment used for LLM. The maintenance program should identify or contain system and equipment reliability tracking methods derived from 14 CFR part 119 requirements.

I. Flightcrew Qualifications. A pilot in command (PIC) who has not met the requirements of part 91, § 91.1039(c), part 121, § 121.652, part 125, § 125.379, or part 135, § 135.225(e), as appropriate, must use the high minimum pilot RVR landing minimum equivalents, as determined from the table in OpSpec/MSpec/LOA C054. For the PIC to conduct the part 121 CAT II operations at the lower authorized minimums, he or she must have currently accumulated the hours required by § 121.652 in the aircraft type that he or she will fly for that

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carrier. The provision of Air Transport Association of America (A4A) Exemption 5549 for part 121 air carriers may also apply.

J. Authorized CAT II Approach and Landing Minimums. To determine the applicable minimums for an approach, the pilot must first compare the DH shown on the 14 CFR part 97 approach chart with the operator's lowest authorized DH for the airplane being flown. The higher minimum is applicable. Therefore, considering RVR sensor reports available, the RVR to be used for the approach is the highest RVR value in the approach chart, Table 1, or subparagraph f of the OpSpec/MSpec part 125 LOA or subparagraph 6 of the part 91 LOA.

K. Authorized CAT II Approaches, Airports, and Runways.

1) CAT II Operations. If the airport and runways are approved for CAT II operations in part 97, they should not be routinely listed in OpSpec/MSpec/LOA C059 unless the POI determines there is a need to specify a special limitation for an operator at a particular airport.

a) Standard CAT II approaches are published as CAT II procedures in the National Aeronautical Navigation Services (AeroNav Services), Air Traffic Products and Publications Group, instrument approach procedure (IAP) Flight Information Publication (FLIP). They are identified by the procedure name "ILS RWY 16C (CAT II)" and by the note in the minimums section stating "CATEGORY II ILS—SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED."

b) Special Authorization (SA) CAT II (formerly called reduced-lighting CAT II) approaches are published by AeroNav Services with the identifier "(SA CAT II)," and they also have a note in the Procedure Notes section stating "Reduced Lighting: Requires specific OPSPEC, MSPEC, or LOA approval and use of Autoland or HUD to touchdown." Some SA CAT II approaches were published without the "(SA CAT II)" identifier, but will have the same or similar note.

2) Standard CAT II. The operator may be authorized for up to three different minimums for use with published part 97 approaches: 1600 RVR, 1200 RVR, and 1000 RVR. Allowable minimums depend on the availability of RVR sensors and availability and use of required airplane equipment.

a) Minimums of TDZ 1600 RVR and TDZ 1200 RVR require the flightcrew to use an approach coupler or to fly at least to DH under manual control using a HUD for flight guidance. A manually flown landing is assumed and need not be specified. Autoland or HUD-to-touchdown operations for Standard CAT II may be authorized if the operators are also authorized OpSpec/MSpec/LOA C061 or C062.

b) Minimums of 1000 RVR require the flightcrew to use autoland or to fly under manual control using a HUD to touchdown.

1. For operations to touchdown, the airplane and its automatic flight control guidance system (AFCGS), autoland system, or manually flown guidance system (HUD), are approved for approach and landing operations as specified by AC 120-29.

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2. For manual control using a HUD to touchdown, the HUD must be flown in the AIII Approach mode.

3. The flightcrew has been trained at the lower visibilities before they can be authorized. If the flightcrew is currently authorized CAT III operations, no further training is required for this authorization in C059.

c) CAT II operations, with a DH of 100 feet and 1000 RVR (300 meters), may be authorized at certain foreign airports. Table 3-19, Example List of Authorized Foreign Airports and Runways for Category II Instrument Approach and Landing Operations, illustrates an example for listing authorized foreign airports and runways.

Table 3-19. Example List of Authorized Foreign Airports and Runways for Category II Instrument Approach and Landing Operations

Airport Name/Identifier	Runways	Limitations and Provisions
Mirabel, Canada CYMX	06	NA
Taipei— Chiang Kai Shek, Taiwan RCTP	10, 28	NA
Tokyo Narita, Japan RJAA	16	NA
Athens, Greece Eleftherios Venizelos LGAV	03L 03R 21L 21R	RVR 350 m

Refer to Table 3 in OpSpec C059.

d) Operators authorized SA CAT II, as described in subparagraph K3) below, may also be authorized to conduct approaches to standard CAT II facilities when the TDZ and/or centerline (CL) lights are inoperative. They must comply with all requirements in paragraph K3), using minimums appropriate to the RVR available and using autoland or manual (HUD) to touchdown.

3) SA CAT II. In addition to the standard CAT II operations authorized by OpSpec/MSpec/LOA C059, SA CAT II operations can be authorized to qualifying runways that do not meet the performance or ground equipment requirements normally associated with a compliant CAT II operation (e.g., TDZ lighting, CL lighting, or Approach Lighting System with Sequenced Flashing Lights (ALSF) 1 and 2).

a) Approval criteria for SA CAT II approaches are given in FAA Order 8400.13. The instrument landing system (ILS) facilities used are CAT I ILS installations that meet the glideslope (GS) and localizer signal quality requirements of CAT II facilities. The required increase in aircraft capabilities of HUD or autoland to touchdown mitigates the reduced-lighting requirements.

b) RVR requirements and available minimums are the same as standard CAT II and in accordance with Table 3-18, but these minimums require the flightcrew to use autoland or to fly under manual control using a HUD to touchdown.

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c) Aircraft operation approval, HUD usage, and flightcrew training requirements are the same as for standard CAT II to 1000 RVR.

4) Lists. The lists "Foreign Facilities Approved for Category II/III Operations," "Restricted U.S. Facilities Approved for Category II/III Operations," and "U.S. Runways Approved for Special Authorization CAT II Operations" are located on the Flight Operations Branch (AFS-410) Web site at: http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs400/afs410/status_lists/.

NOTE: CAT II or III approaches in foreign states at airports that are controlled by the U.S. Department of Defense (DOD) and that meet FAA CAT II/III criteria do not need to be included on the approved foreign facilities list and do not need to be listed in Table 3 of OpSpec/MSpec/LOA C059.

L. Missed Approach Requirements. The missed approach decision point has been changed from 1,000 feet above touchdown to the final approach fix (FAF). After passing the FAF, if the required visual landing references are not acquired and any failure of required equipment occurs, or if the primary guidance system in use (autopilot/autoland or HUD) is disengaged or disabled for any reason, the flightcrew must execute the missed approach. The exception to this requirement is that if both guidance systems are properly briefed and engaged before reaching the FAF and one system is disengaged or fails inside the FAF, the remaining guidance system is considered the primary and the approach may be continued.

M. CAT II Runway Restrictions. The requirement to conduct automatic landings in reduced lighting and 1,000 RVR operations implies that autoland restrictions imposed by prethreshold terrain must be considered. Approaches that have prethreshold terrain characteristics that may cause abnormal performance in flight control systems will have a note on the approach chart requiring a special autoland evaluation. Approved runways will be on the AFS-410 restricted facilities list in subparagraph K4) above, and must be listed in Table 4 of OpSpec/MSpec/LOA C059.

N. SA CAT I for Part 91. The part 91 LOA contains selectable text that authorizes SA CAT I ILS approaches to runways without TDZ or runway centerline (RCL) lights with a radar altimeter (RA) DH as low as 150 feet and a visibility minimum as low as RVR 1400 when using a HUD to DH. This selectable text is only available in the part 91 LOA. SA CAT I authorization for operators under other 14 CFR parts is available in OpSpec/MSpec/LOA C052. The operator must meet *all* of the following requirements:

1) Aircraft Requirements. To be approved for SA CAT I, each airplane must be certified and maintained for CAT II operations. Those airplanes and equipment must be listed in Table 1 of OpSpec C059. The authorized airplane(s) must be equipped with a HUD that is approved for CAT II or CAT III operations.

2) Training Requirements. The flightcrew must be current and qualified for CAT II operations. The flightcrew must demonstrate proficiency in ILS approaches and landings to this minimum or to a lower minimum using the HUD prior to commencing any SA CAT I

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operations. This requirement applies both to initial eligibility for SA CAT I as well as recurrent training.

3) Operational Requirements.

a) The flightcrew must use the HUD to DH in a mode used for CAT II or CAT III operations. This mode provides greater lateral and vertical flightpath accuracy and more sensitive alarm limits.

b) The flightcrew must use the HUD to DH, or to the initiation of missed approach, unless adequate visual references with the runway environment are established that allow safe continuation to a landing. Should the HUD malfunction during the approach, the flightcrew must execute a missed approach unless visual reference to the runway environment has been established.

c) The crosswind component on the landing runway must be less than the AFM crosswind limitations, or 15 knots or less, whichever is more restrictive.

d) The part 97 Standard Instrument Approach Procedure (SIAP) must have a published SA CAT I minimum.

e) Unlike other CAT I approaches, the mid-RVR report may *not* be substituted for the TDZ RVR report when using SA CAT I minima.

f) Single-pilot operators are prohibited from using SA CAT I landing minima.

OPSPEC/MSPEC/LOA C060—CATEGORY (CAT) III INSTRUMENT APPROACH AND LANDING OPERATIONS.

NOTE: NextGen Tracking. Applications for approvals for this paragraph must be entered in the Regional NextGen Tracker as indicated in the General Procedures Section (Volume 3, Chapter 1, Section 1).

A. General. Category (CAT) III is an optional authorization. The following issuances are required for authorizing CAT III operations: OpSpec C060 for 14 CFR parts 121, 125, 121/135, and 135; MSpec C060 for 14 CFR part 91 subpart K (part 91K); and LOA C060 for parts 91 and 125M. For 14 CFR part 129 operations, see Volume 12, Chapter 2.

1) CAT III operations are evaluated in accordance with the current edition of Advisory Circular (AC) 120-28, Criteria for Approval of Category III Weather Minima for Takeoff, Landing, and Rollout.

2) The initial CAT III authorization must be coordinated through the regional Flight Standards division (RFSD) Next Generation (NextGen) branch (see Volume 4, Chapter 2).

3) RFSD NextGen branch concurrence is also required before amending OpSpec/MSpec/LOA C060 to include an additional airplane make, model, and series (M/M/S) for an operator.

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4) All reductions in CAT III operating minimums for each operator and aircraft also require RFSD NextGen Branch concurrence.

5) Initial CAT III authorizations may require the operator to use higher minimums for a period of time or number of operations. The principal operations inspector (POI) should issue an initial, interim authorization using the higher minimums, and reissue OpSpec/MSpec/LOA C060 authorizing lower minimums upon completion of the approval demonstration phases as shown in Volume 4, Chapter 2, Section 2, paragraph 4-194.

B. Applicability. The authorization is applicable to operations conducted by:

- Part 121 certificate holders,
- Part 125 certificate holders,
- Part 135 certificate holders,
- Part 121/135 certificate holders,
- Part 91K program managers,
- Part 91 operators, and
- Part 125M operators/companies.

C. Airplanes Approved for CAT III Operations. Airplanes with an approved Aircraft Flight Manual (AFM) entry authorizing CAT III may be approved for CAT III. In accordance with the AFM, CAT III operations may be conducted with either fail operational (FO) or fail passive (FP) systems. Table 3-20, Fail Operational Landing Systems, and Table 3-21, Fail Passive Landing Systems, classify all CAT III landing and rollout systems as either FP or FO and show the associated lowest Runway Visual Range (RVR) minimums. The type of landing and rollout system is specified (listed) in Table 1 (see Figure 3-67F, Example OpSpec/MSpec/LOA C060, Table 1) for each airplane M/M/S.

1) Each airplane type M/M/S and the equipment authorized to conduct CAT III operations must be listed in Table 1 (see Figure 3-67F). In order to select an operator's M/M/S in OpSpec/MSpec/LOA C060, Table 1, ensure that "CAT III" is selected under "Authorizations" on the "Edit Aircraft" page of "Operator Data." Aircraft (including wide-body aircraft such as the DC-10, L-1011, and B-747, which are authorized for FO CAT III, but which have not been demonstrated to meet the FP provisions of AC 120-28, Appendix 3) may be approved for FP operations with landing minimums of RVR 1000. (See AC 120-28 for further details.)

2) The equipment required to conduct CAT III operations is established in accordance with the applicable 14 CFR parts, the approved AFM, and AC 120-28.

a) The only acceptable method of demonstrating that an airplane is Airworthy for CAT III operations is through a type design approval obtained by a manufacturer.

b) The approved AFM (or Aircraft Flight Manual Supplement (AFMS)) for airplanes that have CAT III type design approval contains a statement to the effect that the airborne systems have demonstrated the reliability and redundancy necessary for CAT III operations in accordance with AC 120-28.

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c) The AFM also specifies that certain equipment is required for airworthiness approval of the various kinds of CAT III operations.

d) Some AFMs also indicate that acceptable CAT III performance was demonstrated both with and without ("w/wo") certain equipment (for example, "autothrottles w/wo"). AC 120-28 also specifies that certain types of equipment are required for operational approval of the various kinds of CAT III operations. Therefore, both the approved AFM and AC 120-28 must be considered in determining the additional equipment that must be listed in Table 1 (see Figure 3-67F).

3) Equipment that is explicitly required by the airplane certification regulations (14 CFR parts 23 and 25), the operating regulations (parts 91, 121, 125, and 135), and/or the approved AFM should not be listed in Table 1 (see Figure 3-67F).

a) Additional equipment that must be listed in Table 1 (see Figure 3-67F) is determined by cross-checking the types of equipment required by AC 120-28 for the kind(s) of CAT III operations proposed against the equipment required by the regulations and the approved AFM.

b) Also, the equipment required by the guidance and direction in the RFSD NextGen branch concurrence letter is listed in Table 1 (see Figure 3-67F) as additional equipment.

c) The standard text of OpSpec/MSpec/LOA C060 requires this equipment to be installed and operational.

4) When the AFM indicates acceptable performance, both with and without certain items of equipment (that are not explicitly required by AC 120-28 or the RFSD NextGen branch concurrence letter), it must be determined how the operator intends to conduct CAT III operations and train flightcrews with those items of equipment.

a) If the operator proposes to conduct operations both with and without certain equipment (such as autothrottle), the operator must train flightcrews for both situations, and the item of equipment does not need to be listed in OpSpec/MSpec/LOA C060.

b) If the operator proposes to conduct operations only when those items of equipment (with and without) are functional, then those items of equipment must be listed in OpSpec/MSpec/LOA C060.

5) The authorizations for a decision height (DH)/alert height (AH), the lowest RVR (see subparagraph I), and the FP/FO landing systems must be specific for each airplane type. In general, Tables 3-20 and 3-21 summarize RVR and other requirements for different landing and rollout systems.

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Table 3-20. Fail Operational Landing Systems

Fail Operational Landing Systems—General 1. Utilize an AH (typically 50 ft). 2. Must go-around if any system failure occurs above AH. 3. Could land safely if a failure occurs after AH.		
Fail Operational Without a Rollout System	**Fail Operational with a Fail Passive Rollout System**	**Fail Operational with a Fail Operational Rollout System**
1. No visual necessary. 2. Lowest allowable RVR 600/600/300.	1. No visual necessary. 2. Lowest allowable RVR 400/400/300.	1. No visual necessary. 2. Lowest allowable RVR 300/300/300.

Table 3-21. Fail Passive Landing Systems

Fail Passive Landing Systems—General 1. Utilize a DH (no less than 50 ft). 2. Must have visual references NLT DH to land, otherwise missed approach. 3. System not capable of autoland if a failure occurs after DH. 4. If visual references are lost after DH or a failure after DH (prior to touchdown), missed approach.	
Fail Passive Without a Rollout System	**Fail Passive with a Fail Passive or Fail Operational Rollout System**
Lowest allowable RVR 600/600/300.	Lowest allowable RVR 600/400/300.

D. Runway Field Length Requirements.

1) For all CAT III operations, the required field length (determined prior to takeoff) is at least 1.15 times the field length required by:

- Part 91K, § 91.1037(b) and the AFM,
- Part 121, § 121.195(b),
- The AFM for parts 91 and 125, or
- Part 135, § 135.385(b).

2) Once airborne, additional consideration of CAT III landing field length by the flightcrew is not required for normal operations. If unforecasted adverse weather or failures occur, the crew and aircraft dispatchers should consider any adverse consequences that may result from a decision to make a CAT III landing. The runway length needed in these changed circumstances must be determined considering the runway in use, runway conditions, current weather, AFM limitations, operational procedures, and aircraft equipment status at the time of landing.

3) Runway field length requirements for parts 121 and 135 are no longer contained in OpSpec C060. **They have been moved to OpSpec C054, and any part 121 or 135 operators issued OpSpec C060 *must* also be issued OpSpec C054.**

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4) The "Special Operational Equipment and Limitations" column in Table 1 (see Figure 3-67F) is provided for equipment that is *in addition* to that required by 14 CFR and not included in the AFM. For example, additional equipment may be required to meet the field length requirement where "procedural" means alone is not acceptable.

E. Operators Authorized for CAT IIIa (RVR 700) Operations Can be Approved for RVR 600. Some aircraft were certified in the AFM for CAT IIIa operations. These operations are limited by regulation to no lower than RVR 700. If the AFM or AFMS also contains a statement that the CAT III systems are FP or have been demonstrated to meet the airworthiness criteria of AC 120-28 for FP systems, the aircraft may be approved for operations no lower than RVR 600. Most CAT III operations authorized for RVR 700 prior to issuance of AC 120-28 are now eligible for authorization to RVR 600, upon request of the operator for issuance of a revision to that operator's pertinent OpSpecs. Operators authorized RVR 700 may be approved for RVR 600/600/300 or RVR 600/400/300 operations in accordance with Table 3-21 when:

1) The AFM or AFMS contains a statement that the aircraft systems are FP.

2) The operator has incorporated changes reflecting RVR 600 into the approved training program (when applicable), bulletins, aircraft placards, etc., as appropriate.

3) A check airman or an FAA inspector has certified the flightcrews to fly to these reduced minimums.

F. Approval for RVR 600. An operator currently using RVR 600 or lower in its approved training for FP operations may be approved for RVR 600 without further checking. Approval may be given when the operator has updated the approved training program (when applicable) and flightcrew bulletins to reflect the RVR 600 authorization.

G. CAT III Approach and Landing Minimums. Figure 3-67F is an example of Table 1 with data inserted. If an operator is not authorized to conduct those kinds of CAT III operations with a particular airplane, or if the operator does not need special operational equipment, put "NA" under the appropriate column (do not delete or leave any cells blank).

NOTE: Include only the equipment that is not explicitly required by the regulations and/or the AFM. For new CAT III operators, inspectors must coordinate the operational equipment requirements with the RFSD NextGen branch during normal review processing.

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Figure 3-67F. Example OpSpec/MSpec/LOA C060, Table 1

Airplane M/M/S	Landing System*	Rollout System*	DH/AH	TDZ/Mid/RO RVR	Special Operational Equipment and Limitations
B-737-232	FP	NA	50 DH	600/600/300	NA
B-737-35B	FP	NA	50 DH	600/600/300	Either autoland or HGS must be operable
B-737-832	FP	NA	50 DH	600/600/300	Either autoland or HGS must be operable.
A-320-214	FO	FO	100 AH	300/300/300	NA
B-737-400	FP	FP	50 DH	600/400/300	1. Two EADI displays (EFI switch in NORMAL). 2. First Officer Flight Director Display. 3. Operational antiskid. 4. Cockpit LWMP status placard indicating CAT IIIa HGS capable.
B-747-47UF	FO	FO	100 AH	300/300/300	Antiskid and thrust reverser system must be fully operative for operations below RVR 600.
DASAULT FALCON-900EX	FP	FP	50	600/600/300	NA
B-757-225	FO	FO	50AH	300/300/300	1.30 required if thrust reverser or antiskid inoperative below RVR 600.
B-727-277	FP	NA	DH 50	600/600/300	NA
B-757-236	FO	FO	50 AH	300/300/300	NA
B-767-222	FO	FO	100 AH	300/300/300	Use 1.3 if autobrake is inoperative.
A319-112	FO	FO	100 AH	300/300/300	1.30 required if thrust reverser or antiskid inoperative below RVR 600.
B-777-236	FO	FO	50AH	300/300/300	NA
DC-10-10F	FO	FO	100 AH	300/300/300	Ground speed indicating system.
MD-11F	FO	FO	100 AH	300/300/300	Ground speed indicating system.

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NOTE: Enter: "NA" for not applicable; "FP" for FP landing or rollout control system; and "FO" for FO landing or rollout control system (i.e., "FP/FO" systems include autoland and head-up display (HUD) guidance systems (also referred to as Head-Up-Guidance Systems (HGS))).

H. Additional Information. Some European Aviation Safety Agency (EASA) Member States apply a DH (as opposed to an AH) to operations at or below RVR 600 because of instrument landing system (ILS) facility integrity concerns.

I. Required RVR Reporting Equipment. The RVR reporting equipment authorizations were expanded to enable the use of new and more robust EASA approval and AC 120-28 certification criteria for autoflight or a guidance landing system(s) with FP rollout control or flight guidance landing systems. A summary of these authorizations is shown in Figure 3-67G, OpSpec/MSpec/LOA C060, Table 2.

1) OpSpec/MSpec/LOA C060 allows touchdown RVR 600; mid RVR 400; rollout RVR 300 (600/400/300) for appropriate FP landing and FP or FO rollout systems; and RVR 400/400/300 for FO landing systems with FP rollout control or flight guidance (HUD) landing systems.

2) Note that to use the touchdown RVR 600 with mid RVR 400 and rollout RVR 300, a published runway landing minimum of RVR 400 or lower is required—that is, mid RVR 400 and rollout RVR 300 cannot be used at runways where RVR 600 is the lowest published RVR minimum.

3) RVR 300/300/300 is allowed for FO landing systems with FO rollout control or flight guidance (HUD) landing systems.

4) The operator or program manager is not authorized to conduct operations using an RVR lower than the published minimums at any runway (domestic or foreign), even if the operator or program manager is authorized to conduct CAT III operations at a lower RVR than is published for that approach.

Figure 3-67G. OpSpec/MSpec/LOA C060, Table 2

Landing System	Rollout System	TDZ RVR	Mid RVR	Rollout RVR
FP or FO	None	600 (175 m)	600 (175 m)	300 (75 m)
FP	FP or FO	600 (175 m)	400 (125 m)	300 (75 m)
FO	FP	400 (125 m)	400 (125 m)	300 (75 m)
FO	FO	300 (75 m)	300 (75 m)	300 (75 m)

J. Crosswind Limitations. The crosswind component on the landing runway must be 15 knots or less, unless the AFM's crosswind limitations are more restrictive. This should be reflected in the approved training program and flightcrew bulletins.

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K. Authorized CAT III Airports and Runways. With the issuance of OpSpec/MSpec/LOA C060, the operator/program manager is authorized to conduct CAT III operations at all domestic airports and runways using an approved 14 CFR part 97 CAT III instrument approach procedure (IAP), unless the runway is on the Flight Technologies and Procedures Division's (AFS-400) Restricted U.S. Facilities Approved for Special Authorization Category II & Category III Operations list (http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs400/afs410/status_lists), or unless a restrictive Notice to Airmen (NOTAM) is issued for that approach. Domestic airports and runways that have no restrictions do not have to be individually listed in OpSpec/MSpec/LOA C060. All foreign airports and runways approved for CAT III operations and restricted U.S. airports and runways approved for CAT III operations must be specifically identified and listed in OpSpec/MSpec/LOA C060, Tables 3 and 4, respectively. The list of approved foreign CAT III airports and runways can be found at http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs400/afs410/status_lists.

1) Foreign Airports and Runways. CAT III operations may be authorized at the foreign airports and runways listed in Table 3 (see Figure 3-67H, Example OpSpec/MSpec/LOA C060, Table 3) from the selection list provided for in Table 3.

2) U.S. Facilities with Restrictions or Conditions. The U.S. ILS facilities provided in Table 4 (see Figure 3-67I, Example OpSpec/MSpec/LOA C060, Table 4) are approved for CAT III operations only for the specific aircraft listed. The characteristics of the prethreshold terrain, runway touchdown zone (TDZ) slope, or steep glideslope (GS) at these facilities may cause abnormal performance in flight control systems. Additional analysis and/or flight demonstrations are typically required for each aircraft type before approval of CAT III minimums at each runway. Publication of a part 97 Standard Instrument Approach Procedure (SIAP) or additional operators and their aircraft may be approved by the regional NextGen branch as provided in AC 120-28, Appendix 8. Approved aircraft are equipped with either autoland or HUD flight guidance equipment. The restrictions at U.S. facilities for the certificate holder are provided as selectables for listing in Table 4.

Figure 3-67H. Example OpSpec/MSpec/LOA C060, Table 3

Foreign Airports and Runways Approved for CAT III Operations	
Airport Name/Identifier & Runway(s)	**Special Limitations**
London/Gatwick, England; EGKK; 8R/26L	None
Luxembourg, Luxembourg; ELLX; 24	None
Madrid/Barajas, Spain; LEMD; 18L/18R/33L/33R	None
Almaty, Kazakhstan; UAAA; 23R	None

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Figure 3-67I. Example OpSpec/MSpec/LOA C060, Table 4

Runway and Aircraft Restrictions and Limiting Conditions for Part 97 CAT III Operations	
Airport Name/Identifier, Runway(s) & CAT III Minimums	**Restrictions & Limitations**
Pittsburgh/Greater Pittsburgh Intl, PA; KPIT RY10L; RVR 300	Aircraft approved: A319, A320, B-757, and B-767
Pittsburgh/Greater Pittsburgh Intl, PA; KPIT RY10R; RVR 600 and RVR 300	Restricted to 600 RVR until less-than 600 RVR SMGCS operations are approved. Aircraft approved RVR 600: B-757 and B-767. Aircraft approved RVR 300: A319 and A320.

L. Inoperative Lights. If CAT III operations are planned at a runway, but TDZ and/or centerline (CL) lights are inoperative, CAT II operations may be conducted if weather permits and the operator has the authorization described below in OpSpec/MSpec/LOA C059. OpSpec/MSpec/LOA C059 authorizes specific CAT II minimums for part 97 CAT II approaches when the TDZ and centerline lights are inoperative. These CAT II minimums (RVR 1200) are authorized under the selectable subparagraph g(2) in OpSpec/MSpec/LOA C059, and are the lowest minimums available to a runway with inoperative TDZ and/or centerline lights.

M. Lower Landing Minimums Maintenance Program. The operator/program manager must maintain the aircraft and equipment listed in Table 1 (see Figure 3-67F) in accordance with its approved Lower Landing Minimums (LLM) maintenance program or inspection program, as applicable.

N. Engine-Inoperative Operations. The operator may be authorized for engine-inoperative CAT III operations in accordance with the AFM and AC 120-28. Airplane M/M/S, operational requirements, and limitations must be listed in Table 5 (see Figure 3-67J, Example OpSpec/MSpec C060, Table 5 (LOA C060, Table 6)).

1) With preplanned engine-inoperative CAT III capability, airports and minimums that otherwise may not be considered acceptable for use could be selected by the pilot or operator without having to subsequently justify its use based on emergency authority. This capability also has the advantage of allowing for full preassessment of the aircraft capability and engine inoperative aircraft configurations (e.g., flap settings, electrical system capability, hydraulic system capability, etc.), approach procedure characteristics, missed approach performance, and other factors that may be difficult to assess in real time if not previously assessed.

2) This capability can also permit an operator some additional flexibility in selecting alternate airports. Authorization to use CAT III alternate airport weather minimums is given in OpSpec C055, and should be based on the authorization in Table 5 (see Figure 3-67J).

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3) Authorization to conduct engine-inoperative CAT III operations is based on the AFM and approved operator procedures and training. AC 120-28 describes in detail the requirements and considerations necessary for authorization. These include aircraft performance, configuration and systems requirements, crew training (if applicable), and dispatcher and crew preflight and en route planning and decisionmaking.

4) Operational authorizations are in accordance with AC 120-28. With preflight planning authorization, the operator may consider engine-inoperative CAT III capability in planning flights for a takeoff alternate, en route (Extended Operations (ETOPS) or Extended-Range Operations (ER-OPS)) alternate, redispatch alternate, destination, or destination alternate. With landing after engine failure en route authorization, the operator may initiate an engine-inoperative CAT III approach under the conditions specified in AC 120-28. With landing after engine failure during approach authorization, the operator may continue a CAT III approach after passing the final approach fix (FAF), unless required by the AFM to discontinue the approach in order to reconfigure the aircraft.

Figure 3-67J. Example OpSpec/MSpec C060, Table 5 (LOA C060, Table 6)

Engine Inoperative CAT III Operations		
Airplane M/M/S	**Operational Authorization**	**Limitations**
B-777	Preflight planning. Landing after engine failure en route. Landing after engine failure during approach.	Flaps 20 or 30. Minimum TCH: 40 feet.
B-747	Preflight planning. Landing after engine failure en route.	Flaps 25 or 30. Minimum TCH: 42 feet. Rudder trim or manual control required until below 1500 feet RA with LAND 3. 5-kt crosswind limit with rudder ratio system inoperative and engine inoperative.

O. Nonstandard Requests. All requests for operational nonstandard OpSpec/MSpec/LOA authorizations must be submitted to the Air Transportation Division (AFS-200) using the nonstandard request policy outlined in Volume 3, Chapter 18, Section 2, paragraph 3-713.

OPSPEC/MSPEC/LOA C061—FLIGHT CONTROL GUIDANCE SYSTEMS FOR AUTOMATIC LANDING OPERATIONS OTHER THAN CATEGORIES II AND III.

A. General. OpSpec/MSpec C061 authorizes an operator to use a flight control guidance system with automatic landing capabilities to touchdown. Title 14 CFR part 121, § 121.579(f); part 125, § 125.329(f); and part 135, § 135.93(f) specify that this type of operation must be

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authorized by an OpSpec. A 14 CFR part 91K program manager is issued MSpec C061, if applicable. Before issuing C061, the principal operations inspector (POI) must determine the following:

1) The Aircraft Flight Manual (AFM) permits use of the flight control guidance system (autoland system) to touchdown.

2) Training on the use of the flight control guidance system and autoland procedures to touchdown is provided to flightcrew members.

3) The operator continually maintains flight control guidance and autoland systems in accordance with an approved maintenance program for autoland operations.

NOTE: The current edition of Federal Aviation Administration (FAA) Order 8400.13, Procedures for the Evaluation and Approval of Facilities for Special Authorization Category I Operations and All Category II and III Operations, also provides credit for other-than-standard Category II (CAT II) minimums using an autoland system to touchdown.

B. Listing Flight Control Guidance Systems. The airplanes (make/model) and the flight control guidance systems (manufacturer/model) authorized for this type of operation must be listed in C061a.

C. Exceptions to Issuance of C061. When the autoland system is not used to touchdown on a Category I (CAT I) instrument landing system (ILS), C061 is not required to be issued.

D. Additional Information. The current edition of Advisory Circular (AC) 120-67, Criteria for Operational Approval of Auto Flight Guidance Systems, provides additional information.

OPSPEC/MSPEC/LOA C062—MANUALLY FLOWN FLIGHT CONTROL GUIDANCE SYSTEM CERTIFIED FOR LANDING OPERATIONS OTHER THAN CATEGORIES II AND III.

A. General. OpSpec/MSpec C062 is optional for 14 CFR parts 91K, 121, 125, and 135 operations to authorize operators to use manually flown flight control guidance systems to conduct approach and landing operations to fly a Category I (CAT I) instrument landing system (ILS) using a Head Up Display (HUD). C062 is issued to use an HUD just as C061 is issued to use an autoland system for other than Category II (CAT II) or Category III (CAT III) operations.

1) This authorization is independent of CAT II/III authorizations. Typically, this authorization is issued prior to CAT II/III authorizations and is kept after the issuance of CAT II/III authorizations.

2) The current edition of Federal Aviation Administration (FAA) Order 8400.13, Procedures for the Evaluation and Approval of Facilities for Special Authorization Category I

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Operations and All Category II and III Operations, also provides credit for lower-than-standard CAT I minimums using HUD to touchdown.

3) It is required to list series of aircraft in addition to make/model due to the distinct differences in series of models (especially in the newer aircraft). The aircraft listed must have a manual flight control guidance system installed and certified for manually flown landings (HUD).

B. Exceptions to Issuance of C062. When HUD guidance is not used to touchdown on a CAT I ILS, C062 is not required to be issued.

C. Requirements for Operators Conducting Operations in MD-11 Aircraft. National Transportation Safety Board (NTSB) safety recommendation A-99-40 recommends the FAA "issue a flight standards information bulletin that directs principal operations inspectors to ensure that MD-11 training programs provide simulator instruction in the proper procedure for autopilot disengagement and the subsequent manual control of the airplane." As a result, Flight Standards (AFS) recommends that principal operations inspectors (POI) ensure that each operator conducting operations in an MD-11:

1) Has included in its Company Flight Manual (CFM) information regarding the potential for pitch attitude upsets caused by improper operation of the autopilot and disseminate that information to each flightcrew member of the MD-11.

2) Has included simulator instruction in the proper operating procedure for autopilot disengagement and subsequent manual control of the airplane in its MD-11 initial, upgrade, recurrent, transition, and requalification training programs.

D. Helicopter Authorization. See OpSpec/MSpec H111, Manually Flown Flight Control Guidance System Certified for Landing Operations Other Than Categories II and III, for the helicopter equivalent of this authorization.

OPSPEC/MSPEC/LOA C063—AREA NAVIGATION (RNAV) AND REQUIRED NAVIGATION PERFORMANCE (RNP) TERMINAL OPERATIONS.

A. General. The authorization provided by OpSpec/MSpec/LOA C063 is applicable to certificate holders/operators/program managers conducting operations under 14 CFR parts 91 subpart K (part 91K), 121, 125 (including A125 Letter of Deviation Authority (LODA) holders), and 135. (For 14 CFR part 129, see Volume 12, Chapter 2, Section 5.)

1) OpSpec/MSpec/LOA C063 authorizes certificate holders/operators/program managers to conduct operations using 14 CFR part 97 U.S. instrument flight rules (IFR) terminal Area Navigation 1 (RNAV 1) and/or Required Navigation Performance 1 (RNP 1) departure procedures (DP) and RNAV 1 and/or RNP 1 Standard Terminal Arrival Routes (STAR) in the National Airspace System (NAS). This guidance addresses RNAV 1, RNP 1, and other RNAV flight operations. It also provides guidance authorization for certificate holders/operators/ program managers to conduct RNP 1 procedures that include Radius to Fix (RF) path terminators and Tailored Arrivals (TA). Part 91 operators do not need to obtain an LOA for RNAV 1 or RNP 1 operations.

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2) The term "RNAV 1 DP" or "RNP 1 DP" includes Standard Instrument Departures (SID) and Obstacle Departure Procedures (ODP).

3) RNP 1 requires a Global Positioning System (GPS) and additional requirements for operating on procedures that contain RF legs, as outlined in the current edition of Advisory Circular (AC) 90-105, Approval Guidance for RNP Operations and Barometric Vertical Navigation in the U.S. National Airspace System and in Oceanic and Remote Continental Airspace.

4) RF legs are an optional capability rather than a minimum requirement for RNP 1 operations. However, RF capability is required for Advanced RNP (A-RNP) certificate holders. For RNP 1 systems incorporating RF leg capability, the systems must comply with the requirements in AC 90-105, Appendices C, H, and I.

B. Determining Eligibility for RNP 1 and RNAV 1.

1) RNP Compliance. AC 90-105 provides the minimum criteria for RNP systems to operate on RNP routes and procedures. Manufacturers should evaluate their systems against these criteria and document the RNP capabilities as per guidance in AC 90-105.

2) Certificate holders/operators/program managers and pilots should use the guidance in AC 90-100, U.S. Terminal and En Route Area Navigation (RNAV) Operations, to determine their eligibility for domestic U.S. RNAV 1 terminal procedures. For the purpose of this authorization, "compliance" means meeting operational and functional performance criteria.

NOTE: Per AC 90-100 and AC 90-105, data suppliers and avionics data suppliers must have an LOA in accordance with the current edition of AC 20-153, Acceptance of Aeronautical Data Processes and Associated Databases. Operators must ensure that data supplier(s) are compliant. Aircraft/equipment with approval under AC 90-100 for use of GPS are approved under AC 90-105 for RNP operations.

3) RNAV 1 procedures require distance measuring equipment (DME)/DME/Inertial Reference Unit (IRU) sensors and/or GPS inputs. Due to gaps in the DME infrastructure of the NAS, RNAV 1 procedures require IRU sensor inputs to augment DME/DME, which is often referred to as DME/DME/IRU.

4) RNP 1 operations are based on GPS positioning and, if adequate coverage is available, DME/DME/IRU.

5) The certificate holder/operator/program manager is responsible for providing equipment eligibility documented by the Airplane Flight Manual (AFM) or other FAA-recognized means. If the operators are unable to determine that the aircraft is eligible, they must provide the following required documentation for RNAV 1 and/or RNP 1 terminal procedures to the certificate-holding district office (CHDO):

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a) RNAV system make, model, and part number(s);

b) Evidence of compliance with AC 90-100 or AC 90-105 criteria;

c) Crew operating procedures;

d) Evidence of control of operation procedures;

e) Crew training program;

f) Evidence of control of navigation database processes; and

g) Any other pertinent information.

6) Based on the information supplied by the operator, the principal operations inspector (POI) must coordinate with the principal avionics inspector (PAI) to determine equipment eligibility. If unable to determine eligibility, contact the FAA Performance-Based Flight Systems Branch (AFS-470).

a) As described in the AC 90-100 and AC 90-105, the term “compliance” means meeting the operational and functional performance criteria. For the intended purpose of this policy, “compatible” means equipment and systems that perform their intended function and meet performance requirements for RNAV 1 and RNP 1 operations.

b) The PAI determines the proper nomenclature of the equipment manufacturer’s make, model, and software version, and verifies the RNAV equipment and system is installed in accordance with approved data and meets the criteria of the most recent version of AC 90-100 or AC 90-105. To ensure the proper configuration control of the approved RNAV operating system, it is required to list both the hardware and the software part numbers or version/revision numbers in Table 1 of OpSpec C063.

c) If the CHDO is unable to determine equipment eligibility for RNAV 1 or RNP 1 DPs and STARs, contact AFS-470 for guidance.

7) Based on the information supplied by the certificate holder/operator/program manager, the POI must coordinate with the PAI to determine if the aircraft’s system meets the performance and functionality requirements for RNP 1 operations. The equipment must not permit the flightcrew to select a procedure or route that is not supported by the equipment, either manually or automatically (e.g., a procedure is not supported if it incorporates an RF leg and the equipment does not provide RF leg capability).The system must also restrict pilot access to procedures requiring RF leg capability if the system can select the procedure, but the aircraft is not otherwise equipped (e.g., the aircraft does not have the required roll steering autopilot or flight director (FD) installed).

8) Some RNAV equipment and systems may not be able to perform multiple STAR runway transitions, sometimes known as route Type 3, because of database limitations. Operators of such RNAV systems must procure a tailored database and charts to allow the use of multiple runway transitions in order to qualify for RNAV 1 and/or RNP 1 approval.

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9) After the POI and PAI agree that the certificate holder's/operator's/program manager's navigation equipment, procedures, and flightcrew training are eligible for authorization(s) in Table 1, the OpSpec/MSpec/LOA C063 template may be issued, indicating the appropriate bundled authorizations as follows:

- A-RNP, RNP 1, TA, RNAV 1;
- RNP 1, RF, TA, RNAV 1;
- RNP 1, RF, RNAV 1;
- RNP 1, TA, RNAV 1;
- RNP 1, RNAV 1; or
- RNAV 1.

10) Every effort should be made to bundle qualifications within the hierarchy of an OpSpec/MSpec/LOA where applicable and also combine other OpSpecs/MSpecs/LOAs as desired by qualified operators. (Refer to AC 90-105).

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Figure 3-67D. Sample C063 Table 1 – Airplane(s), RNAV Equipment, Navigation Specification(s)

Airplane	Compliant RNAV System(s) and Software			Navigation Specification(s)	Additional Capabilities	Limitation and Provisions
M/M/S	Manufacturer	Model/HW Part Number	Software Part/ Version/ Revision Number			
B-747-451	Honeywell Rockwell-Collins Honeywell Rockwell-Collins Rockwell-Collins Honeywell	FMC-4052508 FCGS-FCS-700 IRU-HG1050 DME-DME-700 MMR(GPS)-GLU-925 MMR(GPS)-RMA-55B		A-RNP/RNP 1/ TA/RNAV 1	FRT/TOAC	GPS Required
B-757-212	Honeywell Rockwell-Collins Honeywell Rockwell-Collins Honeywell Rockwell-Collins	FMC-4052506 FCGS-FCS-700 IRU-HG1050 DME-DME-700/ DME-900 DME-DMA-37B MMR(GPS)-GLU-920		RNP 1/RF/TA/ RNAV 1	FRT	GPS Required
A-320-212	Thales Thales Honeywell Rockwell-Collins Thales	FMGC-C13043 C13403 ADIRU-HG1150/ HG2030 DME-DME-700/ DME-900 MMR(GPS)-TLS755-01		RNP 1/RF/ RNAV 1	TOAC	
A-330-223	Thales Thales Honeywell Rockwell-Collins Thales	FMGEC-C12858 C12858 ADIRU-HG2030 DME-DME-900 MMR(GPS)-TLS755-01		RNP 1/TA/ RNAV 1		DME/DME Only
B-717-200	Honeywell Honeywell Honeywell Honeywell Honeywell	FMC-4081570 B717ACF ADIRU-HG2080 DME-DMA-37B MMR(GPS)–RMA-55B		RNP 1/ RNAV 1		
B-737-832	GE (Smiths) Honeywell Rockwell-Collins Honeywell Rockwell-Collins Rockwell-Collins	FMC-2907A4/2907C1 FCGS–SP-300 FCGS-EDFCS-730 ADIRU-HG2050 DME-DME-900 MMR(GPS)–GLU-920/ GLU-925		RNAV 1		

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11) A-RNP Authorization. In paragraph C063, Table 1 provides an option for six bundled options starting with A-RNP, RNP 1 with TA. Lesser bundles are also available with the following options: RNP 1 with RF and TA and RNAV 1; RNP 1 with RF and RNAV 1; RNP 1 with TA and RNAV 1; RNP 1 and RNAV 1; or RNAV 1 only. As a minimum for A-RNP, the certificate holder must be qualified for the following advanced capabilities: scalability, RF, and parallel offset. Operators applying for A-RNP must be functionally and operationally capable of performing the required A-RNP functions and meet the continuity requirements for the operation.

12) Additional Capabilities. A-RNP functions Fix Radius Transition (FRT) and/or Time of Arrival Control (TOAC) may be selected in Table 1 under additional capabilities for those who qualify for A-RNP.

C. RNAV 1 and/or RNP 1 DPs and STARs. AC 90-100 provides detailed guidance for certificate holders/operators/program managers regarding operations on RNAV 1 DPs and STARs. AC 90-105 provides guidance for system and operational approval for conducting RNP 1 DPs and STARs.

1) For current ACs, policy, guidance, and compliance tables, see http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs400/afs470/pbn. For further questions, contact the Performance Based Flight Systems Branch (AFS-470) at 202-267-8790. Based on the information supplied by the certificate holder/operator/program manager, the POI must coordinate with the PAI to determine equipment eligibility. For TAs, a Future Air Navigation System (FANS)-1/A is required, as indicated in OpSpec/MSpec/LOA A056.

2) Additional information may also be found in the Web-based Operations Safety System (WebOPSS) guidance associated with OpSpec/MSpec/LOA C063 by clicking on "Guidance."

D. Outlining Procedures Using This Approval. Procedures used under this approval should be outlined in the appropriate operations manual or within the OpSpec/MSpec/LOA C063 template for certificate holders/operators/program managers conducting operations under parts 91K, 125 (including A125 LODA holders), and 135 who do not have an operations manual. For part 91 operators, LOAs are optional and may be obtained through the application process.

E. Designation of RNAV 1 RNP 1. U.S. RNAV DPs and STARs throughout the NAS are designated as RNAV 1 and published in accordance with part 97.

F. Definitions Related to This Authorization. Some important definitions as they relate to this authorization are as follows:

1) Instrument Departure Procedure (DP). Instrument DPs are published IFR procedures that provide obstruction clearance from the terminal area to the en route structure. There are two types of DPs: SIDs and ODPs.

a) A SID is a published IFR air traffic control (ATC) DP that provides obstacle clearance and a transition from the terminal area to the en route structure. SIDs are primarily

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designed for air traffic system enhancement to expedite traffic flow and to reduce pilot/controller workload.

b) An ODP is a published IFR DP that provides obstruction clearance via the least onerous route from the terminal area to the appropriate en route structure. ODPs are recommended for obstruction clearance unless an alternate DP (such as a SID or radar vector) has been specifically assigned by ATC.

c) The RNAV 1 or RNP 1 DP must be retrievable from the flight management system (FMS) database and included in the filed flight plan.

G. Certificate Holders and Program Managers Authorized European Precision Area Navigation (P-RNAV) Operations. The criteria in AC 90-100, required for U.S. RNAV procedures, are generally consistent (but there are exceptions) with the criteria for P-RNAV operations in Europe.

1) P-RNAV terminal and en route operations require a track-keeping accuracy of ± 1 NM for 95 percent of the flight time.

2) If an operator has met the requirements for and is authorized P-RNAV (OpSpec/MSpec/LOA B034), that operator may also be eligible for RNAV 1 after consideration of the issues listed below regarding equipment. POIs should still evaluate their operator's procedures and training to ensure compliance with AC 90-100.

a) If approval for the P-RNAV included the use of Very High Frequency omni-directional range station (VOR)/DME, then RNAV system performance must be based on the GNSS, DME/DME, or DME/DME/IRU for RNAV 1. However, VOR/DME inputs do not have to be inhibited or deselected.

b) If approval for the P-RNAV included the use of DME/DME, the operator can ask the manufacturer or check the FAA Web site for a list of compliant systems. However, DME/DME-only systems are not authorized to conduct RNAV 1 operations.

c) Operators must be able to follow RNAV guidance no later than 500 feet above field elevation (AFE).

3) Appropriate P-RNAV references.

a) The current edition of AC 90-96, Approval of U.S. Operators and Aircraft to Operate Under Instrument Flight Rules (IFR) in European Airspace Designated for Basic Area Navigation (B-RNAV) and Precision Area Navigation (P-RNAV);

b) Joint Aviation Authority (JAA) temporary guidance leaflet (TGL) Number 10, Airworthiness and Operational Approval for Precision RNAV Operations in Designated European Airspace; and

c) Volume 3, Chapter 18, Section 4, OpSpec/MSpec/LOA B034.

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H. TAs. Currently, the TA model is limited and TAs are preplanned fixed routes received via data link from ATC's Ocean21 system to FANS-1/A-equipped aircraft. Except for the instrument approach portion of the operation, these routes are neither stored in the aircraft navigation database nor published.

1) TAs Consist of Three Elements.

- Delivery of the TA clearance through the ATC Ocean21 system via data link to FANS-1/A-equipped aircraft;
- An RNAV lateral, vertical, and speed profile; and
- Connection to a published instrument approach stored in the aircraft navigation database.

2) TA Clearances. Because TAs are complex clearances, only aircraft with an FMS autoload/uplink function can request a TA. Pilots may not manually enter a TA procedure into the FMS. ATC issues TA clearances. Pilots fly the TA procedure according to the operator's standard operating procedures (SOP).

3) Approval. The POI should contact the Air Transportation Division (AFS-200), General Aviation and Commercial Division (AFS-800), and AFS-470 at FAA headquarters (HQ) for concurrence prior to issuing the appropriate OpSpec, MSpec, or LOA. If the POI, AFS-200, and AFS-470 agree that the operator is authorized to conduct TA operations, authorization should be given by adding TA into the "Authorization" column of Table 1.

4) Certificate holders/operators/program managers must have all the following OpSpecs/MSpecs/LOAs for TA authorization:

a) OpSpec A056. OpSpec A056 will include FANS-1/A equipment in Table 1.

b) OpSpec B050.

c) OpSpec C063. In the "Limitations and Provisions" column of Table 1 add the following phrase: "Operator is authorized to conduct TAs with FANS-1/A-equipped aircraft listed in OpSpec A056." If the POI wishes to restrict the authorization to only specific airports, this may also be added to the "Limitations and Provisions" column of Table 1.

I. References (current editions):

- Title 14 CFR Part 91, §§ 91.123, 91.205, and 91.503.
- Title 14 CFR Part 95.
- Title 14 CFR Part 121, § 121.349.
- Title 14 CFR Part 125, § 125.203.
- Title 14 CFR Part 135, § 135.165.
- Order 1050.1, Environmental Impacts: Policies and Procedures.
- Order JO 7100.9, Standard Terminal Arrival Program and Procedures.
- Order JO 7110.65, Air Traffic Control.
- Order JO 7400.2, Procedures for Handling Airspace Matters.

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- Order 8260.3, United States Standard for Terminal Instrument Procedures (TERPS).
- Order 8260.19, Flight Procedures and Airspace.
- Order 8260.58, United States Standard for Performance Based Navigation (PBN) Instrument Procedure Design.
- AC 20-153, Acceptance of Aeronautical Data Processes and Associated Databases.
- AC 90-45, Approval of Area Navigation Systems for Use in the U.S. National Airspace System.
- AC 90-96, Approval of U.S. Operators and Aircraft to Operate Under Instrument Flight Rules (IFR) In European Airspace Designated for Basic Area Navigation (B-NAV)/RNAV 5 and Precision Area Navigation (P-RNAV).
- AC 90-100, U.S. Terminal and En Route Area Navigation (RNAV) Operations.
- AC 90-105, Approval Guidance for RNP Operations and Barometric Vertical Navigation in the U.S. National Airspace System.
- TSO C-129a, Airborne Supplemental Navigation Equipment Using the Global Positioning System (GPS).
- TSO C-145(), Airborne Navigation Sensors Using the Global Positioning System (GPS) Augmented by the Wide Area Augmentation System (WAAS).
- TSO C-146(), Stand-Alone Airborne Navigation Equipment Using the Global Positioning System (GPS) Augmented by the Wide Area Augmentation System (WAAS).
- TSO C-196(), Airborne Supplemental Navigation Sensors for Global Positioning System Equipment using Aircraft-Based Augmentation.
- ICAO Global Operational Data Link Document (GOLD).

OPSPEC C064—TERMINAL AREA IFR OPERATIONS IN CLASS G AIRSPACE AND AT AIRPORTS WITHOUT AN OPERATING CONTROL TOWER—NONSCHEDULED PASSENGER AND ALL CARGO OPERATIONS. C064 authorizes an operator to conduct nonscheduled passenger and all cargo (scheduled and nonscheduled) terminal area instrument flight rules (IFR) operations in Class G airspace or into airports without an operating control tower, with the following limitations and provisions:

A. Operation Information. Before authorizing C064, the principal operations inspectors (POI) must ensure that the operator has sufficient content in its manual(s) and training program to cover common traffic advisory frequency (CTAF) and pilot controlled lighting (PCL) information and procedures. The POI must also determine that the operator has a method or procedure for obtaining and disseminating necessary operation information. This operation information must include the following:

1) The airport is served by an authorized instrument approach procedure (IAP) (and departure procedure when applicable);

2) Applicable charts for crewmember use;

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3) Operational weather data from an approved source for control of flight movements and crewmember use;

4) Status of airport services and facilities at the time of the operation;

5) Suitable means for pilots to obtain traffic advisories (TA); and

6) Sources of TA and airport advisories.

B. Radio Sources of Air TA Information. Certificate holders may be authorized to use any two-way radio source of air TA information listed in the Aeronautical Information Manual (AIM) (for operations in U.S. airspace) or equivalent Aeronautical Information Publications (AIP) (for foreign operations).

1) These sources include CTAFs, Aeronautical Advisory Stations (UNICOM), Aeronautical Multicom Stations (MULTICOM), and Flight Service Stations (FSS).

2) In those cases where two sources are listed at the same airport, inspectors must ensure that the operator's manuals have procedures that require pilots to continuously monitor and use the TA frequency when operating within 10 nautical miles (NM) of the airport. The procedures should require communication concerning airport services and facilities to be completed while more than 10 NM from the airport.

3) At some airports, no public use frequencies may be available. In those cases, a certificate holder must arrange for radio communication of essential information including surveillance of local or transient aircraft operations by ground personnel. Ground personnel who operate a company radio for airport status and TA must be able to view airspace around the airport.

C. Issuance of C064 for C081 Authorization. OpSpecs C064 and/or C080 may need to be issued to the certificate holder in order for the OpSpec C081 to be issued. C081 authorizes the use of special (non-14 CFR part 97) IAPs or departure procedures (DPs).

D. Other Authorizations. C064 is applicable to 14 CFR part 121, 125, 121/135, and 135 certificate holders. For helicopter authorization, see OpSpec H121. Title 14 CFR part 91 subpart K (part 91K) program managers should use MSpec A014 for Class G operations.

OPSPEC C065—POWERBACK OPERATIONS WITH AIRPLANES.

A. General. C065 authorizes the use of powerplant reversing systems for rearward taxi operations. Before issuing C065, the principal operations inspector (POI) must determine whether the operator meets requirements discussed in AC 120-29, Criteria for Approval of Category I and Category II Weather Minima for Approach, current edition. Airplane types' make, model, and series (M/M/S) authorized for powerback operations must be listed in C065. Airports where powerback operations are authorized must also be listed. If the POI and/or operator determine that restrictions to powerback operations are required at certain gates or ramp areas, the restrictions must be described (adjacent to the airport name) in the "Restrictions and

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Limitations" column. OpSpecs worksheets provide a template for listing authorized airplanes, airports, and restrictions.

B. Policies and Procedures for Ground Personnel During Ground Operations. Title 14 CFR part 121, §§ 121.133 and 121.135, part 134, § 134.23, and part 135, § 135.21, require certificate holders to prepare manuals setting forth procedures and policies that must be used by ground and maintenance personnel in conducting their ground operations. Sufficient procedures must be established to maintain an adequate level of passenger and company ground personnel safety during ramp operations. Procedures should emphasize safety during boarding and deplaning of passengers or cargo, specifically during times when an engine(s) may be running or a propeller(s) is turning during ground operations. Procedures should include, as a minimum, a means for defining no access areas around the propeller(s), as well as the landing gear and tugs, during push and ground marshaling operations. Policies should provide that an adequate number of ground personnel are assigned to ensure safety of company personnel and passengers.

C. Pushback and Ground Marshaling. Procedures for pushback and ground marshaling activities should be clearly defined and should include safety precautions and signals, and should ensure adequate visibility of assigned personnel during the time of aircraft movement.

D. Increased Awareness. FAA air carrier surveillance programs should emphasize increased awareness by inspectors and the strict need to follow safety procedures around turning propellers, in marshalling and pushback procedures, and/or other ground activities.

E. Other References. Additional references can be found in National Transportation Safety Board (NTSB) Recommendations 91-297, 91-298, and 93-146, and Air Carrier Operating Bulletin (ACOB) 8-94-2, Safety in Ground Operations.

OPSPEC C067—SPECIAL AIRPLANE AUTHORIZATIONS, PROVISIONS, AND LIMITATIONS FOR CERTAIN AIRPORTS.

A. General. OpSpec C067 authorizes certificate holders to operate airplanes into certain airports. The authorizations include the following:

1) Title 14 CFR part 121 air carriers to conduct passenger-carrying operations into uncertificated airports (see subparagraph C);

2) Part 121 air carriers to conduct operations at airports that require curfew limitations for flights into or out of specific airports (see subparagraph D);

3) Part 121 or 14 CFR part 135 air carriers to conduct operations into airports that have operational considerations such as special aircraft performance charts and equipment, special lighting (flare pots, etc.), or unpaved runways (see subparagraph D);

4) Part 121 or 135 air carriers to conduct operations using the Reginald Bennett International Runway (RBI) Reflectorization System in Alaska (see subparagraph D); and

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5) Part 135 transport category airplane deviations from part 135, § 135.376(a)(3) or § 135.379(d). (See subparagraph D and Volume 4, Chapter 3, Section 5.)

B. Authorizations Where Other OpSpecs Are Applicable.

1) OpSpec C050 for "special PIC qualification airports" is applicable to the authorization described in part 121, § 121.445. Do not list special pilot in command (PIC) qualification airports in OpSpec C067 unless one of the items in subparagraph A also applies.

2) OpSpec C081 should be used for listing the airports/runways where the Flight Technologies and Procedures Division (AFS-400) has approved specific "special" instrument procedures for a certificate holder.

3) OpSpec C058 is used for authorizing specific foreign Terminal Instrument Procedures (TERPS).

4) OpSpec C064 and C080 are used for authorizing a certificate holder to conduct airplane operations in airport terminal areas in Class G and E airspace.

5) OpSpec C070 is used for authorizing airports where certificate holders conduct scheduled operations.

C. Uncertificated Airports.

1) In accordance with § 121.590(c) and (e), a certificate holder may be authorized to conduct passenger-carrying airplane operations into an airport (nonmilitary) operated by the U.S. Government that is not certificated under 14 CFR part 139 if those airports meet:

a) The equivalent safety standards for airports certificated under part 139, and

b) The equivalent airport classification requirements under part 139 to serve the type airplanes to be operated and the type of operations to be conducted.

2) Authorization to use such airports may be granted by entering the location/identifier of each airport, and the make and model (if applicable) of the airplanes to be operated in Table 3-24, Sample of Airports and Special Provisions:

a) Operators should obtain permission from the airport manager of nonmilitary airports to operate at these airports before starting operations.

b) This permission is not needed for operations at joint-use civil and military airports.

3) The FAA may authorize a certificate holder to conduct passenger-carrying airplane operations into a domestic military airport that is not certificated under part 139 (by selecting this text in the OpSpec) if the certificate holder ensures the following in advance of starting operations into that airport:

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a) Certificate holders should obtain permission from the base commander of military airports that are not certificated under part 139 in advance of commencement of operations.

b) In accordance with the requirements of § 121.590, certificate holders must ensure that the airport:

1. Meets the equivalent safety standards for airports certificated under part 139, and

2. Meets the equivalent airport classification requirements under part 139 to serve the type airplanes to be operated and the type of operations to be conducted.

D. Other Special Authorizations.

1) Other special authorizations include those that may require special operational considerations and special flightcrew member training. (See guidance in Volume 4, Chapter 3, Section 5, paragraph 4-601.) These authorizations may include but are not limited to:

a) Operations into airports with special runway markings, such as flare pots or trees;

b) High-altitude airports with special airplane performance requirements;

c) Airports in or near precipitous terrain (§ 135.363(h)); and

d) Airports with unpaved runways or runways constructed on frozen lakes and rivers.

2) Special authorization for conducting operations at airports in Alaska. For authorization to conduct airplane operations using the RBI Runway Reflectorization System in Alaska:

a) The air carrier must provide a station agent at the airport trained to give wind information to the flightcrew, and

b) The air carrier must train its flightcrews on this specific system in accordance with an approved training program. The training program must be approved in accordance with the following criteria:

1. Each pilot must receive initial and follow-on recurrent training in accordance with the company approved training program.

2. Ground and flight personnel must complete initial training before participation with this authorization.

3. Recurrent training must be completed every 12 calendar-months following completion of initial training.

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4. Whenever a person who is required to take this recurrent training completes the training in the calendar-month before or the calendar-month after the month in which this recurrent training is required, that person is considered to have completed it in the calendar-month in which it was required.

NOTE: The sample Table 3-24 shows how to provide authorization for conducting operations after curfew hours at specific airports or use of the RBI Runway Reflectorization system at specific airports in Table 3-24 of OpSpec C067.

3) Unpaved Runways for Turbojet Operations. To use an airport with unpaved runways, an operator is required to have special operational procedures and flightcrew member training. For approval of operations at an airport with unpaved runways, the principal operations inspector (POI) must identify the airport and reference the appropriate section of the operator's manuals in Table 3-24 of OpSpec C067. See Volume 4, Chapter 3, Section 5.

4) You may list in OpSpec C067 flag or supplemental destination airports that do not have an available alternate airport (in accordance with § 121.621(a)(2) or § 121.623(b)), for use by airplanes that are dispatched in accordance with the required fuel reserves set forth in § 121.641(b) or § 121.645(c).

5) Although the FAA does not encourage operators to list aircraft limitations at certain airports during curfew hours in their OpSpecs, if an airport authority requires operators to list these limitations in their OpSpecs, then operators may list them in Table 3-24 of OpSpec C067. A sample of Table 3-24, below, shows an example of limitations for air carrier operations into specific airports during curfew hours.

Table 3-24. Sample of Airports and Special Provisions

Airport Location/Identifier	Aircraft M/M (enter N/A if not applicable)	Special Provisions and Limitations and Special Flightcrew Member Training
PKEK, Ekwok, Alaska	N/A	A station agent is required to give wind information to the flightcrews and the flightcrew must have completed the required approved training on the RBI Runway Reflectorization System.
DCA, Ronald Reagan Washington National Airport	Boeing 737-800	Limitations during the curfew hours. Boeing 737-800 Max Takeoff—159,000 pounds. Max Landing—137,600 pounds.
Tahiti Island, Society IS; PPT/NTAA	N/A	Approved as destination airport without an available alternate.

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6) Deviation from the requirement to obtain obstacle clearance data for takeoff. This OpSpec provides for the authorization of certain transport category airplanes a deviation from § 135.367(a)(3) or § 135.379(d). Guidance for this deviation authorization is contained in Volume 4, Chapter 3, Section 5, paragraph 4-599. To authorize this deviation, it must be listed in OpSpec A005 and the following statement must be selected in OpSpec C067:

> "The certificate holder is authorized to conduct takeoff operations using transport category airplanes weighing no more than 19,000 pounds and having a seating configuration of no more than 19 passenger seats without showing compliance with part 135, §§ 135.367(a)(3) and 135.379(d). This authorization is limited to only the following operations conducted:
>
> - At airports of 4,000 feet mean sea level or less field elevation;
> - On runways on which the available length of runway is equal to or greater than 150 percent of the runway required by part 135, § 135.367(a)(1) and (2) or part 135, § 135.379(c), as applicable; and
> - In weather conditions equal to or greater than straight-in Category I landing minimums for the runway being used."

OPSPEC C068—NOISE ABATEMENT DEPARTURE PROFILES (NADP) ITEM 7K.

A. General. C068 authorizes an operator to conduct Noise Abatement Departure Profiles (NADP) using aircraft with a maximum certificated gross takeoff weight (GTOW) of more than 75,000 pounds. Operators may use either or both of two standard NADPs as described in Advisory Circular (AC) 91-53, Noise Abatement Departure Profiles, current edition.

B. Compliance of Vertical Departure Profiles. Before authorizing this paragraph, the principal operations inspector (POI) must ensure that all airplane vertical departure profiles described in the certificate holder operations and/or training manuals comply with the minimums criteria established in AC 91-53 for NADPs (close-in and distant) before approving paragraph C068 for the certificate holder's OpSpecs. The certificate holder must not use any other departure profile (except as stated in 14 CFR part 91) that is not defined within the AC.

> NOTE: Use of part 91 procedures does not require OpSpecs authorization. If the operator does not meet the criteria established in AC 91-53, then OpSpec C068 will not be issued.

C. Proposed Exceptions to This OpSpec. Proposed exceptions to the criteria as stated in this OpSpec, which would be less limiting (less than 800 feet above field elevation (AFE)), must be addressed by the certificate holder to the certificate holder's POI for concurrence by the Flight Technologies and Procedures Division (AFS-400) of the Flight Standards Service (AFS).

D. Criteria for Close-In and Distant NADPs. AC 91-53, effective July 22, 1993, established minimum acceptable criteria for speed, thrust settings, airplane configurations, and the criteria for both the close-in and distant NADPs. These NADPs can be combined with preferential runway selection and flightpath techniques to minimize noise impact. For helicopter information, see the current edition of AC 91-66, Noise Abatement for Helicopters.

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NOTE: The distant departure profile requires an initiation of flaps/slats retraction prior to thrust cutback initiation with the thrust cutback initiation at an altitude of no less than 800 feet AFE. Configuration changes necessary to meet regulatory performance or operations requirements will not be affected by this procedure. For those airplanes that have a performance requirement to reduce takeoff flaps to an intermediate takeoff flap setting at 400 feet AFE or above, the next flap/slats retraction should be initiated at an altitude of no less than 800 feet AFE.

OPSPEC C070—AIRPORTS AUTHORIZED FOR SCHEDULED OPERATIONS.

A. General. Under 14 CFR part 119, § 119.49, the OpSpecs must prescribe the authorizations and limitations for each type of operation. All regular airports shall be listed in the OpSpecs of all operators conducting scheduled operations. This includes domestic operations, flag operations, and commuter operations. Provisional and refueling airports will be listed for 14 CFR part 121 domestic and flag operations:

- Airport name,
- Four-letter identifier of the airport,
- Airplanes authorized to use the airport, and
- A notation as to whether the airport is regular (R), refueling (F), or provisional (P) for each type of airplane authorized (refueling and provisional airports are not applicable to part 135 operators).

NOTE: If an airport is designated as provisional, the regular airport or airports for which it serves as a provisional airport must be annotated. (Except in unique situations, an airport should not be designated as a provisional airport if it is located more than 100 statute miles outside of the metropolitan area served by the regular airport.)

B. Requirements for List of Airports. If the operator provides a list of airports to be incorporated into C070, this list must provide the same type of information discussed in subparagraph A. This list must be annotated with the effective date of the listing.

C. List of Alternate Airports. C070 specifies that the operator must maintain a list of alternate airports that can be used. This list of alternates may be integrated into the list provided by the operator, if desired. The principal operations inspector (POI) should occasionally inspect the list of alternates to determine airport and airplane compatibility.

OPSPEC/LOA C071—AUTOPILOT MINIMUM USE ALTITUDES/HEIGHTS (MUH).

A. Applicability. OpSpec/LOA C071 is a mandatory authorization for certificate holders/operators who want to operate an autopilot below 500 feet above ground level (AGL), during takeoff or approach operations. Autopilot minimum use altitudes/heights (MUHs) in this OpSpec/LOA are applicable to 14 CFR parts 121, 125 (including 125 Letter of Deviation Authority (LODA) holders), and 135. OpSpec/LOA C071 will base its authorization on part 121, § 121.579; part 125, § 125.329; and part 135, § 135.93. OpSpec/LOA C071 does not replace or override OpSpec/LOA C059, Category II Instrument Approach and Landing Operations

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(Optional: 14 CFR Parts 121, 125, 125M, and 135 Operators) and Special Authorization Category I Instrument Approach and Landing Operations; OpSpec/LOA C060, Category (CAT) III Instrument Approach and Landing Operations; or OpSpec C061, Flight Control Guidance Systems For Automatic Landing Operations Other Than Categories II and III authorizations. The Administrator has authorization to require an altitude higher than the Airplane Flight Manual (AFM).

1) Approved Airplanes and Equipment. Table 1 lists the airplane configuration and the associated MUHs approved for each individual phase of flight. Airplanes with same M/M/S, but equipped with a different autopilot model/version and MUHs must be listed separately.

NOTE: This OpSpec/LOA uses "altitude/height" when referencing MUHs. AFMs use "altitude" or "height" in referencing MUH.

Table 1 – Approved Airplanes, Equipment and MUHs

Airplane Type (M/M/S)	Autopilot Manufacturer	Autopilot Model/Version	Minimum Use Heights/Altitudes (feet)		
			Takeoff/Initial Climb	Enroute	Approach

2) Determining MUHs. Specified MUHs and/or specified altitude/height losses published in the AFM will be the basis for this OpSpec/LOA. The following criteria will be used by this OpSpec/LOA to authorize any alternatives to these altitudes:

a) If the Flight Standardization Board (FSB) report recommends a higher altitude than the AFM, the higher FSB (Administrator) altitude will be the authorized altitude.

b) If an FSB report is not available, or does not address autopilot use altitudes, the lowest authorized altitude in the AFM will be used.

c) If an FSB report is not available and the AFM does not address autopilot use altitudes/heights, the lowest authorized altitude/height shall be the basic MUH for a given phase of flight.

3) Takeoff/Initial Climb and Go-Around/Missed Approach Engagement Height. The basic minimum engagement height for an autopilot on takeoff/initial climb and go-around/missed approach is 500 ft. The following exceptions to the 500 ft. basic engagement height are:

a) A higher altitude/height if doubling the "altitude/height loss" specified in the AFM is greater than 500 ft.,

b) A minimum engagement altitude is specified in the AFM, or

c) An altitude/height recommended by FSB, that is no lower than the AFM or double the "altitude/height loss."

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4) Enroute MUHs. The lowest MUH during enroute operations is 500 ft. above the ground, except as follows:

a) If doubling the "altitude/height loss" specified in the AFM results in an altitude/height greater than 500 ft., or

b) A greater altitude recommended by FSB.

5) Approach MUHs. The MUH during approach operations is no lower than 50 ft. below the lowest DA/H or MDA/H for the instrument procedure being flown, except as follows:

a) For autopilots with an AFM specified altitude/height loss for approach operations:

1. An altitude no lower than twice the specified altitude/height loss if greater than 50 ft. below the DA/H or MDA.

2. An altitude no lower than 50 ft. higher than the altitude loss specified in the AFM when:

a. Reported weather conditions are less than the basic VFR weather conditions in 14 CFR part 91, § 91.155,

b. Suitable visual references specified in § 91.175 have been established on the instrument approach procedure (IAP), and

c. The autopilot is coupled and receiving both lateral and vertical path references.

3. An altitude no lower than the greater of the altitude loss specified in the AFM or 50 ft. when:

a. Reported weather conditions are equal to or better than the basic VFR weather conditions in § 91.155, and

b. The autopilot is coupled and receiving both lateral and vertical path references.

4. A greater altitude recommended by FSB.

b) For autopilots with AFM specified approach altitude/height limitations, and the autopilot is coupled and receiving both lateral and vertical path references, the greater of:

1. The MUH specified for the coupled approach mode selected,

2. Fifty feet, or

3. An altitude recommended by FSB.

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c) For autopilots with an AFM specified negligible or zero altitude loss for an autopilot approach mode malfunction, and the autopilot is coupled and receiving both lateral and vertical path references, the greater of:

1. Fifty feet, or

2. An altitude specified by Administrator.

6) Types of Certificates. Airplanes with specified MUHs, specified negligible or zero height loss, or specified height loss will meet the following criteria:

a) Will be published in the AFM and the autopilot approved in accordance with an FAA type certificate (TC).

b) Will be published in an AFM supplement and issued as a Supplemental Type Certificate (STC).

7) AFM. The AFM and its supplements are the primary resource for establishing autopilot MUHs and issuing OpSpec/LOA C071. The AFM contains operational procedures and limitations approved by Aircraft Certification Offices (ACO).

8) Aircraft Evaluation Group (AEG). The principal operations inspector (POI) may use the AEG as a liaison between the PI and ACO during the AFM approval process when there are any questions regarding the AFM, FSB, or any other subject found in the list above.

9) Operator Produced Manuals. An Airplane Operations Manual (AOM), General Operations Manual (GOM), or Flightcrew Operating Manual (FCOM) is an operator published document. Although produced in accordance with parts 121, 125, and 135, use information directly from AFM to issue OpSpec/LOA C071. Do not solely use information from operator produced manuals to issue OpSpec/LOA C071. The AFM establishes the basis for the limitations, operational procedures, and performance sections published in these documents.

10) Manuals with Takeoff Procedures. Some AOMs, GOMs, or FCOMs contain procedures for systems not specifically designed with a takeoff or approach mode. Do not use these types of procedures as a basis for approving procedures and training programs that relate to achieving necessary takeoff or approach performance.

a) Principal inspectors (PI) approving, or who have approved, performance-related takeoff or approach procedures and training for systems not specifically designed with these modes should coordinate with the responsible AEG.

b) The AEG, in coordination with the responsible ACO, should be able to provide inputs on the procedure, and propose conditions and limitations, if any, as appropriate.

B. Training Program. Flightcrews must be trained in accordance with the certificate holder/operator's training program. Certificate holder/operator training programs should specifically address the following topics:

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1) Autopilot function, use, and limitations relative to approach and navigational source used.

2) Flight management system (FMS) function, use, and limitations relative to approach and navigational source used.

3) Procedures, modes, and configurations for flying an autopilot coupled approach.

4) Applicable monitoring and cross check requirements.

5) Suitable accuracy checks using control display unit (CDU) pages or flight instrument displays.

6) Display use, including deviation indications and display scaling.

7) Pilot Flying (PF) and pilot monitoring (PM) duties and callouts during: descent, approach, landing, and missed approach.

8) Understanding and interpretation of U.S. terminal procedures (e.g., departure procedures, Standard Terminal Arrival Routes (STAR), and IAPs).

9) Understanding, interpretation, and proper response to appropriate failure indications prior to initiation of an approach or during an approach.

10) Proper techniques to accomplish any special flight deck procedure specified by the certificate holder/operator for the approach type used or for the particular approach to be flown.

11) Any unique issues particular to a specific approach or family of approach procedures, airplane or FMS.

12) Proper techniques for executing a missed approach during any segment of the approach with the autopilot engaged or disengaged.

13) The flightcrew must have successfully completed training for Auto Flight Guidance System (AFGS) operations at the MUHs.

14) Understanding the limitations of navigational systems used for approach operations (e.g., Instrument Landing System (ILS) facility performance classification codes and their expected performance found in the Airport Facility Directory (AFD)).

C. Maintenance Program. The certificate holder/operator shall conduct operations in accordance with the airworthiness certification of the autopilot found in 14 CFR part 25, § 25.1329. The certificate holder/operator must also review the established maintenance and reliability program. The design of the program should ensure the equipment functions to the prescribed levels as delivered by the manufacturer, and include maintenance and preventative maintenance. Reference appropriate manuals for compliance with manufacturers' recommendations.

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OPSPEC C072—ENGINE-OUT DEPARTURE PROCEDURES WITH APPROVED 10 MINUTE TAKEOFF THRUST TIME LIMITS.

A. General. OpSpec C072 is optional and authorizes the certificate holder to use engine-out departure procedures (DPs) under the provisions of 14 CFR parts 121, 125, and/or 135, as appropriate, using airplanes that are equipped with powerplants that are approved 10-minute takeoff thrust time limits in accordance with the provisions of this guidance and OpSpec C070.

B. Takeoff Obstacle Climb Data in the Aircraft Flight Manual (AFM). The manufacturer's AFM must include takeoff obstacle climb data for use with a 10-minute, engine-out takeoff thrust time limit. This AFM data must be applied to the certificate holder's airplane engine-out takeoff obstacle analysis to provide critical obstacle clearance in the event of an engine failure during takeoff.

1) The FAA Transport Airplane Directorate and the Engine and Propeller Directorate have developed a procedure to certify and revise airplane manufacturers' AFMs to include takeoff obstacle climb data for use with a 10-minute, engine-out takeoff thrust time limit.

2) Previously, airplane operators' AFM takeoff data only provided data for a 5-minute takeoff thrust time limit. Airplane operators may obtain revised AFMs from airplane manufacturers for specific airplane/engine combinations. This AFM data may then be applied to the airplane operator's engine-out takeoff obstacle analysis to provide critical obstacle clearance in the event of an engine failure during takeoff.

C. Airplane Thrust Limit Restrictions. Because it is assumed that not all airplanes operated by an air carrier will have their AFMs revised for 10-minute takeoff thrust data, some operators' airplane takeoff thrust limits may be restricted to 5 minutes, while other airplanes in the same fleet may have the 10-minute restriction. Certain criteria must be addressed to inform the pilot which limit is applicable in the event of an engine failure during takeoff.

D. Engine-Out DPs. The certificate holder's approved operations manual and training program must include the engine-out DPs specifically designed to use the 10-minute takeoff thrust time limits. These DPs require that airplane operator's training programs, manuals, and procedures address the following areas:

1) Air carrier performance engineers' evaluation of engine-out DPs specifically designed to use the 10-minute takeoff thrust time limit.

2) An FAA AFM revision outlining operational procedures with specific airplane/engine lists that involve the 10-minute takeoff thrust time limit.

3) An FAA-approved dispatch or similar acceptable system that provides specific 10–minute, engine-out takeoff thrust departure procedure information to the pilot for the impending flight concerning the airport, aircraft weight, and departure path.

4) Information readily available to the pilot that indicates airplanes authorized for 10-minute takeoff thrust operations in the event of an engine failure on takeoff.

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5) Pilot knowledge of the designed engine-out departure procedure that uses the 10-minute takeoff thrust time limit.

6) Pilot training of the 10-minute takeoff thrust time limit departure flight procedure.

OPSPEC/MSPEC/LOA C073—VERTICAL NAVIGATION (VNAV) INSTRUMENT APPROACH PROCEDURES (IAP) USING MINIMUM DESCENT ALTITUDE (MDA) AS A DECISION ALTITUDE (DA)/DECISION HEIGHT (DH).

A. Applicability. OpSpec/MSpec/LOA C073 is applicable to all certificate holders/operators/program managers conducting airplane operations under 14 CFR parts 91, 91 subpart K (part 91K), 121, 125 (including part 125 Letter of Deviation Authority (LODA) holders), and 135. OpSpec/MSpec/LOA C073 will be used in conjunction with OpSpec/MSpec/LOA C052 (not applicable to part 91 operators). OpSpec/MSpec/LOA C073, in accordance with part 91, § 91.175, which states "unless otherwise authorized by the FAA," authorizes certificate holders/operators/program managers to use a minimum descent altitude (MDA) as a decision altitude (DA)/decision height (DH) using vertical navigation (VNAV).

B. VNAV Operating Concept. The VNAV operating concept is to fly approach procedures using VNAV guidance with a defined Vertical Path (VPATH) that provides a continuous descent final approach (CDFA). All 14 CFR part 97 Nonprecision Approach (NPA) straight-in IAPs may be flown using an MDA as a DA/DH.

NOTE: The use of MDA as a DA/DH does not ensure obstacle clearance from the MDA to the landing runway. Operators must see and avoid obstacles between the MDA and the runway when § 91.175 requirements are met and the approach is continued below the MDA for landing.

C. Airplane Type and Area Navigation (RNAV) System. OpSpec/MSpec/LOA C073, Table 1 will list the airplane type by make, model, and series (M/M/S) and the RNAV system by model and version.

1) The installed navigation equipment with VNAV must be certified and documented in accordance with FAA Advisory Circular (AC) 20-129, Airworthiness Approval of Vertical Navigation (VNAV) Systems for use in the U.S. National Airspace System (NAS) and Alaska, or AC 20-138 (revision A and later), Airworthiness Approval of Positioning and Navigation Systems. The types of certification include: type certificate (TC), amended TC, Supplemental Type Certificate (STC), and amended STC. An FAA equivalent approval may also include a Service Bulletin (SB) installation with approved data by the air carrier. The following are accepted ways to determine certification:

a) A statement in the FAA-approved Airplane Flight Manual (AFM) showing that the aircraft is equipped with a VNAV system certified in accordance with AC 20-129 or AC 20-138 (revision A and later).

NOTE: AC 20-129 applies only to barometric vertical navigation (baro-VNAV), while AC 20-138A applies only to Satellite-based Augmentation Systems (SBAS) and Ground-Based Augmentation Systems (GBAS). AC 20-129 was cancelled

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when guidance information for baro-VNAV, SBAS, and GBAS was combined into AC 20-138B and later versions.

b) An Aircraft Evaluation Group (AEG) verification that the applicant's aircraft and flight management system (FMS) meets AC 20-129 or AC 20-138 (revision A or later) criteria for VNAV operations. This may replace the requirement for an FAA-approved AFM statement or an applicable Flight Standardization Board (FSB) report.

2) The certificate holder/operator/program manager is required to provide documentation proving that airworthiness maintenance practices and procedures are being accomplished.

3) The certificate holder/operator/program manager must review and revise the minimum equipment list (MEL), as necessary, to address any pertinent VNAV or FMS operating requirements.

D. Public Vertically Guided IAP Assessment. Obstacle clearance surface (OCS) assessments protect the instrument procedure, including the missed approach. Glidepath Qualification Surface (GQS) assessments protect the landing area and are accomplished on part 97 IAPs with a published DA/DH. These approaches conform to the U.S. standard for Terminal Instrument Procedures (TERPS) and include instrument landing system (ILS), Ground Based Augmentation System (GBAS) Landing System (GLS), RNAV (Required Navigation Performance (RNP)), and RNAV Global Positioning System (GPS)) IAP with a localizer performance with vertical guidance (LPV) DA and/or lateral navigation (LNAV)/VNAV DA.

E. Visual Approach Slope Indicator (VASI)/Precision Approach Path Indicator (PAPI) Requirements. VASI/PAPI lighting systems are normally set at a descent angle of 3.0 degrees or with the electronic ILS glideslope (GS), if applicable. Variances to the normal requirements are issued by a Notice to Airmen (NOTAM) and permanently published in the Airport/Facility Directory. A note in the profile view will state if the VASI/PAPI descent angle is not coincident with the published VDA or GS. VASI/PAPI is referenced as Visual Glide Slope Indicator (VGSI) in the C073 template and subparagraph F3).

F. Authorized Approaches. The certificate holder/operator/program manager may fly all part 97 nonprecision straight-in IAPs listed as authorized in their OpSpec/MSpec/LOA C052, Table 1, columns 1 and 2 (C052 not applicable to part 91 operators), using an MDA as a DA/DH if the approach meets one of the following requirements and its subcomponents:

1) Serves a runway that has a published RNAV IAP ("RNAV (GPS)," "RNAV (RNP)," or "GPS" in the title) with a published LNAV/VNAV or RNP DA, and:

a) Has the exact published final approach course as the RNAV IAP.

b) Has a published VDA coincident with or higher than the the barometric vertical guidance GS on the published RNAV IAP.

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NOTE: A published VDA is not required when using the LNAV minima line on an RNAV approach that has a published LPV or LNAV/VNAV DA. Use the published GS. The VNAV path must be at or above all stepdown fixes.

c) Is selected from an approved and current database and the FMS displays a final approach Flight Path Angle (FPA) in tenths or hundredths. The displayed FPA may have a maximum difference of minus .04 from the IAP VDA or GS. The displayed FPA may always be rounded up to the next tenth. The range for a given FPA will be 2.9 to 3.0, 3.1 to 3.2, 3.2 to 3.3, 4.0 to 4.1, etc. See examples below.

1. For FMS FPAs displayed in tenths, 3.1 may be displayed for a published IAP with a VDA or GS of 3.10 to 3.14. An FPA of 3.2 may be displayed for a published IAP with a VDA of 3.10 to 3.20.

2. For FMS FPAs displayed in hundredths, 3.10 may be displayed if the FMS FPA does not match the published IAP with a VDA or GS of 3.10 to 3.14. An FPA of 3.20 may be displayed for a published IAP with a VDA of 3.10 to 3.20.

NOTE: Aircraft without an FMS FPA display meeting previous AC 20-129 criteria may have been approved for LNAV/VNAV approaches using baro-VNAV. Certificate holders/operators/program managers currently approved C073, using AC 20-129 criteria, may continue C073 operations.

2) Serves a runway that has a published ILS, GLS, or RNAV IAP with LPV minima and:

a) Has the exact published final approach course as the ILS, GLS, or RNAV IAP.

b) Has a published VDA or GS coincident with or higher than the GS on the published ILS, GLS, or RNAV IAP.

1. A published VDA is not required on a LOC-only approach when the ILS GS is out of service. Use the published GS. VNAV path must be at or above all stepdown fixes.

2. A published VDA is not required when using the LNAV minima line on an RNAV approach that has a published LPV or LNAV/VNAV DA. Use the published GS. VNAV path must be at or above all stepdown fixes.

c) Is selected from an approved and current database and the FMS displays a FPA in tenths or hundredths. The displayed FPA may have a maximum difference of minus .04 from the IAP VDA or GS. The displayed FPA may always be rounded up to the next tenth. The range for a given FPA will be 2.9 to 3.0, 3.1 to 3.2, 3.2 to 3.3, 4.0 to 4.1, etc. See examples below.

1. For FMS FPAs displayed in tenths, 3.1 may be displayed for a published IAP with a VDA or GS of 3.10 to 3.14. An FPA of 3.2 may be displayed for a published IAP with a VDA or GS of 3.10 to 3.20.

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2. For FMS FPAs displayed in hundredths, 3.10 may be displayed if the FMS FPA does not match the published IAP with a VDA or GS of 3.10 to 3.14. An FPA of 3.20 may be displayed for a published IAP with a VDA of 3.10 to 3.20.

NOTE: Aircraft without an FMS FPA display meeting previous AC 20-129 criteria may have been approved for LNAV/VNAV approaches using baro-VNAV. Certificate holders/operators/program managers currently approved C073, using AC 20-129 criteria, may continue C073 operations.

3) Serves a runway to an airport operating under 14 CFR part 139 with a VGSI.

a) The VDA or GS on the published final approach course must be coincident with or higher than the published VGSI descent angle.

b) The published final approach course is within plus or minus 4 degrees of the runway centerline (RCL) course.

G. Approach Design Requirements. The IAP must conform to the following procedural design:

1) Be published with a VDA or GS found in the profile view.

2) Have a VNAV path angle greater than 2.75 and less than 3.77 degrees for Category A, B, and C aircraft, and a VNAV path angle greater than 2.75 and less than 3.50 degrees for Category D/E aircraft.

3) Steeper descent paths may be authorized in accordance with the current edition of AC 120-29. Submit aircraft capability and supporting procedures to the Flight Technologies and Procedures Division (AFS-400) via the principal operations inspector (POI).

H. Database. Waypoint and procedure data must be retrievable from an approved and current database. Source data or database providers must provide for the specification of a VPATH that ensures operation above stepdown fixes between the threshold and the final approach fix (FAF).

NOTE: The procedure must be loaded from the database and cannot be modified.

I. Operational Considerations. The certificate holder/operator/program manager will comply with the following operational conditions:

1) They will follow the lateral flightpath to the missed approach point (MAP) before beginning any turns, unless air traffic control (ATC) has provided alternate climb-out instructions when executing a missed approach before the MAP. He or she will comply with published altitude restrictions between the FAF and the MAP and continue on or climb to the altitude specified in the missed approach procedure. He or she will ensure that the altitude at the published MAP is equal to or greater than the published MDA.

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2) They will not use an MDA as a DA/DH if the requirements specified in this guidance are not met. The certificate holder/operator/program manager may use a CDFA, but will begin the missed approach at an altitude above the MDA that will not allow the aircraft to descend below the MDA.

J. Flightcrew Training. Flightcrews must be trained in accordance with the certificate holder/operator/program manager's OpSpec/MSpec/LOA C052. Part 91 operators must be proficient with VNAV and the IAP to be flown.

OPSPEC C075—CAT I IFR LANDING MINIMUMS—CIRCLING APPROACHES.

A. General. OpSpec C075 is issued to operators who conduct 14 CFR part 121, 125, and 135 operations with fixed-wing airplanes. OpSpec C075 specifies the lowest minimums that can be used for Category (CAT) I circling approach maneuvers. It also provides special limitations and provisions for instrument approach procedures (IAP) at foreign airports. See Volume 4, Chapter 2 for more information on required training for circling maneuvers.

B. Circle-to-Land Maneuver. For the purpose of this OpSpec authorization, any operator issued this paragraph is authorized to conduct circle-to-land maneuvers. In any weather condition, a certificate holder that permits its pilots to accept a "circle to land" or a "circle to runway (runway number)" clearance from air traffic control (ATC) conducts circle-to-land maneuvers. The term "circle-to-land maneuver" includes the maneuver that is referenced in various regulations, publications, and documents as "circle to land maneuver," "circling," "circling maneuver," "circle," "circling approach," and "circling approach maneuver." With regard to pilots, "conducting" a circle-to-land maneuver means to act as the Pilot Flying (PF) when a circle-to-land maneuver is being conducted.

C. Operations Under IFR During Circle-to-Land. Aircraft operating under instrument flight rules (IFR) during all circle-to-land maneuvers are required to remain clear of clouds. If visual reference to the airport is lost while conducting a circle-to-land maneuver, the missed approach procedure specified for the applicable instrument approach must be followed, unless an alternate missed approach procedure is specified by ATC.

D. Documenting Maneuver Descriptions and Procedures. Each certificate holder who is issued OpSpec C075, and who is also required to have maneuver descriptions/procedures, must publish in its training manual, or must incorporate in its training manual by reference to another approved manual, a detailed description of the procedures used to conduct a circle to land maneuver. Pilots must conduct circle-to-land maneuvers using those procedures.

E. Provisions for Part 121 Certificate Holders to Perform Circle-to-Land Maneuvers. Part 121 certificate holders may conduct circle-to-land maneuvers under two separate provisions within OpSpec C075.

1) Part 121 Operations with Flight Training and Flight Checking. Part 121 certificate holders whose pilots have been trained and checked for the circling maneuver in accordance with part 121 appendices E and F, or in accordance with an Advanced Qualification Program (AQP), may conduct a circle-to-land maneuver:

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- At the published circling landing minimums for the instrument approach to be used; or
- At the minimums specified in the chart contained within the OpSpec paragraph, whichever is higher.

a) Appendix E does not require a part 121 certificate holder to train a second in command (SIC) in the circling maneuver if the certificate holder prohibits the SIC from performing/conducting (acting as PF) a circling maneuver. However, an SIC must be trained and can be checked in those functions specific to the circle-to-land maneuver that the SIC is required to perform while acting as pilot-not-flying (PNF).

b) Any pilot who possesses a pilot certificate restricting circling approaches to visual meteorological conditions (VMC) is not eligible to conduct circle-to-land maneuvers, except as provided in subparagraph E.

2) Part 121 Operations Without Flight Training and Flight Checking. Certificate holders conducting circle-to-land maneuvers without training and checking must use a minimum descent altitude (MDA) of 1,000 feet height above airport (HAA) or the MDA of the published circling landing minimums for the instrument approach to be used, whichever is higher. Certificate holders that conduct a circle-to-land maneuver under this provision remain under an IFR clearance and must comply with those procedures otherwise required for circle-to-land maneuvers. Certificate holders must ensure that pilots are familiar with those procedures. Part 121 pilots who have not been trained and checked for the circling maneuver in accordance with part 121 appendices E and F, or in accordance with an AQP, may conduct a circle-to-land maneuver when:

- The reported ceiling is at least 1,000 feet and the visibility is at least 3 statute miles (see part 121 appendices E and F); or
- The reported weather is at least equal to the published circling landing minimums for the instrument approach to be used, whichever is higher.

F. Circle-to-Land Maneuvers Regarding Part 125. Part 125 certificate holders are not permitted to conduct circle-to-land maneuvers in airplanes without their pilots having been checked in that maneuver.

1) Part 125, § 125.291(b) States: "The IAP or procedures must include at least one straight in approach, one circling approach, and one missed approach. Each type of approach procedure demonstrated must be conducted to published minimums for that procedure."

2) Required Part 125 SIC. The SIC must complete the annual competency check required by § 125.287. The circle-to-land maneuver is not part of the § 125.287 competency check. However, each SIC is evaluated for flightcrew coordination.

3) PNF Duties. Each crewmember can be checked in those functions specific to the circle-to-land maneuver that the pilot is required to perform while acting as PNF.

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G. Circle-to-Land Maneuvers Regarding Part 135. Part 135 certificate holders are not permitted to conduct circle-to-land maneuvers in aircraft without their pilots having been checked in that maneuver. (Helicopter IFR circle-to-land maneuvers are authorized in OpSpec H118.)

1) Part 135, § 135.297.

a) Section 135.297(a) does not allow "any person to serve, as pilot in command of an aircraft under IFR unless, since the beginning of the 6th calendar month before that service, that pilot has passed an instrument proficiency check under this section…."

b) Section 135.297(b) requires, "The IAP or procedures must include at least one straight in approach, one circling approach, and one missed approach. Each type of approach procedure demonstrated must be conducted to published minimums for that procedure." The requirement to demonstrate a circle-to-land maneuver applies to both airplanes and helicopters.

c) Part 135 single-pilot and single pilot-in-command (PIC) operators are not required to have training programs. However, the circle-to-land maneuver must be successfully demonstrated in every § 135.297 instrument proficiency check (IPC).

2) In accordance with § 135.293, a part 135 IFR operator must ensure that each IFR SIC has an annual competency check. In accordance with Volume 3, Chapter 19, Section 7, paragraph 3-1279, an SIC need not be evaluated in "circling approaches" when an operator's procedures restrict an SIC from conducting (acting as PF) this event in revenue service. However, each required IFR SIC is evaluated for flightcrew coordination.

3) PNF duties. Each pilot must be trained and can be checked in those functions specific to the circle-to-land maneuver that the pilot is required to perform while acting as PNF.

4) The standard of competence for part 135 IPCs is specified in § 135.293(d). This standard is also specified in the Airline Transport Pilot and Aircraft Type Rating Practical Test Standards for Airplane (FAA S-8081-5) and the Instrument Rating Practical Test Standards for Airplane Helicopter Powered Lift (FAA S-8081-4).

H. Helicopter Authorization. For helicopter authorization, see OpSpec H118.

OPSPEC/MSPEC C076—CAT I IFR LANDING MINIMUMS—CONTACT APPROACHES. The certificate holder must not use any instrument flight rules (IFR) Category (CAT) I landing minimum lower than that prescribed by the applicable published instrument approach procedures (IAP). The IFR landing minimums prescribed in paragraph C052 for nonprecision and precision approaches are the lowest CAT I minimums authorized for use at any airport. For helicopter authorization, see OpSpec H119.

OPSPEC C077—TERMINAL FLIGHT RULES LIMITATIONS AND PROVISIONS.

A. OpSpec C077. OpSpec C077 is an optional authorization that is applicable to all operators conducting operations under the provisions for 14 CFR part 135 on-demand turbojet, all 14 CFR part 121 certificate holders, and 14 CFR part 129 foreign air carriers (except for

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rotorcraft operations). Information on C077 for part 129 foreign air carriers is contained in Volume 12, Chapter 2, Section 5 of this handbook. Information regarding C077 contained in this section applies only to certificate holders conducting part 121 and part 135 operations.

B. Charted Visual Flight Procedure (CVFP). OpSpec C077 provides for operations under a CVFP unless operating under the provisions of 14 CFR part 93, Special Federal Aviation Regulation (SFAR) 50-2. The minimums in the CVFP may not be lower than those required by part 121, § 121.649 or part 135, § 135.205, as applicable.

C. Visual Flight Rules (VFR) Weather Condition Minimums. The VFR weather conditions specified in part 91, § 91.155 may be used. However, where § 91.155(c) and (d) refers to § 91.157, the minimums set forth in § 121.649 or § 135.205, as applicable, take precedence for operations conducted under part 121 or 135.

D. Subparagraph c.(2)(b). Uncontrolled airports can be in either controlled or uncontrolled airspace. As long as the provisions listed in this subparagraph are met, the operator may operate VFR in uncontrolled airspace in the terminal area in accordance with this OpSpec. For the purpose of direct communication at uncontrolled airports, a common traffic advisory frequency (CTAF) may be utilized as long as it is associated with an air/ground communication facility. The CTAF may be an Aeronautical Advisory Station (UNICOM), Aeronautical Multicom System (MULTICOM), Flight Service Station (FSS), or a tower frequency. Acceptable air/ground communication is a demonstrated reliable means to directly relay traffic advisories (TA) and information that is pertinent to conditions on and around the landing surface during the terminal phase of flight. For example, if the certificate holder adequately demonstrates to the principal operations inspector (POI) its reliability to relay essential information, via radio or another type of communication, through an agent located near the landing surface, it is considered to be a “demonstrated reliable means” of communication.

E. Subparagraph c.(3). In lieu of a published CVFP, an authorized visual guidance procedure such as the use of RNAV Visual Flight Procedures (RVFP) is highly recommended for all terminal VFR departures/arrivals that fall under this OpSpec. The proximity of obstacles to the departure flightpath, the visibility, the accuracy of the guidance and control systems, the pilot’s proficiency, and the operator’s training should determine the size of the area in which obstacle clearance or avoidance must be considered. The POI should also take into account the airplane performance data described in Volume 4, Chapter 3 of this handbook.

F. Terminal Departures VFR. At airports that do not have an operating air traffic control (ATC) facility, subparagraph d. of C077 allows a flightcrew on an instrument flight route (IFR) flight to take off and depart under VFR without obtaining an IFR clearance, provided all of the conditions and limitations of C077 subparagraph d.(1) through d.(4) are met. The flightcrew must obtain an IFR clearance as soon as it is practical after takeoff, but under no circumstances farther than 50 nautical miles (NM) from the departure airport. In the case where a certificate holder is issued OpSpec B051 for VFR en route operations in conjunction with C077, the flightcrew may apply the provisions B051, where applicable, in lieu of obtaining an IFR clearance.

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G. Terminal Departure IFR Requirements in Subparagraph e. This subparagraph allows the flightcrew to accept an IFR clearance that contains a takeoff and climb in VFR conditions to a specified point in the clearance. The certificate holder must ensure that the obstacle performance requirements are met.

H. Special Limitations and Provisions for All VFR Operations. C077 subparagraph f. provides special limitations and provisions for all VFR operations. This subparagraph is applicable to all the provisions and limitations of C077.

1) Subparagraph f.(1). In order for the certificate holder or operator to conduct terminal VFR operations under C077, they must have in place either a procedure or program which can identify obstacles and the airport obstacle data. Further, they must ensure use of that information by the flightcrew.

2) Subparagraph f.(2). Although each subparagraph has specific details and minimums regarding VFR, the requirements for sufficient visibility to identify and avoid obstacles is required for all VFR operations.

OPSPEC C078/C079—IFR LOWER-THAN-STANDARD TAKEOFF MINIMA, 14 CFR PART 121 AIRPLANE OPERATIONS—ALL AIRPORTS.

A. General. C078 and C079 are optional for authorizing lower-than-standard takeoff minimums. The authority for lower-than-standard takeoff minimums is contained in 14 CFR part 91, § 91.1039(e); 14 CFR part 121, § 121.651(a)(1); 14 CFR part 125, § 125.381(a)(1); and 14 CFR part 135, § 135.225(g) and (h). When appropriate, principal operations inspectors (POI) will issue OpSpec C078 to part 121 or 125 operators, LOA C078 to part 125M operators, OpSpec C079 to part 135 operators, and MSpec C079 to part 91 subpart K (part 91K) operators. These authorizations contain specific criteria regarding pilots, training and qualifications, aircraft, and airports when lower-than-standard takeoff minimums are used.

NOTE: C078 and C079 are applicable to all airports utilized by the operator.

NOTE: There may be additional limitations and guidance for specific airplanes in Flight Standardization Board (FSB) reports, which are binding upon all parts 121 and 135 operators.

NOTE: For the purpose of this OpSpec/MSpec/LOA, the word “sensor” is used to indicate all approved Runway Visual Range (RVR) systems.

B. Lower-Than-Standard Takeoff Minimums for Part 121 or 125. C078 allows for lower-than-standard takeoff minimums for operators conducting operations under part 121 or 125 (including Letter of Deviation Authority (LODA) holders operating under part 125) with the following limitations and provisions:

1) Takeoff operations without runway centerline (RCL) lighting are not allowed at less than RVR 1000 (300 meters),

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2) Takeoff operations using only visual references are not allowed at less than RVR 500 (150 meters),

3) Takeoff operations with visibility down to, but not lower than, RVR 300 (75 meters) using approved Head-Up Display (HUD) takeoff guidance systems,

4) Authorization for pilot assessment of touchdown zone (TDZ) RVR for takeoff when the installed RVR sensor is inoperative (see subparagraph H), and

5) Lower-than-standard takeoff minimums include paragraphs addressing takeoffs down to RVR 1600 (500 meters), RVR 1200 (350 meters), RVR 1000 (300 meters), RVR 600 (175 meters), and RVR 500 (150 meters).

C. Lower-Than-Standard Takeoff Minimums for Part 91K or 135. C079 allows for lower-than-standard takeoff minimums for operators conducting operations under parts 91K and 135 with the following limitations and provisions:

1) Lower-than-standard takeoff minimums down to RVR 1600 (500 meters), RVR 1200 (350 meters), RVR 1000 (300 meters), or RVR 500 (150 meters) for part 135 domestic operations. Section 135.225(f) restricts part 135 domestic operators to 1-mile visibility for takeoffs at foreign or military airports unless approved in the certificate holder's OpSpecs.

2) Lower-than-standard takeoff minimums down to RVR 1600 (500 meters), RVR 1200 (350 meters), RVR 1000 (300 meters), or RVR 600 (175 meters) for part 91K operations at all airports.

3) Each aircraft must be operated with a flightcrew consisting of at least two pilots. Use of an autopilot in lieu of a required second in command (SIC) is prohibited.

4) There are some circumstances in which an Operations inspector for a part 121 or 135 air carrier may consider issuing this OpSpec for airplanes certificated under Civil Air Regulations (CAR) 3 or 14 CFR part 23. Those airplanes have to meet the 14 CFR part 25 avionics equipment requirements necessary to hold a C079 authorization. The following statement becomes binding on such aircraft and must be added using the "Remarks" paragraph selection for C079 to be issued:

a) Each pilot station must have operational equipment that displays a reliable indication of the following:

1. Aircraft pitch and bank information (attitude) (from a gyroscopic or attitude heading reference system source);

2. Aircraft heading (from a gyroscopic or magnetic direction indicating source);

3. Vertical Speed (VS);

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4. Airspeed; and

5. Altitude.

b) Each pilot station must have an independent source of power for the equipment required by subparagraph C4)a)*1* and C4)a)*2*.

5) Each pilot in command (PIC) must have at least 100 hours of flight time as PIC in the specific make and model airplane used under this authorization. Each PIC must have satisfactorily completed the operator's approved training program (as applicable) and a qualification check for the minimums approved by this authorization. This includes the methods to be used to ensure compliance with the aircraft performance limitations during takeoffs with RVR less than RVR 1000 (300 meters), when applicable.

6) Any part 91K or 135 SIC authorized to manipulate the flight controls during lower-than-standard takeoff minimums must have at least 100 hours of flight time as a pilot in the specific make and model airplane, and must have satisfactorily completed the operator's approved training program and qualifications check for those minimums, when applicable.

7) For takeoffs when the RVR is less than RVR 1000 (300 meters), each airplane used must be operated at a takeoff weight that permits the airplane to achieve the performance equivalent to the takeoff performance specified in § 135.367 (for reciprocating-powered airplanes), § 135.379 (for turbine-powered airplanes), or § 135.398 (for commuter category airplanes).

D. Lower-Than-Standard Takeoff Minimums Using HUD Systems. C078 and C079 provide for the authorization of lower-than-standard takeoff minimums using HUD systems with certain limitations and provisions. Although RVR 500 (150 meters) is the lowest authorized minimum when the takeoff is based upon outside visual references (with the exception of operations conducted under part 91K and operations to foreign or military airports conducted under part 135), RVR 300 (75 meters) is the lowest authorized minimum when using an HUD system on a runway that has been determined to be served by a localizer providing Category (CAT) III rollout guidance, as indicated by a III/E/4 facility classification. As the HUD systems use the localizer signal for steering commands, the localizer needs to be III/E/4 certified (III=CAT III, E=accurate to at least 2,000 feet from the departure end of the runway, and 4=4,000 hours mean time between failures for the localizer signal). A listing of runways with III/E/4 localizer classifications is available on the Flight Operations Branch (AFS-410) Web site at http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs400/afs410.

E. Lower-Than-Standard Takeoff Minimums for TDZ RVR. C078 and C079 authorize lower-than-standard takeoff minimums for TDZ RVR 1600 (500 meters). If TDZ RVR is inoperative, mid-point RVR may substitute for TDZ RVR. Below RVR 1600, two operating RVR sensors are required and controlling. If more than two RVR sensors are installed, all operating RVR sensors are controlling, with the exception of a fourth, far-end RVR sensor that may be installed on extremely long runways. A far-end RVR sensor is advisory only. C078 and C079 allow the selection of the following lower-than-standard takeoff minimums based on flightcrew training, checking, and allowed authorizations:

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1) TDZ RVR 1200 (350 meters), mid-point (if installed) RVR 1200 (350 meters), and rollout RVR 1000 (300 meters).

2) TDZ, mid-point (if installed), and rollout RVR 1000 (300 meters).

3) TDZ, mid-point (if installed), and rollout RVR 600 (175 meters) (part 91K).

4) TDZ, mid-point (if installed), and rollout RVR 500 (150 meters) (part 121, 125, or 135). Part 91K program managers are limited by regulation to RVR 600 (175 meters) takeoff authorization without an exemption. The RVR 500 (150 meters) and RVR 300 (75 meters) authorization will not be available in the part 91K MSpec C079. Tables 3-24A, Runway Equipment Requirements for Lower-Than-Standard Takeoff Minimums, and 3-26A, Runway Equipment Requirements for Lower-Than-Standard Takeoff Minimums, provide examples of tables that may be included in flightcrew manuals, such as the Flight Operations Manual (FOM).

Table 3-24A. Runway Equipment Requirements for Lower-Than-Standard Takeoff Minimums

Serviceable Runway Visual Aid Required	Lowest Allowable Takeoff Minimum Authorization
If an RVR sensor is not available:	
Adequate visual reference, *or* any *one* of the following: HIRL/CLL/RCLM	1/4 sm (400 m)
If an RVR sensor is available:	Note: Below RVR 1600, two operating RVR sensors are required. All operating RVR sensors are controlling (except per the note below for far-end sensors).
Adequate visual reference, *or* any *one* of the following: HIRL/CLL/RCLM	RVR 1600 (500 m)/NR/NR Mid-point can substitute for an unavailable touchdown.
Day: CLL or RCLM or HIRL Night: CLL or HIRL	RVR 1200 (350 m)/1200 (350 m)/1000 (300 m)
RCLM and HIRL, or CLL	RVR 1000/1000/1000 (300 m)
HIRL and CLL	RVR 600/600/600 (175 m) or RVR 500/500/500 (150 m)
With an approved HUD takeoff guidance system, HIRL, and CLL	RVR 300/300/300 (75 m)

NOTE: Extremely long runways (e.g., DEN 16R) utilize four RVR sensors (i.e., TDZ, mid, rollout, and far-end). When a fourth far-end RVR value is reported, it is not controlling and is not to be used as one of the two required operative RVR sensors.

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Table 3-26A. Runway Equipment Requirements for Lower-Than-Standard Takeoff Minimums

Runways with 1 RVR Sensor		
RCLM or CLL or HIRL or Adequate Visual Reference	Standard	
TDZ RVR 16 or 1/4	3 & 4 Eng	1 & 2 Eng
	RVR 24 or 1/2	RVR 50 or 1

Runways with 2 RVR Sensors						
Both RVR sensors are required and controlling.				RCLM or CLL or HIRL or Adequate Visual Reference	Standard	
HUD & CLL & HIRL	CLL & HIRL	CLL, or RCLM & HIRL	RCLM (day only) or CLL or HIRL			
TDZ RVR 3 Rollout RVR 3	TDZ RVR 5 Rollout RVR 5	TDZ RVR 10 Rollout RVR 10	TDZ RVR 12 Rollout RVR 10	TDZ RVR 16 or 1/4	3 & 4 Eng	1 & 2 Eng
					RVR 24 or 1/2	RVR 50 or 1

Runways with 3 RVR Sensors						
Two operating RVR sensors are required. All operating RVR sensors are controlling.				RCLM or CLL or HIRL or Adequate Visual Reference	Standard	
HUD & CLL & HIRL	CLL & HIRL	CLL, or RCLM & HIRL	RCLM (day only) or CLL or HIRL			
TDZ RVR 3 Mid RVR 3 Rollout RVR 3	TDZ RVR 5 Mid RVR 5 Rollout RVR 5	TDZ RVR 10 Mid RVR 10 Rollout RVR 10	TDZ RVR 12 Mid RVR 12 Rollout RVR 10	TDZ RVR 16 (if TDZ inop) Mid RVR 16 or 1/4	3 & 4 Eng	1 & 2 Eng
					RVR 24 or 1/2	RVR 50 or 1

Runways with 4 RVR Sensors						
Two RVR sensors below must be operational. All operating RVR sensors are controlling except far end, which is advisory only.				RCLM or CLL or HIRL or Adequate Visual Reference	Standard	
HUD & CLL & HIRL	CLL & HIRL	CLL, or RCLM & HIRL	RCLM (day only) or CLL or HIRL			
TDZ RVR 3 Mid RVR 3 Rollout RVR 3	TDZ RVR 5 Mid RVR 5 Rollout RVR 5	TDZ RVR 10 Mid RVR 10 Rollout RVR 10	TDZ RVR 12 Mid RVR 12 Rollout RVR 10	TDZ RVR 16 (if TDZ inop) Mid RVR 16 or 1/4	3 & 4 Eng	1 & 2 Eng
					RVR 24 or 1/2	RVR 50 or 1

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F. RVR Applicability to Lower-Than-Standard Takeoff Minimums.

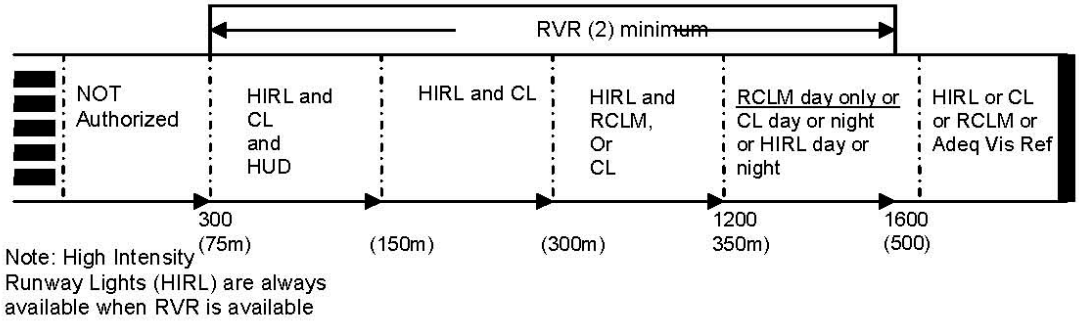
1) Other than the authorization for RVR 1600 (500 meters), which permits use of Runway Visibility Values (RVV) under the appropriate authorization for an operator issued C078 or C079, all the authorizations in C078 and C079 are based on RVR reports that are generated by RVR sensors.

a) "Controlling" RVR means that RVR reports are used to determine operating minimums whenever operating minimums are specified in terms of RVR, and that RVR reports are available for the runway being used.

b) All CAT I operating minimums below one-half statute mile (RVR 2400) and all CAT II and III operating minimums are based on RVR. The use of visibility is prohibited because the reported visibility may not represent the seeing-conditions on the runway. (See Volume 4, Chapter 2, Section 3, paragraphs 4-208 and 4-213.)

c) All takeoff minimums below 1/4 statue mile visibility require RVR values, and the use of RVV for takeoff clearances is prohibited. In these situations, RVR is said to be "controlling"; that is, RVR must be operating and reporting (by requirement, High Intensity Runway Lights (HIRL) also must be working) and at a value equal to or greater than the lowest authorized RVR for the particular clearance. Takeoffs or approaches and landings in these conditions require actual RVR values to be authorized by the controlling agency.

C078 Lower Than Standard Takeoff Visibility Quick Reference Chart



NOTE: The diagram above is intended as a memory aid intended to help in remembering the various RVR breakdowns and associated requirements within each grouping. For example, two RVR sensors are required for all takeoffs at RVR values less than 1600 (500 meters) (shown above the runway).

2) The following requirements and restrictions apply to the use of RVR values below 1600 feet (500 meters) (in the C078 and C079 templates, simplified wording is used):

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a) Where only two RVR sensors are installed, the TDZ and rollout RVR sensors are both required and controlling.

b) Where three RVR sensors are installed on the runway to be used:

1. The TDZ, mid, and rollout RVR reports are controlling for all operations.

2. The failure of any one RVR will not affect operations provided the remaining two RVR sensors are reporting values at or above the appropriate minimums in this subparagraph.

NOTE: Extremely long runways (e.g., DEN 16R) utilize four RVR sensors (e.g., TDZ, mid, rollout, and far-end). When a fourth far-end RVR value is reported, it is not controlling and is not to be used as one of the two required operative RVR systems.

G. Flightcrew Training and Qualification Requirements. If an operator requests authorization to conduct lower-than-standard takeoffs, the flightcrew must be trained and qualified in their respective crew positions for the applicable takeoff minimums requested. The PIC is ultimately responsible for ensuring that the flightcrew members are appropriately qualified before conducting an authorized lower-than-standard takeoff.

1) Individual pilots must be trained in their respective crew positions (parts 91K, 121, and 135) and checked (parts 91K, 121, 125, and 135) in takeoffs using the appropriate requested minimums before being approved for conducting such takeoffs.

2) Pilot qualification must consist of an initial check that includes one takeoff at the lowest requested takeoff minimums (simulator or simulated in the aircraft with a view limiting device). It is also required during each pilot's recurrent qualification cycle.

3) Additional crew qualification for a check airman or a qualified FAA inspector, beyond that shown herein for regular flightcrews, is not required.

4) POIs must ensure that operators requesting lower-than-standard takeoff minimums provide appropriate training for flightcrews, including the procedures listed below, as appropriate:

- Confirming the takeoff runway alignment (Safety Alert for Operators (SAFO) 07003 includes guidance and/or advisory information about acceptable techniques);
- Rejected takeoffs in a low-visibility environment;
- Low-visibility instrument takeoff cross-check priorities;
- Engine failure during critical phases of takeoff in low visibility;
- Acceleration and climb disorientation factors and illusions;
- Use of HUD takeoff guidance systems (when installed in aircraft for RVR 300 authorization only);

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- Taxiing in a low visibility environment with emphasis on preventing runway incursion, and Surface Movement Guidance and Control System (SMGCS) training Advisory Circular (AC) 120-57, Surface Movement Guidance and Control System, current edition, includes guidance and/or advisory information about acceptable techniques;
- Taxiway critical areas;
- Crew coordination and planning;
- Required ground-based visual aids (such as stop bars and taxi holding position lights);
- Required ground-based electronic aids (such as instrument landing system (ILS) and transmissometers); and
- Determination of takeoff alternate airports.

H. Pilot Assessment of Instrument Flight Rules (IFR) Lower-Than-Standard Takeoff Minimums. C078 and C079 allow pilots to make an assessment of the touchdown RVR when the TDZ RVR sensor is inoperative, is not reported, or the pilot determines that the reported TDZ RVR report is in error. This assessment, when equal to or greater than the TDZ RVR requirement for takeoffs made with only outside visual references, or for takeoffs using HUD systems, can be used for takeoff when mid and rollout RVR sensors are available, and are equal to or greater than the required minimums. To be authorized for this pilot assessment, each operator must meet the following requirements:

1) For each specific runway for which the assessment is allowed, have an FAA-approved procedure for assessing RVR values that includes:

a) Identification of actual distances between runway lights (from 160 feet to 200 feet) on the particular runway for the takeoff in question.

b) Identification of an appropriate number and type of runway lights that matches the particular RVR minimums or required visual distance for the takeoff being made.

c) Identification of runway markings of known spacing with corresponding distances that must be visible to the pilot from the flight deck when the aircraft is in the takeoff position.

2) This procedure must include the effects of variability of runway light intensity settings and changing ambient lighting (day or night). Flightcrew training and checking must assess knowledge of this specific subject area by requiring crews to relate runway markings and number of lights visible to specific known distances.

3) For each type of runway where an assessment is allowed, have an FAA-approved procedure for describing the actions to be taken when local visibility conditions, as determined by the pilot, indicate that a significantly different visibility exists from that reported for the TDZ recorded by RVR sensor. The procedure will address types of runway markings, runway lights and distances between lights, and any other runway environmental cues that permit precise distance evaluations by flightcrews.

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4) For each runway where an assessment is allowed, have an FAA-approved procedure for coordinating release with air traffic control (ATC) and dispatch for part 121 operations.

5) For part 135 air carriers, the operator must have an FAA-approved procedure for conducting pilot assessment of takeoff visibility contained in its manual, as defined by § 135.21. That procedure will cover the following requirements:

a) How to determine actual visibility measured in number and type of runway lights that are seen, or markings of known spacing that are visible to the pilot when viewed from the cockpit in the takeoff position.

b) How all flightcrew members will be trained and checked in the procedures used to determine visibilities, as described above.

6) Have FAA-approved procedures for RVR assessment, for determining that TDZ RVR sensor reports are in error, and for takeoff and flight release coordination in operating manuals and in such materials that are readily available to the flightcrew in the cockpit.

7) Have an FAA-approved training and validation program of the FAA-approved procedures for all flightcrews authorized to participate. No flightcrew member may participate in these operations until this portion of the approved training program is accomplished satisfactorily.

OPSPEC C080—TERMINAL AREA IFR OPERATIONS IN CLASS G AIRSPACE AND AT AIRPORTS WITHOUT AN OPERATING CONTROL TOWER FOR SCHEDULED PASSENGER OPERATIONS. C080 is used to authorize terminal-area instrument flight rules (IFR) operations for scheduled passenger operations in Class G airspace or at airports without an operating control tower.

A. Authorizing Scheduled Terminal-Area IFR Operations in Class G Airspace. Before authorizing scheduled terminal-area IFR operations in Class G airspace, or at airports without an operating control tower, the principal operations inspector (POI) must ensure the operator has sufficient content in its manual(s) and training program to cover common traffic advisory frequency (CTAF) and pilot controlled lighting (PCL) information and procedures. The POI must also obtain and list the following information in C080.

1) Names of airports.

2) Sources of weather information to be used by flightcrews (see Volume 3, Chapter 26, Section 3; and Volume 3, Chapter 2).

3) Source of traffic advisories (TA) and airport advisories.

B. Sources of TAs and Airport Advisories. Certificate holders may be authorized to use any two-way radio source of air TA information listed in the Aeronautical Information Manual (AIM) (for operations in U.S. airspace) or equivalent Aeronautical Information Publication (AIP) (for foreign operations).

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1) These sources include CTAFs, Aeronautical Advisory Stations (UNICOM), Aeronautical Multicom Stations (MULTICOM), and Flight Service Stations (FSS).

2) If an air TA source is also suitable for determining the status of airport services and facilities, it is the only source which needs to be listed in C080.

3) When airport services and facilities information is on a different frequency, both sources should be listed in C080.

4) In cases where two sources are listed at the same airport, inspectors must ensure the operator's manuals have procedures that require pilots to continuously monitor and use the TA frequency when operating within 10 nautical miles (NM) of the airport. The procedures should require communication concerning airport services and facilities to be completed while more than 10 NM from the airport.

5) At some airports, no public use frequencies may be available. In those cases, a certificate holder must arrange for radio communication of essential information including surveillance of local or transient aircraft operations by ground personnel. Ground personnel, who operate a company radio for airport status and traffic advisory, must be able to view airspace around the airport.

6) OpSpec C080 may need to be issued to the certificate holder authorized scheduled passenger operations in order for the C081 to be issued.

C. Part 125 Operators. C080 is not applicable for part 125 operators.

OPSPEC/MSPEC/LOA C081—SPECIAL INSTRUMENT AND RNAV VISUAL FLIGHT PROCEDURES.

A. Applicability. OpSpec/MSpec/LOA C081 authorizes special non-14 CFR part 97 instrument approach procedures (IAP) and departure procedures (DP). It also authorizes the use of special Standard Terminal Arrivals (STAR) and Area Navigation (RNAV) Visual Flight Procedure (RVFP) operations. C081 applies to all certificate holders/operators/program managers conducting airplane operations under 14 CFR parts 91 (including part 91K), 121, 121/135, 125 (including 125 Letter of Deviation Authority (LODA) holders), and 135. For 14 CFR part 129 foreign air carriers, the guidance for OpSpec C381 is in Volume 12, Chapter 2, Section 5.

B. Helicopter Authorization. Guidance for submitting and processing "special" helicopter instrument procedures will use this guidance. Use OpSpec/LOA H122 to issue a "special" to parts 91, 91K, 121/135, and 135 operators.

C. Responsibilities. The Flight Technologies and Procedures Division (AFS-400) provides policy, oversees approved procedure developers, and approves special instrument procedures and RVFPs that are authorized for specific certificate holders/program managers/operators by their principal operations inspector (POI). The regional Flight Standards division (RFSD) NextGen Branch (RNGB/AXX-220) is the field focal point that assists in the design, distribution, and coordination of special instrument procedures and RVFPs within their

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regional geographic boundaries. POIs authorize the use of approved special instrument procedures and/or RVFPs via OpSpec/MSpec/LOA, as appropriate.

D. Program Tracking and Reporting Subsystem (PTRS) Activity Codes.

1) PTRS Activity Codes—Initial Issuance.

- Special Authorization: 1404.
- Approval of Special Navigation Procedures: 1410.
- Special Performance Authorizations: 1441.

2) PTRS Activity Codes—Future Actions or Surveillance.

- Surveillance Operator Facility: 1635.
- Surveillance Miscellaneous Executive Corporate Operator: 1682.
- Surveillance Miscellaneous 14 CFR Part 125 Deviation Holder: 1683.

E. Background. Instrument Flight Procedures (IFP) not published in the Federal Register (FR) are identified as "special procedures." Any instrument procedure serving a private-use, permission-required airport/heliport must be a special procedure. Special procedures may also be developed to lower approach and/or departure minimums. Aircraft equipment/avionics, performance standards, and/or crew training may be used to mitigate factors that would require higher minimums. Specials may also require the use of landing aids, communications, or weather services not available for public use. For more information, refer to the current edition of FAA Order 8260.60, Special Instrument Procedures.

F. Development of a New Special or RVFP. Refer to Order 8260.60 for developing special instrument procedures and the current edition of FAA Order 8260.55, Special Area Navigation Visual Flight Procedures, for information on developing RVFPs.

1) Specials are typically developed and/or maintained by either an FAA-approved third party or by the FAA via a reimbursable agreement. The cost of the reimbursable agreement may be waived or reduced if the special is determined to be in the public's interest. Development and approval will take 12 to 24 months or more in most cases.

2) RVFPs are developed by the operator with oversight by the FAA Flight Standards Service (AFS).

NOTE: A list of approved specials and RVFPs is available at https://nfdc.faa.gov/xwiki/bin/view/NFDC/Flight+Procedures.

G. Authorize an Approved Special or RVFP. The operator requesting the procedure must submit a written request, via the POI, to the RNGB in the region responsible for the physical landing area. This request does not require a memo from the POI. The RNGB will then provide the POI with the appropriate information. For example, to authorize a special approach procedure into Aspen, CO, contact the RNGB (in this case ANM-220) to get the required information.

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NOTE: The RNGB, at their discretion, may inform the POI that RNGB concurrence is required (typically for procedures with more complex performance, equipment, or training requirements).

1) FAA 8260 Forms. The RNGB will email the POI the appropriate 8260 forms for each procedure. The RNGB will include a form that defines the procedure for charting purposes and a form that describes any applicable operator requirements (if required). These forms are:

a) For new approaches, FAA Form 8260-7A, Special Instrument Approach Procedure, defines the procedure, and FAA Form 8260-7B, Special Instrument Procedure Authorization, defines the operator requirements, with FAA Form 8260-7B requiring POI and operator signatures.

b) For older approaches, FAA Form 8260-7 defines the procedure, and FAA Form 8260-10, Standard Instrument Approach Procedure (Continuation), defines the operator requirements, with FAA Form 8260-7 requiring POI and operator signatures.

c) For departures, FAA Form 8260-15A/B/C, Takeoff Minimums and Obstacle Departure Procedures (ODP)/Graphic Departure Procedures (DP)/Departure (Data Record), defines the procedure, and FAA Form 8260-7B defines the operator requirements, with FAA Form 8260-7B requiring POI and operator signatures.

NOTE: Department of Defense (DOD) requests for specials will be managed by the RNGB in the region responsible for the special or RVFP (with AFS-400 coordination, if necessary). The RNGB may supply the DOD with appropriate forms. The RNGB should maintain records and contact information so any revisions or possible cancellation of the special may be disseminated to the DOD point of contact (POC).

2) Form Review and Distribution. The POI will provide the 8260 forms to the operator.

a) POIs will review the operator's existing procedures, documentation, equipment, manuals, and training to ensure any requirements specific to the procedure and listed on the 8260 forms are satisfactorily addressed. These requirements may require special aircraft performance, equipment, avionics/software, and/or crew training. If existing operator procedures do not address all requirements, the operator must submit a plan to the POI with the necessary changes needed to comply with the requirements of the special procedure. This plan must address any aircraft specific requirements for each make, model, and series (M/M/S) that they plan to use to fly the special. Once the implementation plan is accepted, the operator may receive the applicable signed forms needed to continue the process. Contact the Aircraft Evaluation Group (AEG) for aircraft specific questions and the RNGB for technical questions about special procedures and requirements. Ensure that the OpSpec/MSpec/LOA authorization includes an entry in the fourth column of Table 1 listing only the aircraft approved to fly the procedure(s). This ensures that any new aircraft added at a future date are not inadvertently authorized without conducting the appropriate review. If the 8260 forms or the RNGB require a demonstration flight, see subparagraph G5) below.

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b) POIs and the operator's representative will sign FAA Form 8260-7B after the POI has discussed the procedure requirements with the operator and the operator has provided the POI with documentation showing compliance with procedure requirements (i.e., aircraft performance, aircraft equipment, crew qualifications, etc.) or an implementation plan that shows a reasonable expectation that they will be able to safely meet all procedural requirements. If RNGB concurrence is required, the RNGB may issue their concurrence to the POI by email or, upon request, a memo (the RNGB will determine if they want to maintain a record of their request for concurrence and their actual concurrence of the authorization in their files). The POI will give a signed copy of the FAA Form 8260-7B to the operator and maintain a signed copy in the office file. The POI will notify the RNGB via email when appropriate forms are signed and forward those forms, if requested by the RNGB (RNGBs may individually determine if they will require a copy of the signed forms to be maintained in their files). These forms allow the operator to receive customized charts and navigation database coding (if applicable) from chart vendors and also training from most contract training vendors. It may take some time for the operator to fully implement their plan and qualify all relevant personnel to conduct the procedure(s). The OpSpec/MSpec/LOA must not be authorized until the operator has implemented their plan and is fully prepared to fly the procedure.

NOTE: Signing the back of FAA Form 8260-7B or 8260-7 is not the formal issuance of the authority for use of a special procedure. That is conveyed by the issuance of OpSpec/MSpec/LOA C081, H122, or LOA C381.

c) If applicable, the principal maintenance inspector (PMI) and principal avionics inspector (PAI) should review the requirements contained in the procedure and affirm for the record (such as a PTRS record of review) that the aircraft type(s) in question can perform the procedure. Some special instrument procedures require nonstandard/higher missed approach climb gradients and specific qualities or levels of avionics.

3) Training. A certificate holder/program manager's training program must include training on the procedure and equipment required to accomplish the procedure. An operator/company must be proficient on the procedure and the equipment required to accomplish the procedure. All FAA Form 8260-7B and 8260-10 training requirements must be met for all procedures. Training for specific procedures may be required if the performance, equipment, services, terrain effects, or a combination of factors is emphasized to ensure a safe operation. However, if the operator is seeking authorization for multiple specials or RVFPs, training for each specific procedure may not be required if the training is duplicative, the multiple specials are basic instrument approaches to a private-use landing area, and no additional performance or training requirements for a specific airfield are noted on forms.

NOTE: For questions about training at 14 CFR part 142 training centers, contact the Training Center Program Manager (TCPM). The Air Transportation Division (AFS-200) is responsible for part 142 training center policy and guidance.

4) Charts. The RNGB will send the POI the 8260 forms described above. These forms will be used by the operator to get a chart produced. The operator will submit a copy of the completed chart to the POI. Upon receipt, the POI will forward a copy of the chart to the RNGB for distribution in accordance with Order 8260.60. The Flight Standards District Office

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(FSDO)/certificate management office (CMO) must not authorize operational implementation of the procedure until the chart is received by the RNGB. In some cases, a third-party developer will create a chart for the operator and submit it to the RNGB for distribution. The RNGB will distribute this chart to the POI who, in turn, will give it to the operator.

5) Demonstration Flights. The 8260 forms may require a demonstration flight, or the POI and the RNGB may require a demonstration flight, at their discretion, to verify the suitability of the operator's aircraft, equipment, procedures, and profiles, as described in the subparagraphs below.

a) Special Pilot Qualification Airports—Part 121. Part 121 air carriers are required to perform an in-flight demonstration of a new special IFP at a special pilot qualification airport. If an existing special IFP is amended, a demonstration flight may be required at the discretion of the POI and the RNGB based on the changes to the procedure. OpSpec C050 is used to authorize part 121 air carrier certificate holders to conduct instrument flight rule (IFR) operations into special airports requiring special airport qualification and validation in accordance with the provisions and limitations of the OpSpec and part 121, § 121.445. The list of special pilot qualification airports can be found at http://fsims.faa.gov/PICResults.aspx?mode=Publication&doctype=OPSS Guidance.

b) Other Airports—Parts 91, 91K, 121, 125, 129, and 135. If the airport served is not a special pilot qualification airport and a demonstration flight is not stipulated on FAA Form 8260-7B, a demonstration flight may still be required at the discretion of the POI and the RNGB before an operator can use a new or amended special IFP. Flight simulator and tabletop reviews are other ways to confirm an operation can be conducted safely. The POI and the RNGB should consider the operator's experience at that airport, profiles and procedures, aircraft capabilities, deviation from IFP criteria, and local environmental considerations (e.g., terrain, radar and communications coverage, and obstacles) when determining if a flight demonstration, simulator, or tabletop review is required.

c) Requirements. If the POI and the RNGB require a demonstration flight, they must dictate the requirements and criteria for satisfactorily completing the demonstration. The POI may issue a provisional authorization allowing an operator to conduct a special IFP if an FAA Operations inspector is observing the flight to evaluate that procedure during routine operations in visual meteorological conditions (VMC). The provisional authorization should only be used after a careful evaluation has been made of the special IFP for safety-related factors. Issue this provisional authorization by adding the special IAP to the appropriate OpSpec/MSpec/LOA (C081, H122, or LOA C381) with the provision that the authorization is only applicable to flights observed by an FAA Operations inspector in VMC.

6) Authorization. POIs will issue the approved procedure via OpSpec/MSpec/LOA C081 (H122 for helicopter operations) as described below, once the operator has implemented their plan to address all of the FAA Form 8260 requirements (including training, dispatch, equipment, performance, etc.), has submitted a chart to the POI (and the POI has forwarded that chart to the RNGB), satisfactorily completed the demonstration flight (if required), and the RNGB concurs with the authorization (if required). Enter the aircraft M/M/S that have been reviewed and found suitable in the "Airplane (Rotorcraft) M/M/S"

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column of Table 1. The POI must review the specific FAA Form 8260-7B requirements (and obtain concurrence from the RNGB, if necessary) before authorizing any additional aircraft M/M/S and/or any aircraft that has modified its avionics package.

NOTE: The issuing authority for "special procedures" remains with the FAA. An operator who has been issued authority to use a special procedure will not authorize other operators to use the procedure. If additional users wish to be authorized, they must apply to use the procedure through their POIs and the appropriate RNGB.

a) The RNGB will notify POIs of all approved operators when a special or RVFP is amended or canceled. This notification will typically include an effective date when the old procedure is canceled (if applicable), and an effective date when the new procedure is active. Procedure effective dates can be critical to flight safety. Procedures must not be used after the expired effective date. For example, some procedure amendments use the same fix names but with the fixes in a slightly different location, and those fix locations will change on the effective date, allowing the use of the expiring procedure until the effective date and the new procedure on and after the effective date. If the procedure has a specific effective date set by the RNGB, add a reference to that effective date in the "Limitations and Provisions" column of Table 1 for the new procedure as well as the expiring procedure (if applicable).

b) For new, amended, or canceled specials or RVFPs, the POI will issue the OpSpec/MSpec/LOA revision in accordance with this subparagraph within 30 days of RNGB notification or by the effective date, whichever is later. If the POI/operator cannot meet this deadline, the POI must, at a minimum, remove the expiring procedure from the operator's authorization by the effective date canceling that special or RVFP. To ensure that operators are using the correct, current procedure, the POI will enter the procedure amendment number (ORIG, 1, 2, etc.) as part of the procedure name in the second column of Table 1. POIs may also want to add a reference to that effective date in the "Limitations and Provisions" column of Table 1 for the new procedure. POIs will reference the cancellation date of the expiring procedure in the "Limitations and Provisions" column of Table 1 or remove the authorization for the expiring procedure (if applicable).

c) The RNGB has the authority to rescind their concurrence with an operator authorization if the operator deviates from the procedure requirements, the RNGB becomes aware of any additional operational/training requirements, or any other factors that affect the safe operation of the procedure become known. The POI must rescind authorization for use of a procedure immediately upon notification from the RNGB in accordance with 14 CFR part 119, § 119.51.

H. Table 1 Instructions. When authorizing a special or RVFP, enter the airport identifier (International Civil Aviation Organization (ICAO)), city, airport name, state, full procedure name, airport state, airplane M/M/S, and any limitations and/or provisions in Table 1 as shown in the example below (Figure 3-67L, Sample C081/H122 Table 1 – Authorized Airports, Procedures, and Airplane (Rotorcraft)). The Web-based Operations Safety System (WebOPSS) does not provide drop-down fields for the instrument procedures to be listed in OpSpec/MSpec/LOA C081 or H122.

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Figure 3-67L. Sample C081/H122 Table 1 – Authorized Airports, Procedures, and Airplane (Rotorcraft)

Airport Identifier (ICAO)	Procedure Name, ORIG or AMDT #	Airport State	Airplane (Rotorcraft) M/M/S	Limitations and Provisions
KJFK; New York/John F. Kennedy Intl, NY	RNAV (RNP) RWY 13R, AMDT 2	NY	B-737-800	
KJFK; New York/John F. Kennedy Intl, NY	RNAV Visual RWY 13R, AMDT 2	NY	All B-767 All B-757	
KRNO; Reno/Reno/Tahoe Intl, NV	ILS/DME RWY 16R, AMDT 3	NV	All A-319 All B-757	
99OI, Fostoria Community Hospital, Fostoria, OH	Copter RNAV (GPS) 10, ORIG-B	OH	EC-130-T2 BHT-412-EP	Authorized on and after April 4, 2013
KEGE, Eagle County Regional Airport, Eagle, CO	ILS or LOC/DME RWY 25, ORIG	CO	G550 G650	

1) Airport Identifier (ICAO). Select airport using ICAO airport identifier. Field will populate with ICAO Identifier, City, Airport Name, and State. Use third column when accomplishing state query.

2) Procedure Name. Use procedure name found on FAA Form 8260-7 or 7B to complete this block in the template. This will aid the WebOPSS query process. These procedures are subject to revision, so ensure that the amendment number (including ORIG for "original") is included in the procedure name.

3) Airport State. List airport state with two-letter identifier. Added to aid WebOPSS query.

4) Airplane M/M/S. List airplanes (rotorcraft) that are approved to fly the special procedure. To authorize a new airplane (rotorcraft) to use a special that is already authorized for an existing airplane (rotorcraft), contact the geographic RNGB for a joint review of the new aircraft's (rotorcraft's) capabilities. POIs should ask the responsible RNGB if concurrence is required to authorize any new airplane (rotorcraft) to fly these procedures.

5) Limitations and Provisions. For procedures that require specific review and evaluation of aircraft performance, equipment/avionics, training, or other criteria that would require that an authorization be limited to a specific airplane (rotorcraft) M/M/S, enter the limitation or provision after the approved M/M/S to ensure that any future airplane (rotorcraft) added by the operator is not authorized by default without completing the same review of the new airplane (rotorcraft) capabilities.

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I. Additional Requirements. The following OpSpec/MSpec/LOAs may be required for the authorization of specific procedures.

1) OpSpec C081 or LOA C381.

a) OpSpec/MSpec/LOA C052, Straight-In Non-Precision, APV, and Category I Precision Approach and Landing Minima—All Airports. Parts 91K, 121, 121/135, 125 (including 125 LODA holders), and 135 certificate holders/operators/program managers must be issued C052. The "type" (e.g., RNAV, instrument landing system (ILS), and localizer-type directional aid (LDA)) of instrument approach listed in C081 in Table 1 must be listed in the table of authorized approaches in C052. RVFP and Required Navigation Performance Authorization Required (RNP AR) procedures will not be listed in C052.

b) OpSpec/MSpec/LOA C063, Area Navigation (RNAV) and Required Navigation Performance (RNP) Terminal Operations. Parts 91K, 121, 121/135, 125 (including 125 LODA holders), and 135 certificate holders/operators/program managers may require a C063 authorization. C063 authorizes RNAV 1, RNP 1, and other Performance-based Navigation (PBN) flight operations, and is required for certificate holders/operators/program managers authorized to conduct RNAV 1, RNP 1, or other PBN flight operation in C081.

c) OpSpec/LOA C064, Terminal Area IFR Operations in Class G Airspace and at Airports Without an Operating Control Tower—Nonscheduled Passenger and All Cargo Operations. Parts 121, 121/135, 125 (including 125 LODA holders), and 135 certificate holders may require a C064 authorization. Determine the type of airport and operation being conducted in association with the C081 authorization.

d) OpSpec C077, Terminal Flight Rules Limitations and Provisions. Parts 121, 121/135, and 135 certificate holders may require a C077 authorization. C077 provides arrival and departure guidance for instrument and visual flight operations (e.g., visual flight rule (VFR) departure on an IFR clearance). C077 provides guidance on the use of a charted visual flight procedure (CVFP). Determine if a VFR operation into or out of an airport is part of the C081 authorization.

e) OpSpec C080, Terminal Area IFR Operations in Class G Airspace and at Airports Without an Operating Control Tower for Scheduled Passenger Operations. Parts 121 and 121/135 certificate holders may require a C080 authorization. Determine the type of airport and operation being conducted in association with C081 authorization.

f) OpSpec/MSpec/LOA C384, Required Navigation Performance Procedures with Authorization Required. Parts 91, 91K, 121, 121/135, 125 (including 125 LODA operators), and 135 certificate holders/operators/program managers should be authorized C384 when an RNP AR-like special procedure, normally titled RNAV (RNP), is authorized in C081. Approval to fly an RNP AR-like special without C384 will be granted by AFS-400 and documented on FAA Form 8260-7B. The authorization in C384 must contain the "lowest RNP" and "additional aircraft capabilities" meeting the requirements of the special procedure authorized in C081.

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2) Helicopter OpSpec/MSpec/LOA H122.

a) OpSpec/MSpec/LOA H102, Basic Instrument Approach Procedure Authorizations—All Airports. Parts 91, 91K, 121/135, and 135 certificate holders/operators/program managers must be issued H102. The "type" of approach authorized in H122 must be authorized in H102.

b) OpSpec/MSpec/LOA H112, Instrument Approach Operations Using an Area Navigation System. Parts 91, 91K, 121/135, and 135 certificate holders/operators/program managers may require an H112 authorization.

c) OpSpec/MSpec/LOA H113, Special Terminal Area IFR Rotorcraft Operations in Class G Airspace—Nonscheduled Passenger and All-Cargo Operations. Parts 91, 91K, 121/135, and 135 certificate holders/operators/program managers may require an H113 authorization.

d) OpSpec/MSpec/LOA H121, Special Terminal IFR Rotorcraft Operations in Class G Airspace—Scheduled Passenger Operations. Parts 91, 91K, 121/135, and 135 certificate holders/operators/program managers may require an H121 authorization.

3) Example. Table 2 (Figure 3-67M, Sample C081/H122 Table 2 – Additional Authorizations) below shows a matrix of airplane and rotorcraft additional authorizations. C052 and H102 are required because they authorize the "type of procedure" requested by C081. The "may be required" authorizations are based on the "type of operation" sought along with the procedure. Authorizations are not permitted for those parts with an NA.

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Figure 3-67M. Sample C081/H122 Table 2 – Additional Authorizations

NOTE: The table in this guidance is a graphical depiction on additional authorizations that are: required, may be required, or not applicable.

Airplane						
	C052	C063	C064	C077	C080	C384
91	Optional	Optional	NA	NA	NA	*
91K	R	*	NA	NA	NA	*
121	R	*	*	*	*	*
121/135	R	*	*	*	*	*
135	R	*	*	*	*	*
125	R	*	*	NA	NA	*
125 LODA	R	*	*	NA	NA	*
Rotorcraft						
	H102	H112	H113	H121		
91	NA	NA	NA	NA		
91K	R	*	*	NA		
121/135	R	*	*	*		
135	R	*	*	NA		

R – Required * – May Be Required NA – Not Applicable

J. Amendments. The geographic RNGB will notify the POI of procedure amendments and send the POI all of the new forms required for the amendment. In most cases, this entire process will need to be reviewed to ensure operator compliance with the amended procedure requirements, and the operator will be required to get a new chart, which they must submit to the POI. The POI will forward the new chart to the RNGB for distribution.

K. Cancellations. If an operator is no longer going to use a procedure, the POI must remove the procedure from the operator's OpSpec/MSpec/LOA and advise the appropriate RNGB that the operator is no longer authorized to use that procedure. If the procedure is canceled, the RNGB will notify the POI, and the POI will remove the procedure from the operator's OpSpec/MSpec/LOA.

L. Notices to Airmen (NOTAM). Special procedures exist outside of the normal notification system for standard instrument procedures. Many special procedures serve landing areas that are in the public NOTAM system, and public NOTAMs will be issued for specials whenever possible. However, sometimes it is not possible to issue a NOTAM for a special, which requires updates and changes to be issued to all authorized operators through their POI. Therefore, it is critical to record, maintain, and update operator contact data with the appropriate RNGB.

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M. Adding an Aircraft. If the operator requests to fly an authorized RVFP or special procedure in a new aircraft (e.g., one that they are not currently authorized to fly), the POI should review this entire process to ensure the suitability of the proposed aircraft.

N. Oversight and Auditing. Oversight management and guidance of operator authority and use of special instrument procedures is not currently in the FAA automated work programs. It may occur under the initiative of planned activities by POIs for those certificated operators who are addressed in National Work Programs for inspectors. POIs are requested to review the OpSpec/MSpec/LOA for their assigned operators annually to ensure the currency of the special instrument procedures. Part 91 operators are normally not addressed in the national programs. It is therefore critical that this certification and approval process be tracked directly by the FSDO. The FSDO should maintain files (paper/electronic, etc.) for operators authorized to conduct special procedures and conduct an annual review of the files to ensure that current information is maintained and disseminated.

1) The documentary elements of the special instrument procedure (e.g., FAA Form 8260 series, a copy of the current chart as issued to the operator, and related correspondences) should be maintained in the FSDO's part 121, 125, 129, or 135 operator files. The FSDO should create and maintain a specific file for parts 91 and 91K operators that are authorized to use special IAPs.

2) The RNGB must be supplied with a copy of the current chart and any subsequent updates or changes. At their discretion, the RNGB may require a copy of the signed 8260 forms. The POI should review the status of the special authority annually and advise the RNGB of any changes (i.e., aircraft type, company's existence, etc.) The PMI and PAI should apply the same review to any aircraft changes that they did for the initial authority. A record of such review should be kept in the part 121 or 135 file.

3) The RNGB will advise POIs of changes or updates to the procedures and distribute such information in accordance with Order 8260.60.

O. Additional Information. LOA C381, Special Instrument Procedures, Regional Authorization, allows FSDO inspectors and the RNGB to authorize multiple part 91 pilots and operators to use special instrument procedures. This LOA is only applicable to part 91 operators, and is not required to be used in lieu of individual LOA C081 authorizations. The geographical RNGB will determine which procedures are applicable for LOA C381. All other special terminal instrument procedures issued to part 91 operators, including those procedures that require additional pilot training or specific equipment and/or aircraft performance requirements, must be authorized using LOA C081 for each operator on a case-by-case basis.

OPSPEC C091—OPERATIONAL REQUIREMENTS AIRPLANE DESIGN GROUP VI (ICAO GROUP F). (OPTIONAL.)

A. Applicability. OpSpec C091 must be issued to U.S. certificate holders who conduct takeoff and landing operations using Airplane Design Group VI (ADG-VI), International Civil Aviation Organization (ICAO) Group F, within or outside the United States on runways as narrow as 150 feet (45 meters) wide.

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B. Operational Requirements. OpSpec C091 specifies the runway width, Obstacle Free Zone (OFZ), and other airport requirements for these aircraft. ADG-VI are airplanes with a wingspan from 214 feet (65 meters) up to 262 feet (80 meters). It closely parallels ICAO Group F criteria. However, where the ICAO Code designation is also dependent on main gear track width, the Federal Aviation Administration (FAA) criteria is dependent on the wingspan of the aircraft and tail height. The current edition of Advisory Circular (AC) 150/5300-13, Airport Design, establishes airport requirements for the different airplane design groups, including runway width requirements, taxiway width requirements, OFZ dimensions, and other airport considerations. Historically, the FAA has authorized deviations from these established standards on an air carrier-by-air carrier basis after evaluating the specific air carrier's operational procedures and flightcrew training program and standards. Operational limitations were typically part of the air carrier's operational authorization to operate as per the specific deviation granted to the air carrier.

NOTE: In order to allow ADG-VI aircraft operations on existing infrastructure, U.S. Airplane Design Group V (ADG-V) airports accepting scheduled service of ADG-VI aircraft are required to undergo a special modification of standards (MoS). The MoS applies to those portions of the airport that do not comply with ADG-VI standards.

C. U.S. Certificate Holders and Principal Operations Inspector (POI) Actions. Prior to initiating service to any ADG-V/ICAO Group E airport with an aircraft designed for ADG-VI/ICAO Group F, the certificate holder must supply the POI with the following:

- Evidence that the requirements of OpSpec C091 are met for the proposed runway(s) of operations at those airports, including potential alternates.
- For destination airports, U.S. airport MoS approval for that make and model (e.g., A-380 or B-747-8).
- For alternate airports, the process the operator used to evaluate the airport to ensure it could accommodate the aircraft.

1) It is the air carrier's responsibility to confirm that they can comply with the requirements of OpSpec C091 and to supply the POI sufficient documentation to verify their compliance. The air carrier is responsible for any necessary coordination and letters of understanding with applicable air traffic control (ATC) facilities and/or airport operators to meet the requirements of OpSpec C091 (e.g., taxi routes to be used and procedures to follow applicable to the specific certificate holder).

2) Flightcrew and dispatch training and qualification program.

3) The POI should provide the air carrier, ATC facility, or airport operator support, as necessary, to comply with the requirements of OpSpec C091. PIs may find a list of airports with MoS, for the A-380 and B-747-8 at http://www.faa.gov/airports/engineering/nla_mos/.

NOTE: The air carrier's compliance with the requirements of OpSpec C091 eliminates the air carrier from having to demonstrate its capability to operate to

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the lower criteria specified in OpSpec C091 prior to being issued OpSpec C091 for that aircraft and airport combination.

D. ADG-VI/ICAO Group F Aircraft. ADG-VI/Group F specifies that the required runway width be at least 200 feet (60 meters) while ADG-V/Group E specifies that the runway width be at least 150 feet (45 meters). Currently, the A-380 and the B-747-8 are the only commercial aircraft in regular airline service that fit into the ADG-VI/ICAO Group F criteria and are therefore subject to the C091 requirements to takeoff and land on ADG-V/ICAO Group E runways.

E. B-747-8 Limitations. The following limitations apply to B-747-8 operations:

1) Runways for takeoffs and landings shall be at least 150 feet (45 meters) wide;

2) Operators must comply with all limitations and procedures specified in the applicable B-747-8 Airplane Flight Manual (AFM) for lightweight and aft center of gravity (CG) takeoffs.

NOTE: In accordance with FAA Airports Engineering Brief #74A, Use of 150-Foot (45-M) Wide Runways and Blast Pads for Boeing 747-8 Operations, the 35-foot standard stabilized runway shoulder width for ADG-V does not need to increase to the ADG-VI standard of 40 feet.

F. A-380 Limitations. The following limitations apply to A-380 operations:

1) The overall runway plus shoulder width is of 280 feet (85 meters) for ADG-VI and 250 feet (75 meters) for ICAO Group F. In order to reduce the jet blast impact to 150 feet (45 meters) runway surface, the FAA recommends stabilized shoulders beyond the runway edge. The FAA 150 foot runway width evaluation for the A-380, along with the recommendations for these operations contained in ICAO Annex 14, Aerodromes, and A-380 AFM have led to the following runway width authorization for A-380 operation in the United States:

2) Runways for takeoffs and landings shall be at least 150 feet (45 meters) wide with stabilized runway shoulders on both sides of the runway extending an additional 50 feet (15 meters) outward from the runway edge.

3) Runways as narrow as 150 feet (45 meters) wide without stabilized shoulders may be used for takeoff and landings, provided applicable flight manual procedures for takeoffs on 150 foot wide runways without stabilized runway shoulders are followed and procedures are implemented for the full length of the runway to be inspected for foreign object damage (FOD) after the takeoff prior to successive aircraft operations.

NOTE: Only the airport operator conducts runway inspections for FOD. Hence, the air carrier should make sure, or have some documentation, that the airport operator will do it. The document is the Federally required Airport Certification Manual under 14 CFR part 139.

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4) The hold short lines or hold position must be expanded outward from the 280 foot point by 1 foot for every 100 feet the runway threshold elevation is above sea level. (For example, a threshold elevation of 5,000 feet mean sea level (MSL) requires an additional 50 feet. Thus, the hold short lines or hold position can be no closer than 330 feet (280 feet + 50 feet) from the runway centerline (RCL).

NOTE: This is to address the hold position of aircraft when an A-380 is on final approach and is as required per the current edition of AC 150/5300-13. Specifically, so that if the A-380 has to go-around (balked landing) then the lateral area on both sides of the runway is clear of obstacles so that if the A-380 deviates left or right during the go-around maneuver (balked landing) its wing tips will not strike anything.

OPSPEC C300—14 CFR PART 97 NDB, NDB/DME, VOR, AND VOR/DME INSTRUMENT APPROACH PROCEDURES USING SUBSTITUTE MEANS OF NAVIGATION.

A. C300 Nonstandard Authorization. The nonstandard template OpSpec C300 authorizes qualified operators to substitute specific Area Navigation (RNAV) equipment for non-directional radio beacon (NDB), NDB/distance measuring equipment (DME), very high frequency omni-directional range station (VOR), and VOR/DME instrument approaches.

1) The OpSpec/MSpec/LOA C300 authorization covered by this subparagraph applies to operators conducting operations under 14 CFR parts 121 and 135. The airplane's make/model/series, the manufacturer and model, and the software part/version of the RNAV navigation systems authorized for this type of navigation must be listed in Table 1 along with any limitations and provisions. (See sample table in Figure 3-66F, Sample Table 1—Aircraft and Navigation Systems Eligible for Instrument Approach Procedures Using Substitute Means of Navigation.)

Figure 3-66F. Sample Table 1—Aircraft and Navigation Systems Eligible for Instrument Approach Procedures Using Substitute Means of Navigation

Aircraft M/M/S	RNAV System(s) and Software			Limitations and Provisions
	Manufacturer	Model	Software Part/Version	
B-717-200	Honeywell	Pegasus	PS4081642-909	NDB, NDB/DME IAP N/A

2) Before a principal operations inspector (POI) can issue a nonstandard OpSpec/MSpec/LOA C300, the Flight Technologies and Procedures Division (AFS-400) and the Air Transportation Division (AFS-200) must concur with the POI's recommendation to issue the OpSpec/MSpec/LOA.

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3) The POI must use the request process as illustrated in Figure 3-66G, Instrument Approach Procedures Using Substitute Means of Navigation Application Flowchart, when the operator submits an application package.

a) The POI submits the application package to the regional NextGen program branch manager.

b) The regional NextGen program branch manager forwards the application to AFS-400 for review.

c) AFS-400 will review the application in consultation with AFS-200 and forward a written concurrence to the regional NextGen program branch manager.

d) The regional NextGen program branch manager will forward the written concurrence to the POI.

e) The POI will issue OpSpec/MSpec/LOA C300 to the operator.

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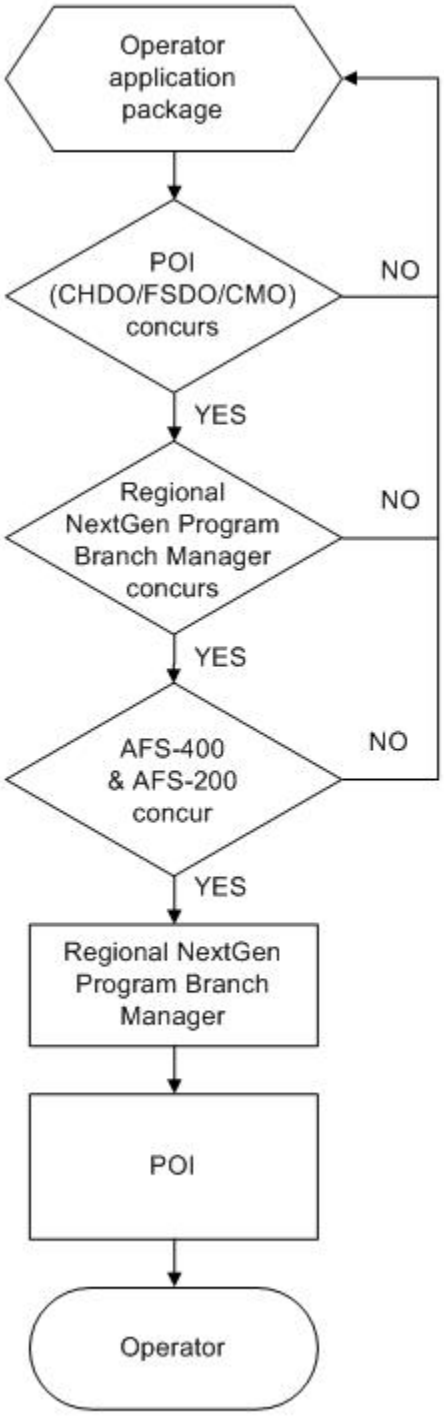
Figure 3-66G. Instrument Approach Procedures Using Substitute Means of Navigation Application Flowchart



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B. Aircraft Qualification. Use the guidelines in OpSpec C300 for aircraft qualification.

C. Operating Considerations. This authorization to conduct NDB, NDB/DME, VOR, and VOR/DME instrument approach procedures (IAP) using substitute means of navigation applies when the underlying Navigational Aid (NAVAID) (NDB, VOR, or DME) is out of service, and/or compatible aircraft avionics are either not installed (automatic direction finder (ADF) or DME) or not operational (VOR, ADF, or DME).

1) Navigation Data and Flyability Validation. The operator must establish a process to ensure that each IAP intended to be flown under this authority has been checked to confirm flyability with aircraft RNAV systems. The structure of this process is left to the operator's discretion as long as compliance with OpSpec C300 is met. The operator's process must also ensure that any lateral path changes that occur during the 28-day update cycle are examined to confirm the flyability of procedures and that the flyability and validation are documented.

2) Dispatching to Airports with Out-of-Service NAVAIDs. Operators planning to dispatch to an airport with an out-of-service NAVAID may need to coordinate with air traffic control (ATC). In order to receive a clearance for certain procedures, this coordination should include, but is not limited to, the operators' intent to use their RNAV system as a substitute means of navigation guidance and their capability and operational authorization.

D. Training. The flightcrew must complete the operator's approved training program, to include training specific to the RNAV manufacturer/model/software and software version, and IAPs using substitute means of navigation. Guidance in OpSpec C300 must be addressed in the training program.

OPSPEC/MSPEC/LOA C358—SPECIAL RESTRICTIONS FOR FOREIGN RNAV TERMINAL INSTRUMENT PROCEDURES WITH RNP LINES OF MINIMUMS.

NOTE: To obtain the nonstandard authorization C358, the operator must use the nonstandard request process. See Volume 3, Chapter 18, Section 2, paragraphs 3-712 to 3-713, for the nonstandard request process. For operators conducting operations under 14 CFR part 121 or 135, the formal request must be requested through the Air Transportation Division (AFS-200). For operators conducting operations under 14 CFR part 125, including part 125 Letter of Deviation Authority (LODA) holders, or under 14 CFR part 91 subpart K (part 91K), the same nonstandard request process must be used and submitted through the General Aviation Division (AFS-800). The airplane qualification package should be sent simultaneously to the Flight Technologies and Procedures Division (AFS-400) for evaluation. AFS-400 will coordinate with the appropriate policy division for final approval of this nonstandard authorization for all operator requests.

A. Nonstandard Authorization. The nonstandard template C358 authorizes a qualified operator to conduct certain "RNP-like" foreign Area Navigation (RNAV) Terminal Instrument Procedures (TERPS) with required navigation procedures (RNP) lines of minimums. These

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"RNP-like" foreign RNAV approaches are not designed to the same criteria as U.S. 14 CFR part 97 RNAV RNP special aircraft and aircrew required (SAAAR) procedures. Only the selectable procedures in Table 1 of the C358 template may be authorized. The International Civil Aviation Organization (ICAO) uses the term Authorization Required (AR) rather than SAAAR. AR may appear on "RNP-like" foreign RNAV procedures with RNP lines of minimums regardless of the design criteria.

NOTE: "RNP-like" foreign RNAV procedures with RNP minimums that meet part 97 RNAV RNP SAAAR procedure design criteria are not available for selection in the C358 template, Table 1, and require authorization via the authorization of template C384.

1) C358 authorization is granted through the nonstandard authorization request process (see Volume 3, Chapter 18, Section 2).

2) C358 authorization is applicable to operators conducting operations under 14 CFR parts 91, 91K, 121, 125 (including those with a LODA 125M), and 135.

3) Procedures with RNP lines of minimums. These "RNP-like" foreign RNAV procedures have RNP lines of minimums of 0.3 or less, and/or a radius to a fix (RF) leg required, and/or the missed approach requiring an RNP less than 1.0. RNP less than 0.3 specified in the line of minimums (RNP line of minimums refers to the minimum altitude for the approach and has an RNP requirement associated with it; e.g., there may be minimums of 250 feet for RNP 0.11 and a separate line of minimum of 350 feet for RNP 0.20).

4) U.S. RNAV RNP SAAAR procedures are authorized (nonstandard template C384) using the guidance in Advisory Circular (AC) 90-101, Approval Guidance for RNP Procedures with SAAAR, current edition. The foreign "RNP-like" RNAV procedures in Table 1 are authorized using the portions of AC 90-101 that apply to the particular RNP procedure design criteria for each approach.

Figure 3-66A. Sample Table 1—Special Restrictions for "RNP-like" Foreign RNAV Terminal Instrument Procedures with RNP Lines of Minimums

(Only those procedures allowed for authorization will be available as selectables in the C358 template.)

Airport	Procedure Identification	Procedure Requirements
QUITO, Ecuador (SEQU-UIO) / RNAV (RNP) Rwy 17 / VNAV path required, RF leg required, RNP 0.15, Missed approach RNP < 1.0		
QUITO, Ecuador (SEQU-UIO) / RNAV (RNP) Rwy 35 / VNAV path required, RF leg required, RNP 0.15, Missed approach RNP < 1.0		

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B. Airplane Qualification. The airplane qualification must meet the guidelines established in AC 90-101, appendix 2, with the following exceptions:

1) Principal operations inspectors (POI) should send the formal nonstandard request to the appropriate headquarters (HQ) division stating that the airplane qualification and operating procedures have been sent to the Flight Technologies and Procedures Division (AFS-400) for evaluation. POIs should simultaneously submit the airplane qualification and operating procedures package to AFS-400, as described in the AC 90-101, appendix 7 checklist.

2) The vertical accuracy requirement as written in AC 90-101, appendix 2, paragraph 2c is not required for this authorization. Vertical guidance in these foreign "RNP-like" procedure(s) is based on barometric vertical navigation (baro-VNAV). Eligible aircraft are those with an Aircraft Flight Manual (AFM) or Aircraft Flight Manual Supplement (AFMS) that explicitly states that the vertical navigation (VNAV) system is approved for approach operations in accordance with the current edition of AC 20-129, Airworthiness Approval of Vertical Navigation (VNAV) Systems for use in the U.S. National Airspace System and Alaska, or those with written documentation (e.g., Flight Standardization Board (FSB) report or other official documentation) verifying eligibility.

3) Airspace Containment (AC 90-101, appendix 2, paragraph 2d). The airspace containment requirement as written in AC 90-101 is not required for this authorization. Airplanes that are qualified to conduct RNAV operations in accordance with applicable directives and which have the proper RNAV capability (e.g., Global Positioning System (GPS), RF leg capability) for the procedure(s) listed may be authorized.

C. Operating Considerations. The operator must establish operating procedures that meet the applicable guidelines of AC 90-101, appendix 4. Operating procedures must incorporate all operational mitigations based on equipment authorization. For example, if RF leg is authorized, an operational mitigation is required if the equipment engages in "track hold" mode when a go-around is selected. (Track hold would not follow the lateral navigation (LNAV) path when a go-around is initiated in or shortly after an RF leg.) Submit the operating procedures package to AFS-400 as described in the AC 90-101 checklist in appendix 7. The operating procedures must meet the guidelines established in AC 90-101, appendix 4, with the following exceptions.

1) Vertical track deviation monitoring limit of 75 feet (AC 90-101, appendix 4, paragraph 3g.). The track deviation monitoring limit of 75 feet vertically, as written in AC 90-101, is not required for this authorization. Eligible airplanes, in accordance with baro-VNAV requirements, must be equipped with and operationally using either a flight director (FD) or autopilot capable of following the Vertical Path (VPATH).

2) Verification of the most current airport altimeter is set prior to the final approach fix (FAF) but no earlier than the initial approach fix (IAF) (AC 90-101, appendix 4, paragraph 3k). The altimeter setting requirement as written in AC 90-101 is not required for this authorization. Although the listed procedure(s) require(s) the current altimeter setting for the airport of intended landing, the flightcrew is not required to verify the setting between the IAF and the FAF. Normal flight deck procedures must meet this requirement.

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D. Training. The flightcrew must complete the operator's approved RNP instrument approach procedure (IAP) training program for these procedures and qualify for RNP instrument approach operations by one of the operator's check airmen/check pilot, as applicable, or by an FAA inspector. The guidance of AC 90-101, appendix 5, must be addressed in the training program.

1) For operators authorized RNP SAAAR instrument approaches for the aircraft equipment listed in Table 2 of the C358 authorization, only the specific differences from RNP SAAAR procedures that apply to the "RNP-like" foreign RNAV instrument procedures listed in Table 1 of the C358 authorization, must be trained.

2) Flightcrew members of operators that are not authorized for RNP SAAAR for the aircraft equipment listed in Table 2 of the C358 authorization, the applicable subjects of AC 90-101, appendix 5 must be trained:

a) Guidance of AC 90-101, appendix 5, must be followed except where a task analysis has shown that the crew knowledge and skills for RNP SAAAR do not apply to the "RNP-like" foreign RNAV instrument procedure(s) authorized in Table 1.

b) Unique RNP approach criteria that apply to the "RNP-like" foreign RNAV instrument procedure(s) authorized in Table 1.

E. Listing Airplanes and Navigation Systems Approved for "RNP-Like" Foreign RNAV TERPS. The airplane(s) and navigation systems approved for "RNP-like" foreign RNAV TERPS with RNP lines of minimums must be listed in Table 2 of the C358 authorization as follows:

1) The approved navigation systems and the specific software version must be listed.

2) The table must identify the authorized use of a coupled autopilot or an FD which is provided as a selectable in the automated Operations Safety System (OPSS) in processing the authorization.

3) The lowest RNP authorized must be listed.

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Figure 3-66B. Sample Table 2—Airplanes and Navigation Systems Eligible for "RNP-like" Foreign RNAV Terminal Instrument Procedures with RNP Lines of Minimums

Airplane M/M/S	Navigation System M/M/Software/ Version	Limitations and Restrictions	Autopilot Coupled or Flight Director Required	Lowest RNP
B-737-490	Smiths FMCS/FMC 2907A4 or 2907C1 with U10.5A.	Not authorized to exceed temperature limits of the approach. Not authorized RNP parallel approach operations (RPA). Not authorized RNP parallel approach runway transitions (RPAT).	Either FD or Autopilot only	RNP-0.15 RNP-0.11

F. Execution of an "RNP-Like" Foreign RNAV Instrument Procedure. Execution of an "RNP-like" foreign RNAV instrument procedure requires the current, local altimeter setting for the airport of intended landing. Remote altimeter settings are not allowed.

G. VNAV Path Requirements. An airplane(s) with an airworthiness approval for baro-VNAV approach operations in accordance with AC 20-129 must be equipped with and operationally use either an FD or autopilot capable of following the VPATH.

H. Approval Requirements. Unlike RNP SAAAR C384 authorization, there is no interim approval required for this nonstandard authorization in C358. The operator must submit the following information on a continuous basis every 30 days to the POI for his or her evaluation of the continuing use of the authorization (AC 90-101, appendix 6, paragraph 1):

1) Total number of the "RNP-like" foreign RNAV approach procedures conducted;

2) Number of satisfactory approaches by aircraft/system (satisfactory if completed as planned without any navigation or guidance system anomalies); and

3) Unsatisfactory approaches must be included in the report and must include, but are not limited to, the following:

a) UNABLE REQ NAV PERF, NAV ACCUR DOWNGRAD, or other RNP messages during any approach;

b) Excessive lateral or vertical deviation;

c) Terrain Awareness and Warning Systems (TAWS) warning;

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d) Autopilot system disconnect;

e) Navigation data errors; and

f) Pilot report of any anomaly.

OPSPEC/MSPEC C359. DECOMMISSIONED.

LOA C381—SPECIAL INSTRUMENT PROCEDURES, REGIONAL AUTHORIZATION.

A. Applicability. Letter of authorization (LOA) C381 allows Flight Standards District Office (FSDO) inspectors and the regional Flight Standards division (RFSD) Regional NextGen Branch (RNGB) to authorize multiple Title 14 of the Code of Federal Regulations (14 CFR) part 91 pilots and operators to use special non-14 CFR part 97 instrument procedures. RNGBs are not required to use LOA C381. The appropriate geographical RNGB will determine which procedures are applicable for LOA C381. LOA C381 should only be used to maintain a list of multiple users (with written authorizations as described below) of special instrument procedures that do not require specific aircraft equipment, performance, pilot training, or any other complex requirements. All other special terminal instrument procedures must be authorized using LOA C081. The RNGB must contact the Technical Programs Branch (AFS-260) to create an operator in WebOPSS and for RNGB digital signature authority. For LOA C381 applicable to 14 CFR part 129 foreign air carriers, see Volume 12, Chapter 2, Section 5.

NOTE: Currently there is no method to authorize a nonpart 129 foreign pilot/operator to fly special instrument procedures or Area Navigation (RNAV) Visual Flight Procedures (RVFP) due to tracking, notification, and coordination requirements.

B. Background. Section 91.175(a) states, “Instrument approaches to civil airports. Unless otherwise authorized by the FAA, when it is necessary to use an instrument approach to a civil airport, each person operating an aircraft must use a standard instrument approach procedure prescribed in part 97 of this chapter for that airport. This paragraph does not apply to United States military aircraft.”

1) A special terminal instrument procedure (approach or departure) serving a private use airport or heliport is not promulgated under part 97, and therefore requires Federal Aviation Administration (FAA) authorization to conduct these procedures in instrument conditions in accordance with § 91.175(a). OpSpec/management specification (MSpec)/LOA C081 normally authorizes special procedures under 14 CFR parts 91, 91K, 121, 125, and 135. OpSpec H122 authorizes 14 CFR parts 91, 91K, 121/135, and 135 helicopter operators. To ensure that all individual users are authorized correctly for these procedures, all pilots/operators need to be authorized via LOAs to support pilot notification when a procedure is amended or canceled. All part 91 users can be authorized via LOA C081 by their appropriate geographic FSDO, but this can create a greatly increased workload requiring a large number of FAA resources and man hours at air parks with dozens to hundreds of users.

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2) LOA C381 was designed specifically to simplify the authorization process while still authorizing all individual users correctly, to address multiple part 91 operators flying one or more procedures. The RNGB authorizes LOA C381 in Web-based Operations Safety System (WebOPSS), and the last page of the LOA is the signature page for the pilot and the FAA inspector, either a FSDO principal operations inspector (POI) or RNGB All Weather Operations (AWO).

NOTE: While LOA C381 allows an RNGB inspector or FSDO inspector to sign FAA Form 8260-7B and LOA C381 signature page, this is primarily for the sake of flexibility. The geographic FSDO has the primary responsibility to authorize pilots via these signature pages, particularly at air parks which may be a substantial distance from the regional FSDO. The RNGB and the geographic FSDO should work together, particularly during site visits where multiple pilots are anticipated for authorization, but LOA C381 must also be flexible enough to allow either an RNGB inspector or a FSDO inspector to authorize a pilot without inspectors from both offices being present. With the concurrence of the geographic FSDO, an RNGB inspector may authorize users if necessary due to scheduling or staffing issues (e.g., if a FSDO inspector cannot be present). In these instances, the RNGB will ensure that the FSDO receives the required paperwork for their records.

3) LOA C381 (including the signature page) and appropriate 8260 series forms (see subparagraph 5) below) serve as the pilot/operator authorization. One or more approaches in the region can be added to Table 1, and each authorized user for each approach can be added to Table 2 and authorized for individual (or multiple) procedures by referencing Table 1. Although a complete LOA C381 is required for the RNGB and the appropriate FSDO to ensure proper pilot authorizations, the LOA issued to the pilot must only contain, at a minimum, the approach authorized in Table 1, the pilot's name and information in Table 2, and the completed signature page. It is not necessary to send a new copy of LOA C381 with a complete list of all approaches and all pilots to every authorized pilot for every LOA C381 revision. An individual pilot needs to be reissued LOA C381 only when there is a change to a procedure that pilot is authorized to fly, or there is a change in that pilot's authorization.

4) There are several special terminal instrument procedures serving private-use, multiple user, general aviation airports (such as air parks) throughout the United States. Many of these procedures have been around for more than 10 years. Previously, FAA Form 8260-7 defined the procedure and was signed off by the Flight Technologies and Procedures Division (AFS-400) to authorize the procedure. FAA Form 8260-7 has since been updated to FAA Form 8260-7A (which defines the procedure) and FAA Form 8260-7B (which defines any additional operator requirements). Several procedures are still defined by an approved FAA Form 8260-7, and will remain this way until the procedure is amended or canceled.

5) To authorize a user via LOA C381, the pilot completes and signs the bottom half of the last page of the LOA C381 and FAA Form 8260-7B, page 2. An FAA inspector, either an AWO or a FSDO inspector, signs the top half and FAA Form 8260-7B, page 2. The FSDO keeps the signed originals, and gives a copy to the pilot and to the RNGB. The pilot copy is their proof of authorization. The RNGB adds the pilot to Table 2 of LOA C381 and reauthorizes LOA C381

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in WebOPSS. The RNGB is responsible for updating and authorizing the LOA C381 in WebOPSS, including adding pilots and procedures to the tables. The LOA C381 issued to the pilot/operator must contain at least the authorized procedure(s) in Table 1, the authorized pilot with applicable information in Table 2, and the signed original signature page. It is not necessary for all procedures in the region to be listed in Table 1, or all pilots authorized to be listed in Table 2, but the applicable procedure(s) and pilot are required.

6) It is important to note that LOA C381 in WebOPSS only serves as blanket authorization and a tracking method, and is signed in WebOPSS by the RNGB AWO. LOA C381 does not have to be reissued to each listed pilot each time a change is made, but it does need to be reauthorized when one or more pilots is added, removed, or amended in the LOA. The only time a pilot needs to be reauthorized is when that pilot is authorized for a new procedure, or when an authorized procedure is amended.

C. Authorization Forms and Records.

1) As it applies to a pilot/operator, the following signed forms serve as their authorization:

a) Series 8260 Forms: FAA Form 8260-7A (FAA Form 8260-7 for older procedures) containing the specifications of the IAP, FAA Form 8260-7B for issuing the instrument procedure, and FAA Form 8260-15A (FAA Form 8260-15B for graphic Obstacle Departure Procedure (ODP) or Standard Instrument Departure (SID)).

b) LOA C381, signed by both the pilot and an FAA inspector, and including the authorized procedure(s) in Table 1 and the authorized pilot in Table 2.

2) The appropriate geographic FSDO relevant to the pilot maintains signed original of the forms listed in subparagraph 1) above, and sends a copy to the appropriate geographic RNGB relevant to the location of the procedure.

3) The appropriate geographic RNGB relevant to the location of the procedure maintains a copy of the signed forms listed in subparagraph 1) above.

D. Authorization Responsibilities. Due to multiple operators using these special instrument procedures, the following measures outlined below are required to ensure regulatory compliance and limit potential risk.

1) For each procedure, the Airport Manager or their designee shall:

a) Maintain a list of pilots authorized for each procedure, including contact information.

b) For a new procedure or a procedure amendment, where it may be beneficial, arrange a meeting or site visit for the appropriate geographical FSDO and RNGB to authorize multiple users, and notify all pilots seeking authorization.

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c) Notify all pilots/operators requesting to fly any special terminal instrument procedure that they must contact either their appropriate geographical FSDO or RNGB in the region responsible for the procedure for authorization.

d) Using FAA Form 8260-7A (or FAA Form 8260-7 for older procedures) and FAA Form 8260-15A/B, have an aeronautical chart produced suitable for cockpit use.

e) Distribute the appropriate special terminal instrument procedure charts only to pilots/operators that are properly authorized by Flight Standards (AFS). This authorization is verified by presenting the signed FAA Form 8260-7B and the signed LOA C381.

2) The RNGB shall:

a) Establish an Executive Operator in WebOpss to authorize LOA C381, which will contain the list of all pilots/operators authorized to conduct the listed procedures.

b) Verify and enter all pilot/operator information in WcbOPSS, and issue LOA C381 to reflect the procedures as listed in Table 1 of the LOA. See Figure 3-67K for an example.

Figure 3-67K. Sample Table 1 – Airports and Special Terminal Instrument Procedures

Ref. No.	Airport Identifier (ICAO)	Special Terminal Instrument Procedures
1	82IS; Landings Condominium Huntley; IL	VOR-A, AMDT 6 Takeoff Minimums and Obstacle Departure Procedure, ORIG
2	LL22; Brookeridge Air Park; Downers Grove, IL	VOR/DME or GPS-A, AMDT 1

c) Prepare a pilot briefing sheet for each special terminal instrument procedure.

d) Forward a copy of the pilot briefing sheet, FAA Forms 8260-7/8260-7A/ 8260-7B/8260-15A/15B, and any other required documentation to the POI for each procedure.

e) With the concurrence of the geographic FSDO in accordance with paragraph 3-714B2), the RNGB will authorize users via the process outlined in subparagraph 3) below, if necessary, due to scheduling or staffing issues (e.g., if a FSDO inspector cannot be present). In these instances, the RNGB will ensure that the FSDO receives the required paperwork for their records.

f) Save either a hard copy or an electronic copy of each signed pilot authorization and signed FAA Form 8260-7B.

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3) The FSDO inspector shall:

a) Verify the pilot's identity and credentials (pilot certificate/instrument rating/aviation medical).

b) Review FAA Form 8260-7B for required signatures and any associated documents to ensure accuracy.

c) Emphasize to pilots/operators that the special terminal instrument procedures conform to current requirements and that only authorized pilots/operators are permitted to utilize these procedures.

d) Ensure the pilot/operator understands that no additional training is required to conduct these procedures. If additional training is required, that procedure must be authorized via individual OpSpec/MSpec/LOA in accordance with current 8900.1 guidance.

e) Sign an original and make at least two copies of the signed LOA C381 and signed FAA Form 8260-7B and distribute as follows:

1. Original – FSDO.

2. Copy – Pilot/Operator.

3. Copy – RNGB.

NOTE: The pilot/operator is required to have a copy of the applicable FAA Form 8260-7B in order to have an approach chart and ODP issued for their use.

f) Notify the RNGB of any change in assigned POI.

g) Ensure the pilot/operator understands the original issued IAP charts are authorized for their use only. Photocopying this IAP chart is not authorized.

4) The pilot/operator shall:

a) Maintain current point of contact (POC) information with the appropriate Airport Manager.

b) Prior to being issued LOA C381 and FAA Form 8260-7B, present the following documents to the FAA in person:

1. FAA pilot certificate,

2. FAA medical certificate, and

3. U.S. passport or other government issued photo identification.

c) Ensure their signature is on FAA Form 8260-7B.

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d) Present the signed FAA Form 8260-7B to the appropriate airport manager in order to obtain special terminal instrument procedure chart(s).

e) Sign the LOA and confirm FSDO and RNGB signatures.

f) Have LOA in physical possession, or readily accessible, when exercising the privileges of the LOA.

NOTE: Each owner/operator/pilot in command (PIC) is responsible for currency and proficiency of instrument flight rules (IFR) and an airworthy aircraft.

g) Return the LOA and the issued special charts when the LOA is no longer required.

OPSPEC/MSPEC/LOA C384—REQUIRED NAVIGATION PERFORMANCE PROCEDURES WITH AUTHORIZATION REQUIRED.

A. OpSpec/MSpec/LOA C384 Nonstandard Authorization. The nonstandard template C384 authorizes qualified operators to conduct 14 CFR part 97 Area Navigation (RNAV) Required Navigation Performance (RNP) instrument approach procedures (IAP) with Authorization Required (AR). This template also authorizes foreign RNP IAPs with AR.

1) OpSpec/MSpec/LOA C384 authorization covered by this paragraph applies to operators conducting operations under 14 CFR parts 91 (including part 91 subpart K (part 91K)), 121, 121/135, 125 (including A125 Letter of Deviation Authority (LODA) holders), and 135.

2) Complete operational approval guidance material for RNP IAPs with AR is found in the current edition of Advisory Circular (AC) 90-101, Approval Guidance for RNP Procedures with AR. The AC also includes application preparation and processing guidance.

3) Before a principal operations inspector (POI) may issue nonstandard OpSpec/MSpec/LOA C384, the Flight Technologies and Procedures Division (AFS-400) and either the Air Transportation Division (AFS-200) or the General Aviation and Commercial Division (AFS-800), as appropriate, must concur with the POI's recommendation to issue the OpSpec/MSpec/LOA.

4) Figure 3-67E, RNP AR Application Flowchart, illustrates the preferred flow for reviewing RNP AR applications within the FAA. Volume 3, Chapter 1, Section 1 describes the recommended general process to be used by Flight Standards Service (AFS) inspectors in the course of evaluating an operator's request for operational approval. Nothing in this C384-specific guidance is intended to contradict the recommended general process.

a) The POI would typically be the first FAA official to receive and review the application. The POI would provide feedback to the operator, as needed, to produce an application that meets the requirements of AC 90-101. The POI would then submit his or her recommendation for approval to the regional Next Generation (NextGen) Branch (e.g., AEA-220).

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NOTE: Volume 3, Chapter 1, Section 1 instructs the inspector to upload an electronic version of the RNP AR application to the NextGen application tracking SharePoint site associated with his or her region. The inspector should notify the regional All Weather Operations (AWO) specialist (within the NextGen Branch) and the Performance Based Flight System Branch (AFS-470) when the application has been uploaded. This will allow the AWO specialist and AFS-470 personnel to concurrently review the application and save time in the overall process. The POI, AWO specialist, and AFS-470 representatives should collaborate on the application review and thereby avoid duplication of effort in resolving any issues with the application.

b) The AWO specialist will review the application and, if necessary, seek additional information or clarification from the operator through the POI. Upon completion of the AWO specialist's review, the regional NextGen Branch manager should forward his or her recommendation, and that of the POI, to AFS-400.

c) AFS-400 will review the application in consultation with AFS-200 or AFS-800, as appropriate. Upon completion of this review, the coordinating offices will jointly provide written concurrence with the POI and AWO specialist recommendations to approve the application. The headquarters (HQ) concurrence memo will be sent to the POI through the regional NextGen Branch manager.

NOTE: If AFS-200, AFS-400, or AFS-800 does not concur with the recommendations to approve the application, they will provide a memo stating the reasons for this position.

d) The POI will issue the OpSpec/MSpec/LOA C384 to the operator in accordance with the limitations and/or provisions stipulated in the HQ concurrence memo. The HQ memo will, at a minimum, stipulate the specific aircraft make, model, and series (M/M/S), the lowest RNP value authorized, the related flight management system (FMS) software version, and whether the operator is authorized to fly Radius to Fix (RF) legs and/or approaches requiring less than RNP 1.0 nautical mile (NM) on the Missed Approach Segment (MAS) (i.e., "additional aircraft capabilities").

5) A listing of foreign RNP AR procedures approved for U.S. operators is maintained on the AFS-470 Web site. In addition, each approved foreign RNP AR procedure is added to the C384 template as a selectable item in Table 2. Operators may have any of those approved foreign procedures added to OpSpec/MSpec/LOA C384, Table 2 at the time C384 is issued, or at a later date, by requesting such action of their POI. No additional application process, or HQ approval, is required. The AFS-470 Web site also includes any limitations or restrictions associated with the foreign RNP AR procedures. Should the inspector have any questions regarding the suitability of an operator for any foreign RNP AR approach procedure, he or she should contact AFS-470.

NOTE: The AFS-470 Web site may be found at http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs400/afs470/rnp.

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6) If an operator wants a new (i.e., not currently approved) foreign RNP AR approach to be added to the approved list, they must send a separate application package to the POI. That application package must include a letter of request, the applicable state's Aeronautical Information Publication (AIP) (in English), and the applicable procedure charts. The POI should forward the package, along with his or her recommendations, to AFS-400 via the regional NextGen Branch. AFS-400 will evaluate the foreign RNP AR procedure and determine whether it is suitable for U.S. operators' use.

NOTE: The response to this specific request will likely be provided via separate means following completion of the procedure review process described in Figure 3-67E and, if approved, would result in the foreign RNP AR procedure being added to the C384 template and the foreign procedures list on the AFS-470 Web site.

B. OpSpec/MSpec/LOA C384 Tables 1 and 2. The POI should complete Table 1 and, if applicable, Table 2 of OpSpec/MSpec/LOA C384 in accordance with the following guidelines.

1) Table 1 should reflect the complete M/M/S of the aircraft qualified for RNP AR operations, as provided in the HQ concurrence memo. Table 1 should also fully identify the navigation system (FMS) make and model, as well as software version(s). The HQ memo will also stipulate this information.

2) Table 1 should list any limitations specifically addressed in the HQ memo, as well as any limitations identified by the POI. Table 1 should indicate the lowest permissible RNP value for both flight director (FD)-only and autopilot operations, as provided in the HQ concurrence memo. The inspector should also select, in Table 1, those additional aircraft capabilities specifically identified in the HQ memo. See Figure 3-66C, Sample C384 Table 1—Aircraft and Navigation Systems Eligible for RNP Procedures with AR, for a sample OpSpec/MSpec/LOA C384, Table 1.

NOTE: The POI must ordinarily obtain HQ concurrence before making changes to the contents of Table 1, unless specifically authorized in the HQ RNP AR concurrence memo. For example, the inspector would need HQ concurrence prior to adding aircraft or amending the FMS software version unless the associated manufacturer documentation indicates the change/revision has no effect on RNP AR operations. Alternatively, the inspector would not need HQ concurrence prior to amending the "lowest RNP" value if the HQ concurrence memo authorized a lower RNP value at the end of a specified period or upon the operator's completion of a number of RNP AR approaches.

3) Table 2 is used to name the specific foreign RNP AR approaches and any associated limitations for which the individual operator is authorized to fly. All foreign RNP AR procedures approved for U.S. operators will be available for selection within the C384 template. The operator should identify for the POI which foreign RNP AR procedures they want listed in Table 2 of their C384. See Figure 3-66D, Sample C384 Table 2—Foreign Approaches Authorized for RNP AR Operations, for a sample OpSpec/MSpec/LOA C384, Table 2.

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Figure 3-66C. Sample C384 Table 1 – Aircraft and Navigation Systems Eligible for RNP Procedures with AR

Aircraft M/M/S	Navigation System M/M/Software Version	Limitations	Lowest RNP	Additional Aircraft Capabilities
B-737-700/800	GE Aerospace FMC (2), p/n 171497-05-01, U 10.8A	None	With flight director: RNP .15 With autopilot: RNP .11	1) RF legs. 2) Missed approach requiring less than RNP 1.0.

Figure 3-66D. Sample C384 Table 2 – Foreign Approaches Authorized for RNP AR Operations

Approach Name/Identifier	Special Limitations
Tegucigalpa, Honduras (MHTG) RNAV RNP 02	Flightcrews must coordinate missed approach holding instructions with ATC prior to commencing the approach.

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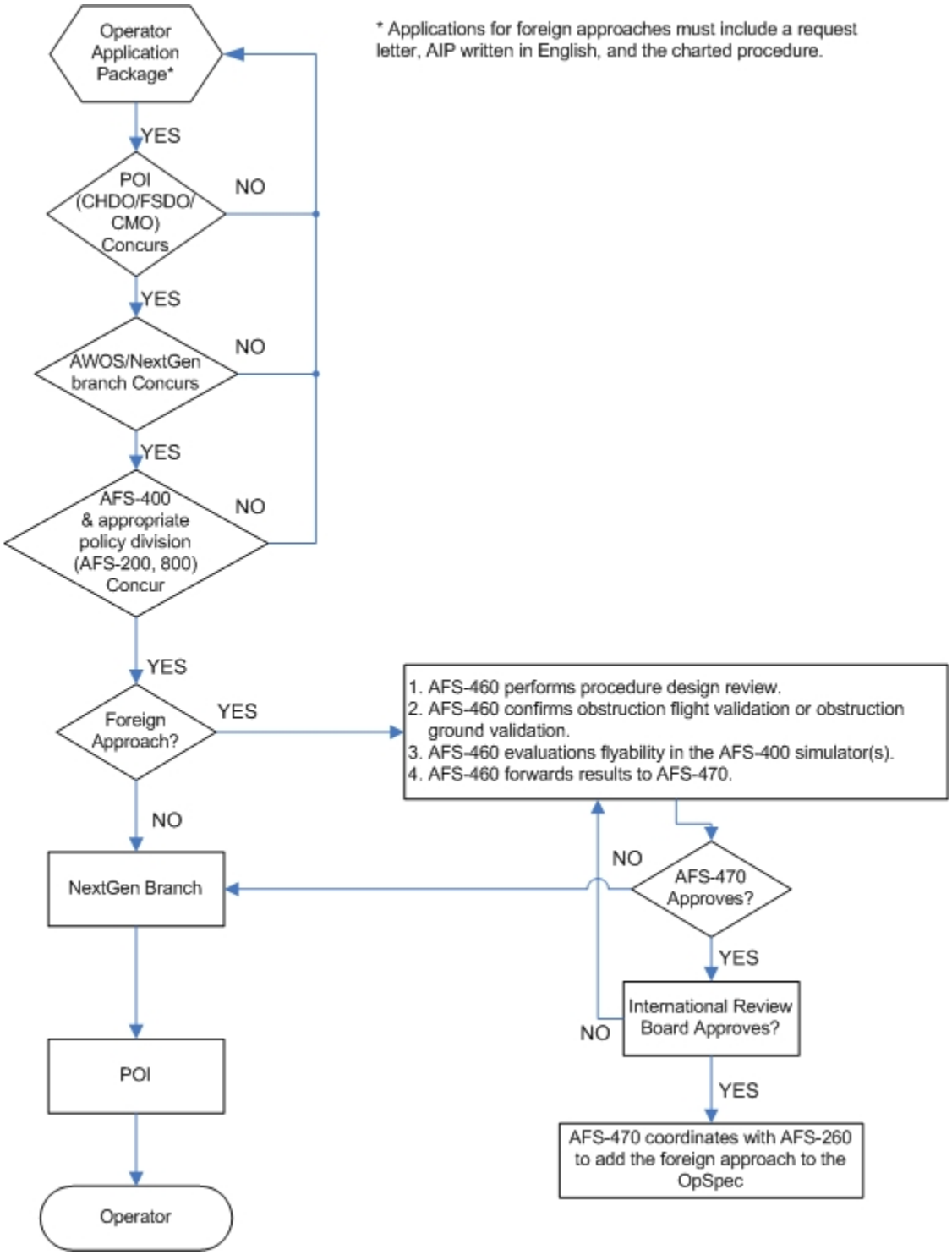
Figure 3-67E. RNP AR Application Flowchart



RESERVED. Paragraphs 3-872 through 3-920.

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VOLUME 3 GENERAL TECHNICAL ADMINISTRATION

CHAPTER 18 OPERATIONS SPECIFICATIONS

Section 5 Part C Operations Specifications—Airplane Terminal Instrument Procedures and Airport Authorizations and Limitations

3-871 GENERAL. Part C is issued to operators who conduct Title 14 of the Code of Federal Regulations (14 CFR) part 91, 91 subpart K (part 91K), 121, 125 (including 125 Letter of Deviation Authority (LODA) holders), or 135 operations with fixed-wing airplanes. It is not issued to part 135 operators who only conduct helicopter operations. Instrument flight rules (IFR) helicopter operators are issued Part H. Part C is not usually issued to part 135 on-demand operators who are restricted to visual flight rules (VFR)-only operations. In rare situations, operations specification (OpSpec) C070 is issued to part 135 VFR-only operators who are authorized to conduct commuter operations. However, for those who operate outside the United States, a letter of authorization (LOA) may be issued to eligible part 91 operators if requested.

NOTE: All 300-series and nonstandard 500-series OpSpecs/management specifications (MSpecs)/training specifications (TSpecs)/letters of authorization (LOA) (Parts A, B, C, D, E, and H) require approval by the appropriate headquarters (HQ) policy division. Title 14 CFR parts 61, 91, 91K, 125 (including the 125 LODA holders), 133, 137, and 141 operators' nonstandard operational requests must be approved by the General Aviation and Commercial Division (AFS-800). Title 14 CFR parts 121, 135, and 142 nonstandard operational requests must be approved for issuance by the Air Transportation Division (AFS-200). Title 14 CFR parts 121, 135, and 145 repair station and all airworthiness nonstandard requests must be approved by the Aircraft Maintenance Division (AFS-300). All Weather Operations (AWO) relating to instrument procedures must be approved by the Flight Technologies and Procedures Division (AFS-400) and AFS-200 or AFS-800, as appropriate. Nonstandard authorizations for 14 CFR part 129 foreign operators require approval from the International Programs and Policy Division (AFS-50).

NOTE: All text added to an OpSpec/MSpec/TSpec or LOA through the use of nonstandard text entered in the nonstandard text block (sometimes referred to as "Text 99") must also be approved by the appropriate HQ policy division. For detailed guidance on the process for obtaining HQ approval for nonstandard authorizations, principal inspectors (PI) must read the guidance contained in Volume 3, Chapter 18, Section 2.

OPSPEC/MANAGEMENT SPECIFICATION (MSPEC)/LETTER OF AUTHORIZATION (LOA) C048—ENHANCED FLIGHT VISION SYSTEM (EFVS) USE ON STRAIGHT-IN INSTRUMENT APPROACH PROCEDURES OTHER THAN CATEGORY II OR CATEGORY III.

A. Authorization. The C048 authorization is optional for certificate holders/operators/program managers conducting airplane operations under 14 CFR parts 91

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subpart K (part 91K), 121, 125 (including the Letter of Deviation Authority (LODA) 125 operators), and 135. C048 authorizes approach to straight-in landing operations below Decision Altitude (DA) or minimum descent altitude (MDA) using a certified enhanced flight vision system (EFVS). C048 is applicable to certificate holders/operators/program managers conducting straight-in instrument approach procedures (IAP) other than Category II Approach (CAT II) or Category III Approach (CAT III), as follows:

1) OpSpec C048 is required to be issued to air carriers conducting operations under parts 121, 135, and 121/135 split certificates using the provisions specified in C048.

2) OpSpec C048 is required to be issued to certificated operators that operate under part 125 using the provisions specified in C048.

3) LOA C048 is required to be issued to operators conducting operations under part 125 that are issued a deviation from the certificate and OpSpec requirements of part 125 (125M) and who will use the provisions specified in C048.

4) MSpec MC048 is required to be issued to those program managers conducting operations under part 91K who will use the provisions specified in C048.

5) An LOA is not required to be issued to part 91 operators (except for part 91K operators who must be issued an MSpec). Part 91 operators are authorized by the regulations to conduct EFVS operations without being issued an LOA.

B. Regulations. Part 91, § 91.175(l) and (m) authorize an EFVS to be used to descend below DA or MDA on straight-in IAPs, other than CAT II or CAT III. These regulations require that the EFVS have a Federal Aviation Administration (FAA) type design approval (type certificate (TC) or Supplemental Type Certificate (STC)), or for foreign-registered aircraft, that the EFVS complies with all of the EFVS requirements of the U.S. regulations. An EFVS uses imaging sensor technologies to provide a real-time enhanced image of the forward external visual scene to the pilot. An EFVS is used by the pilot to determine that the enhanced flight visibility is not less than the visibility prescribed in the IAP to be flown and that the required visual references for descending below DA or MDA down to 100 feet above the touchdown zone elevation (TDZE) are distinctly visible and identifiable using the sensor image when the runway environment is not visible using the pilot's natural vision. EFVS also helps to verify proper runway alignment at night and in low visibility conditions.

NOTE: The authorization associated with this OpSpec, MSpec, or LOA is in keeping with the intent of § 91.175(l) and (m) and does not authorize EFVS to be used to satisfy the § 91.175(e)(2) requirement that an identifiable part of the airport be distinctly visible to the pilot during a circling maneuver at or above MDA, or while descending below MDA. EFVS is permitted to be used to identify the required visual references in order to descend below DA or MDA on straight in IAPs only. An instrument approach with a circle-to-land maneuver is not a straight-in IAP and does not have straight-in minima. While the regulations do not prohibit EFVS from being used during any phase of flight, they do prohibit it from being used for operational credit on anything but a straight-in IAP. EFVS

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may be used during a circle-to-land maneuver provided the visual references required at or above MDA and throughout the circling maneuver are distinctly visible using natural vision. Use of EFVS during a circling maneuver may enable a pilot to see much more of the external scene at night and in low visibility conditions than would be possible using natural vision, thereby enhancing situational awareness (SA).

C. Descending Below DA or MDA. In order to descend below DA or MDA, the following visual references for the runway of intended landing must be distinctly visible and identifiable to the pilot using the EFVS:

1) The Approach Light System (ALS) (if installed); or

2) The following visual references in both subparagraphs C2)a) and b) below:

a) The runway threshold, identified by at least one of the following:

1. The beginning of the runway landing surface,

2. The threshold lights, or

3. The runway end identification lights (REIL).

b) The touchdown zone (TDZ), identified by at least one of the following:

1. The runway TDZ landing surface,

2. The TDZ lights,

3. The TDZ markings, or

4. The runway lights.

3) To descend below 100 feet above the TDZE of the runway of intended landing, the pilot must be able to see the visual references required by § 91.175(l)(4) with his or her natural vision without relying on the EFVS. That is, the enhanced flight visibility observed by use of an EFVS is no longer applicable. At this point, the flight visibility only has to be sufficient for the pilot to distinctly see and identify the lights or markings of the threshold or the lights or markings of the TDZ using natural vision before continuing to a landing.

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D. Required Visual References. The required visual references in § 91.175(l) using EFVS to descend below DA or MDA are different from those required by § 91.175(c) using natural vision. Table 3-15A, Required Visual References, Part 91, § 91.175(c) and (l), provides a comparison of visual reference requirements for both natural vision and EFVS. Generally, the visual reference requirements for EFVS are more stringent than those for natural vision.
For example, § 91.175(c) allows descent below DA or MDA using natural vision when only one of the visual references listed can be seen. For EFVS, § 91.175(l) requires that a pilot either see the ALS or at least one visual reference listed for the threshold environment and one visual reference listed for the TDZ environment. When natural vision is used, the Visual Approach Slope Indicator (VASI) is permitted to be used as a required visual reference for descent below DA or MDA. Under § 91.175(l) using EFVS, however, the VASI cannot be used as a visual reference for descent below DA or MDA using EFVS because the EFVS display is monochromatic. For descent below 100 feet above TDZE using natural vision, § 91.175(c)(3) permits the approach lights to be used as a reference only if the red terminating bars or the red side row bars are visible and identifiable. For EFVS operations below 100 feet above TDZE, the approach lights with red side row bars are not permitted to be used as a visual reference, even though the pilot is required to rely only on natural vision to descend below 100 feet above TDZE. The only visual references permitted to be used for EFVS operations below 100 feet above TDZE are the lights or markings of the threshold or the lights or markings of the TDZ.

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Table 3-15A. Required Visual References, Part 91, § 91.175(c) and (l)

Required Visual References Using ***Natural Vision*** **(14 CFR 91.175(c))**	**Required Visual References Using an** ***Enhanced Flight Vision System*** **(14 CFR 91.175(l))**
For operation below DA or MDA: At least **one** of the following visual references: Approach light system Threshold Threshold markings Threshold lights Runway end identifier lights Visual approach slope indicator Touchdown zone Touchdown zone markings Touchdown zone lights Runway Runway markings Runway lights	**For operation below DA or MDA:** The following references, using the EFVS: Approach light system ***OR*** BOTH paragraphs A and B -- A. The runway threshold, identified by at least one of the following – • beginning of the runway landing surface, • threshold lights, or • runway end identifier lights **AND** B. The touchdown zone, identified by at least one of the following – • runway touchdown zone landing surface, • touchdown zone lights, • touchdown zone markings, or • runway lights.
Descent below 100 feet height above TDZE: At least **one** of the following visual references: Approach light system, as long as the red terminating bars or red side row bars are also distinctly visible and identifiable Threshold Threshold markings Threshold lights Runway end identifier lights Visual approach slope indicator Touchdown zone Touchdown zone markings Touchdown zone lights Runway Runway markings Runway lights	**Descent below 100 feet height above TDZE:** The following references, using natural vision: The lights or markings of the threshold ***OR*** The lights or markings of the touchdown zone

E. Conditions of Approval. Before issuing C048 based on aircraft equipment and operation, inspectors shall ensure that each certificate holder/operator/program manager meets the following conditions:

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1) The authorized aircraft must be equipped with an EFVS certified for conducting operations under § 91.175(l) and (m) and must either have an FAA type design approval (TC or STC) or, for a foreign-registered aircraft, the EFVS must comply with all of the EFVS requirements of the U.S. regulations. Field approvals for EFVS installations are not authorized. An EFVS is an installed airborne system and must include:

a) A head-up display (HUD) or equivalent display.

1. EFVS sensor imagery and aircraft flight symbology must be presented so that they are clearly visible to the Pilot Flying (PF) in his normal position, line of vision, and looking forward along the flightpath.

2. The EFVS display must be conformal. That is, the sensor imagery, aircraft flight symbology, and other cues that are referenced to the imagery and external scene must be aligned with and scaled to the external view.

b) Sensors that provide a real-time image of the forward external scene topography.

c) Computers and power supplies.

d) Indications and controls.

e) Aircraft flight symbology that includes at least the following:

1. Airspeed,

2. Vertical Speed (VS),

3. Aircraft attitude,

4. Heading,

5. Altitude,

6. Command guidance as appropriate for the approach to be flown,

7. Path deviation indications,

8. Flight Path Vector (FPV) cue, and

9. Flight Path Angle (FPA) reference cue.

NOTE: The FPA reference cue must be displayed with the pitch scale and must be selectable by the pilot for the appropriate approach descent angle.

NOTE: An EFVS must not be confused with an Enhanced Vision System (EVS). An EVS is an electronic means to provide the flightcrew with a sensor-derived or enhanced image of the external scene (e.g., millimeter wave radar, Forward

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Looking Infrared (FLIR)). Unlike an EFVS, an EVS does not necessarily provide the additional flight information/symbology required by § 91.175(m). An EVS might not use an HUD and might not be able to present the image and flight symbology in the same scale and alignment as the outside view. This system can provide SA to the pilot, but does not meet the regulatory requirements of § 91.175(m). As such, an EVS cannot be used as a means to determine enhanced flight visibility and descend below the DA or MDA.

2) The pilot can continue the approach below DA or MDA to 100 feet above the TDZE if he or she determines that the enhanced flight visibility observed by the use of a certified EFVS is not less than the minimum visibility prescribed in the straight-in IAP being flown, and the pilot acquires the required visual references prescribed in § 91.175(l)(3). The pilot uses the EFVS to visually acquire the runway environment, confirm lateral alignment, maneuver to the extended runway centerline (RCL), and continue a normal descent from the DA or MDA to 100 feet above the TDZ.

a) A pilot may continue the approach below 100 feet above the TDZE as long as the flight visibility, using natural vision, is sufficient for the required visual references to be seen. In addition, the aircraft must be continuously in a position from which a descent to landing can be made on the intended runway, at a normal rate of descent using normal maneuvers, and for part 121 and 135 certificate holders, at a descent rate that allows touchdown to occur within the TDZ.

b) It should be noted that the rule does not require the EFVS to be turned off or the sensor image to be removed from the HUD in order to continue to a landing without reliance on the EFVS sensor image. In keeping with the requirements of the regulations, however, the decision to continue descending below 100 feet above the TDZE must be based on seeing the visual references required by the rule through the HUD by means of natural vision. An operator may not continue to descend beyond this point by relying on the sensor image displayed on the HUD.

c) EFVS equipage may vary. Some aircraft may be equipped with a single EFVS display. Others may have an EFVS display and a separate repeater display located in or very near the primary field of view (FOV) of the non-flying pilot. Still others may be equipped with dual EFVS displays. The regulations do not require a repeater display or a separate EFVS for the non-flying pilot, but neither do they preclude it. Certificate holders, operators, or program managers should develop procedures for EFVS operations appropriate to the equipment installed and the operation to be conducted. In establishing these procedures, both normal and abnormal or failure modes must be addressed for the various phases of the approach (e.g., before final approach fix (FAF), FAF to DA or MDA, and after reaching DA or MDA).

d) Procedures should support appropriate levels of crew coordination with special emphasis on the transition to and reliance on natural vision. Each EFVS has a specified limit to the FOV. An offset final approach or crosswinds may affect use of the EFVS as well as when the decision is made to rely on natural vision for the primary reference. Also, specific pilot/crew decisionmaking and coordination must be addressed in the segment from FAF to DA or MDA (or point that a decision to rely on natural vision is made) and the EFVS segment

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(from DA or MDA down to 100 feet height above TDZE). The transition from enhanced vision to natural vision for landing is an especially important segment. Certificate holders, operators, or program managers should describe how common SA will be achieved—either procedurally when a single EFVS is used or through a combination of procedures and equipment when a repeater display or dual EFVSs are used.

3) Training requirements with respect to aircraft type (make, model, and series (M/M/S)) and EFVS model/version shall be accomplished in accordance with the Flight Standardization Board (FSB) report for the aircraft and EFVS equipment to be used. If an FSB report was not issued for a specific aircraft type and EFVS model/version, initial EFVS training shall be accomplished in the aircraft type and EFVS model/version to be used, and additional training shall be accomplished when a different EFVS model/version is used on the same aircraft type or when the same EFVS model/version is used on a different make aircraft. It should be noted that the sensor image, fidelity, characteristics, and symbology may differ, necessitating additional training. The flightcrew must be trained in the use of EFVS and demonstrate proficiency conducting straight-in IAPs, other than CAT II or CAT III (e.g., Category I Approach (CAT I) instrument landing system (ILS), nonprecision, approach procedures with vertical guidance (APV), etc.). Part 91K, 121, and 135 operators must have approved training programs. Part 125 operators are not required to have an approved training program. However, pilots of part 125 operators must complete an EFVS training program and must be qualified for EFVS operations by a check airman or an FAA inspector.

a) Pilots should demonstrate knowledge of the regulatory requirements of § 91.175 and part 121, § 121.651, part 125, § 125.381, or part 135, § 135.225, as appropriate, for approach to straight-in landing operations below DA or MDA using an EFVS.

b) Pilots operating an EFVS should be able to demonstrate knowledge and proficiency in the use of this equipment through training and checking as required by the type of operation. As a minimum, pilots should be knowledgeable and proficient in the following areas:

1. The specific sensor technology to include limitations that impact enhanced vision under various environmental conditions (weather, system resolution, external interference, thermal characteristics, variability and unpredictability of sensor performance, etc.).

2. EFVS operational considerations:

- Use of HUD symbology.
- Preflight and warmup requirements, as applicable.
- Controls, modes, adjustments, and alignment of the EFVS/HUD.
- Importance of the Design Eye Position (DEP) in acquiring the proper EFVS image.
- System limitations and normal and abnormal procedures, including visual anomalies such as noise, blooming, and thermal crossover.
- Use of EFVS on precision, nonprecision, and APV approaches.
- Use of caged and uncaged modes of the EFVS, if applicable, in crosswind conditions.

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3. Impact of EFVS on other aircraft systems, such as autopilot minimum use height limitations.

4. Runway lightning systems and ALS.

5. Crew briefings, callouts, and crew coordination procedures.

6. Visual references required by § 91.175(l)(3) and (4).

7. Transition from EFVS imagery to natural vision and recognition of the required visual references.

8. Obstacle clearance requirements for approach and missed approach:

- Flight planning for obstacle clearance on a missed approach (e.g., go-around or balked landing) below DA or MDA;
- Use and significance of a published vertical descent angle (VDA) on IAPs;
- Vertical Path (VPATH), VASI, precision approach path indicator (PAPI), published visual descent points (VDP), calculated VDPs; and
- Use of the FPA reference cue and FPV cue.

9. Missed approach requirements include: loss of required equipment, enhanced flight visibility, or required visual references for various phases of the approach (e.g., FAF to DA or MDA, and after passing DA or MDA).

c) The flightcrew shall not conduct any operations authorized by this paragraph unless they are trained and qualified in the equipment and special procedures to be used. Each pilot in command (PIC) and second in command (SIC) must successfully complete an approved EFVS training program for parts 91K, 121, and 135 operators or a training program for part 125 operators, and must be certified as being qualified for EFVS operations by one of the certificate holder/operator/program manager's check airmen who is properly qualified for EFVS operations or an FAA inspector.

4) The Aircraft Flight Manual (AFM) must contain EFVS provisions appropriate to the EFVS operation authorized.

5) The minimum equipment list (MEL) should include EFVS provisions, if MEL relief for EFVS is sought.

6) Part 121 and 135 operators must incorporate into their maintenance program the EFVS manufacturer's requirements for maintenance and instructions for continued airworthiness. Part 91K and 125 operators must maintain the installed EFVS equipment in accordance with the aircraft manufacturer's or the equipment manufacturer's maintenance instructions.

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OPSPEC/MSPEC C049—DESTINATION AIRPORT ANALYSIS.

A. General. OpSpec C049 is an optional authorization for 14 CFR part 135 certificate holders that have been issued OpSpec A057 as an eligible on-demand operator for reducing effective runway length requirements for turbine-engine powered, large transport-category airplanes that must be met before a flight's release, provided certain requirements are met by the operator. MSpec C049 is an optional authorization for 14 CFR part 91 subpart K (part 91K) fractional ownership operations program managers to reduce effective runway length requirements for turbine-engine powered, large transport-category airplanes that must be met before a flight's release, provided the program manager meets certain requirements.

B. Destination Airport Analysis. FAA regulations governing operations under parts 91K and 135 provide for reducing effective runway length requirements for turbine-engine powered, large transport-category airplanes that must be met before a flight's release, provided the operator meets certain requirements. For destination airports, normal landing distance requirements for part 91K and 135 operations are 60 percent of the available runway length. For alternate airport landing distance requirements, part 91K remains at 60 percent, while part 135 allows for 70 percent of the effective runway length. If an operator desires to reduce such requirements below 60 percent of the available runway length, that operator must meet regulatory requirements in two areas:

1) Part 135 eligible on-demand operator (OpSpec A057 must be issued) or part 91K program experience; and

2) FAA-approved Destination Airport Analysis Program (DAAP). The DAAP must address specific regulatory requirements and be approved for use through that operator's MSpecs or OpSpecs, as applicable.

C. Experience Requirements. An eligible on-demand operator is defined in part 135, § 135.4. Fractional ownership programs must meet the same requirements and are identified in part 91, §§ 91.1053 and 91.1055. The requirements include an on-demand or fractional ownership program operation that meets the following requirements:

1) Two-Pilot Crew. The flightcrew must consist of at least two qualified pilots employed or contracted by the certificate holder.

2) Flightcrew Experience. The crewmembers must have met the applicable requirements of 14 CFR part 61 and have the following experience and ratings:

a) Total flight time for all pilots:

- Pilot in command (PIC)—A minimum of 1,500 hours.
- Second in command (SIC)—A minimum of 500 hours.

b) For multiengine, turbine-powered fixed-wing, and powered-lift aircraft, the following FAA certification and ratings requirements:

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- PIC—Airline transport pilot (ATP) and applicable type ratings.
- SIC—Commercial pilot and instrument ratings.

c) For all other aircraft, the following FAA certification and rating requirements:

- PIC—Commercial pilot and instrument ratings.
- SIC—Commercial pilot and instrument ratings.

3) Pilot Operating Limitations. If the SIC of a fixed-wing aircraft has fewer than 100 hours of flight time as SIC flying in the aircraft make and model, a type rating is required in the type of aircraft being flown, and the PIC is not an appropriately qualified check pilot, the PIC will make all takeoffs and landings in any of the following situations:

a) Landings at the destination airport when a Destination Airport Analysis is required by part 135, § 135.385(f); and

b) In any of the following conditions:

- The prevailing visibility for the airport is at or below three-quarters of a mile;
- The Runway Visual Range (RVR) for the runway to be used is at or below 4,000 feet;
- The runway to be used has water, snow, slush, ice, or similar contamination that may adversely affect aircraft performance;
- The braking action on the runway to be used is reported to be less than “good”;
- The crosswind component for the runway to be used is in excess of 15 knots;
- Wind shear is reported in the vicinity of the airport; and
- Any other condition in which the PIC determines it to be prudent to exercise the PIC’s authority.

4) Crew Pairing. Either the PIC or the SIC must have at least 75 hours of flight time in that aircraft make or model and, if a type rating is required for that type aircraft, either as PIC or SIC.

D. Deviations. The Administrator may authorize deviations from the total flight time requirements of § 91.1053(a)(1) or crew pairing requirements of § 91.1055(b) if the FAA office that issued the OpSpecs or MSpecs, as applicable, finds that the crewmember has comparable experience and can effectively perform the functions associated with the position in accordance with the requirements of this chapter. The Administrator may, at any time, terminate any grant of deviation authority issued under this provision. Grants of deviation may be authorized after consideration of the size and scope of the operation, the qualifications of the intended operating pilots, and the following circumstances:

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1) A newly authorized certificate holder does not employ any pilots who meet the minimum requirements of § 91.1055(b).

2) An existing certificate holder adds to its fleet a new category and class aircraft not used before in its operation.

3) An existing certificate holder establishes a new base to which it assigns pilots who will be required to become qualified on the aircraft operated from that base.

E. DAAP Requirements. DAAP requirements are found in §§ 91.1025 and 135.23. Specifically, if required by § 91.1037(c) or § 135.385, as applicable, the Destination Airport Analysis establishing runway safety margins must include the following elements, supported by aircraft performance data supplied by the aircraft manufacturer for the appropriate runway conditions at the airport(s) to be used, if a reduction below 60 percent of the available runway length is planned:

1) Pilot Qualifications and Experience. The operator is responsible for including all applicable regulatory requirements to establish a pilot's eligibility to reduce effective runway planning requirements below 60 percent of the available runway length. Experience requirements address pilots with less than 100 hours of flight time in type (high minimum), total flight time, and crew pairing limitations (less than 75 hours in type).

2) Aircraft Performance Data to Include Normal, Abnormal, and Emergency Procedures as Supplied by the Aircraft Manufacturer. Landing distance calculations should be completed using FAA-approved procedures and data. Consideration must be given to abnormal and emergency procedures, as some of these procedures may increase approach speeds and consequently, landing distance requirements. Additionally, planned takeoff weight for the departure from that airport should be evaluated before operating into that airport.

3) Airport Facilities and Topography. Consider what services are available at the airport. Services such as communications, maintenance, and fueling may have an impact on operations to and from that airport. Terrain features may figure prominently in or near a particular airport. High, fast-rising terrain may require special approach or DPs, which may impact performance requirements. For example, an aircraft certification criterion uses a 3.5 degree glideslope angle in computing landing distance data. glideslope angles of 2.5 to 3 degrees are common and have the effect of lengthening actual landing distance. Airports that sit on top of hilly terrain or downwind of mountainous terrain may occasionally experience conditions that include gusty conditions or winds shifting from a headwind to a tailwind. Such conditions are an important consideration during the landing maneuver, particularly during the flare, and increase landing distance requirements.

4) Runway Conditions (including contamination). Runway features, such as slope and surface composition, can cause the actual landing distance to be longer than the calculated landing distance. Wet or slippery runways may preclude reductions from being taken and, in fact, require 115 percent of the distance derived from calculations, whether a reduction was used or not. This distance is calculated by increasing the distance required under dry conditions by an additional 15 percent (i.e., if Aircraft Flight Manual (AFM) data show the actual landing distance

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will be 2,000 feet, the effective runway length required is 3,334 feet using 60 percent in this example; if the runway is expected to be wet or slippery upon arrival, the effective runway length required is 3,834 feet). Braking action always impacts the landing distance required as it deteriorates. Always consider the most current braking action report and the likelihood of an update before the flight's arrival at a particular airport.

5) Airport or Area Weather Reporting. Some airports may not have current weather reports and forecasts available for flight planning. Others may have automated observations for operational use. Still others may depend on a nearby airport's forecast for operations. Area forecasts are also very valuable in evaluating weather conditions for a particular operation. Comparing forecasted conditions to current conditions will lend insight to changes taking place as weather systems move and forecasts are updated. Longer flight segments may lean more heavily on the forecast for the estimated time of arrival (ETA), as current conditions may change significantly as weather systems move. For example, if a flight is planned for 5 hours en route, the current conditions may not provide as much insight as a forecast for the arrival time if a cold front is expected to pass through the area while the flight is en route.

6) Appropriate Additional Runway Safety Margins, If Required. Displaced thresholds, airport construction, and temporary obstacles (such as cranes and drawbridges) may impact runway length available for landing. Notices to Airmen (NOTAM) must be consulted before conducting a flight and are a good source of information on items such as these.

7) Airplane Inoperative Equipment. Thrust reversers, on airplanes so equipped, provide some effect of reducing landing rollout distance. However, they are not considered in landing distance performance requirements and data provided by airplane manufacturers during certification. Rather, they provide an added margin of safety when used. If thrust reversers are inoperable or not installed, that additional safety margin does not exist. Also, their effectiveness is directly related to many factors, including pilot technique, reverser deployment rates, engine speeds, and environmental conditions (e.g., wet or contaminated runways in conjunction with crosswinds). Their actual effectiveness varies greatly. Other airplane systems that directly impact landing distance requirements include antiskid and ground spoilers (if installed), brake and tire condition, and landing flap selection, to name a few.

8) Environmental Conditions. Many environmental conditions directly and indirectly affect actual landing distance requirements. Frontal passage usually causes winds to shift, sometimes causing a tailwind component. Tailwinds generally have a significantly greater impact on landing distance than headwinds. Thunderstorms in the vicinity of airports can introduce wind gusts from different directions, including wind shear, to varying degrees that are difficult to predict in advance or during the actual landing maneuver itself. Density and pressure altitudes also directly impact landing distance requirements. Landing distance tables may take these factors into account. However, variations from planned conditions and actual conditions at time of landing can vary and impact actual landing distance requirements.
Stronger-than-forecasted tailwinds en route can cause the airplane to weigh more than projected, causing the actual landing distance to be longer than planned. If icing conditions were encountered while en route and temperatures above freezing are not reached before landing, any ice remaining behind removal devices or on areas that are not protected add additional weight and drag to the airplane, which in turn requires higher airspeeds and longer landing distances.

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9) Other Criteria That Affect Aircraft Performance. Many other variables affect landing distance. Approach speed, flap configuration, airplane weight, tire and brake condition, airplane equipment, and environmental conditions, to name a few, all directly impact required landing distance. With these and many other factors considered, it is the pilot who must apply them through the use of procedures and technique, the latter being highly variable. While specific additives are provided by manufacturer's landing data, a pilot usually applies techniques acquired through experience in dealing with similar circumstances. Pilots may opt for an especially smooth landing on longer runways by "floating" in ground effect, before touchdown. While possibly yielding a smooth landing, this technique will add to the landing distance requirement, as landing data provided by manufacturer's data through the certification process assumes a touchdown rate of descent of 8 feet per second. The following tables provide additional insight into factors that affect landing distance requirements and policies and procedures addressing them should be included in the operator's FAA-approved DAAP.

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Table 3-16. Reduction of Landing Distance Planning Requirements

GENERAL OPERATIONAL CONSIDERATIONS

Certification Criteria	Operational Consideration	Effect on Safety Margin
3.5 degree glideslope angle	2.5 to 3 degrees typical.	Actual landing distance will be longer than calculated landing distance.
8 ft/s touchdown rate of descent	2 to 4 ft/s typical.	Actual landing distance will be longer than calculated landing distance.
Assumes all approach speed additives bled off before reaching the 50 ft height	5 to 10 knots exceedances not uncommon.	Actual landing distance will be longer than calculated landing distance.
	Longer flare distance (“float”).	Actual landing distance will be longer than calculated landing distance.
	Less-than-full braking effort.	Actual landing distance will be longer than calculated landing distance.
	Delays in obtaining full braking configuration.	Actual landing distance will be longer than calculated landing distance.
	Higher temperatures not accounted for (temperature accountability not required).	Actual landing distance will be longer than calculated landing distance.
	Downhill runway slope not accounted for (runway slope accountability not required).	Actual landing distance will be longer than calculated landing distance.
	Icy, slippery, or contaminated runway surface.	Actual landing distance will be longer than calculated landing distance.
	Airplane heavier at time of landing than predicted at time of dispatch.	Actual landing distance will be longer than calculated landing distance.
	Airplane higher than 50 ft over the threshold.	Actual landing distance will be longer than calculated landing distance.
	Airport pressure altitude higher than predicted at time of dispatch.	Actual landing distance will be longer than calculated landing distance.

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OTHER VARIABLE CONSIDERATIONS

Steady-State Variables	Non Steady-State Variables	Actual Operations vs. Flight Test	Actual vs. Forecast Conditions
Runway slope	Wind gusts/turbulence	Flare technique	Runway or direction (affecting slope)
Temperature	Flightpath deviations	Time to activate deceleration devices	Airplane weight
Runway surface condition (dry, wet, icy, texture)		Flightpath angle	Approach speed
Brake/tire condition		Rate of descent at touch down	Environmental conditions (for example, temperature, wind, pressure altitude)
Speed additives		Approach/touchdown speed	Engine failure
Crosswinds		Height at threshold	
		Speed control	

F. Operator Responsibility. Operators are responsible for preparing their DAAP if they desire to reduce landing distance planning requirements below 60 percent of the effective runway length. Operators must ensure that their policies and procedures reflect at least minimum regulatory requirements and adequate policies and procedures before submitting their program to the FAA for approval.

G. Checklist. The checklist is available electronically in the guidance subsystem of the automated Operations Safety System (OPSS) in association with OpSpec/MSpec C049. The checklist should be used to ensure that the operator and its DAAP meet minimum regulatory requirements. This checklist should be completed by the operator and be provided to the FAA office having approval authority, along with the DAAP and request for approval and issuance of OpSpec C049 or MSpec C049, as applicable.

OPSPEC C050—SPECIAL PILOT IN COMMAND AIRPORT QUALIFICATIONS.

A. General. OpSpec C050 is used to authorize 14 CFR part 121 air carrier certificate holders to conduct instrument flight rules (IFR) operations into special airports requiring special airport qualification in accordance with the provisions and limitations of the OpSpec and part 121, § 121.445. For detailed information refer to Volume 4, Chapter 3, Section 5, paragraph 4-602.

B. Operations into Special Pilot in Command (PIC) Qualification Airports. Air carriers conducting domestic, flag, and supplemental operations require the PIC to be qualified

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for operations into special PIC qualification airports. These PICs must be qualified in accordance with § 121.445.

1) OpSpec C050 is used to authorize special PIC qualification airports for domestic, flag, and supplemental part 121 air carriers.

2) The list of special qualification airports can be found in the automated Operations Safety System (OPSS) guidance subsystem in association with OpSpec C050 and at http://fsims.faa.gov/PICResults.aspx?mode=Publication&doctype=OPSS Guidance.

C. PIC Requirements. If both the ceiling and the visibility minimums are not satisfied as detailed in § 121.445(c), then the qualification requirements of § 121.445(b) apply. Section 121.445(b) specifies that for a pilot to serve as PIC on a flight to a special qualification airport, the PIC must have the benefit of one of the following:

1) The PIC, within the preceding 12 calendar-months, has made a takeoff and landing at that airport while serving as a pilot flightcrew member;

2) The second in command (SIC), within the preceding 12 calendar-months, has made a takeoff and landing at that airport while serving as a pilot flightcrew member; or

3) Within the preceding 12 calendar-months, the PIC has qualified by using pictorial means acceptable to the Administrator for that airport.

D. Operator Assessment of Airport Factors. The operator assesses the nature and complexity of certain factors associated with the airport (e.g., high altitude, foreign airport, specific terrain features, unique weather patterns may be present singly or in combination). This assessment determines whether the airport should be included in the air carrier's airport listing in OpSpec C067 or the provisions of OpSpec C050 apply. For instance, an airport with an approved IFR and or visual flight rules (VFR) approach/departure procedure and an unusual characteristic, such as a nearby politically sensitive international boundary or high terrain, may require designation as a special PIC qualification airport. In this case, the airport would need to be listed in OpSpec C067 and the provisions of OpSpec C050 also apply. Refer to Volume 4, Chapter 3, Section 5, paragraph 4-602, and OpSpec C067.

E. Addition and Removal From the Special Airport Qualification List. The air carriers, in conjunction with the Air Transportation Division (AFS-200), will determine any airport additions or deletions from the special airport qualification list. These changes will be made on a quarterly basis.

OPSPEC/MSPEC C051—TERMINAL INSTRUMENT PROCEDURES. C051 is issued to all airplane operators who conduct any flight operations under instrument flight rules (IFR). FAA Order 8260.31, Foreign Terminal Instrument Procedures, current edition, provides direction and guidance on acceptance of foreign Terminal Instrument Procedures (TERPS). Additional information concerning TERPS is in Volume 4, Chapter 2, Section 3. For helicopter authorization, see OpSpec H101.

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OPSPEC/MSPEC/LOA C052—STRAIGHT-IN NONPRECISION, APV, AND CATEGORY I PRECISION APPROACH AND LANDING MINIMA—ALL AIRPORTS.

A. Applicability. OpSpec/MSpec/LOA C052 is applicable to all operators conducting airplane operations under 14 CFR parts 91, 91 subpart K (part 91K), 121, 125 (including the Letter of Deviation Authority (LODA) 125 operators), and 135. C052 specifies the types of instrument approaches the operator is authorized to conduct under instrument flight rules (IFR) and prohibits the use of other types of instrument approaches, and authorizes the lowest straight-in, nonprecision approach procedures with vertical guidance (APV), and Category (CAT) I Approach precision approach and landing minima. OpSpec/MSpec/LOA C052 is applicable to operators as follows:

1) OpSpec C052 is:

- Required to be issued to operators conducting operations under part 121 or 125;
- Required to be issued to operators using turbojets in operations under part 135; and
- Optional for operators conducting operations under part 135 with all other aircraft.

2) LOA C052 is required for operators conducting operations under part 125 that are issued a deviation from the certificate and OpSpec requirements of part 125 (125M).

3) MSpec C052 is required to be issued to those program managers conducting operations under part 91K.

4) For helicopter authorization, see OpSpecs H101, H103, and H117.

5) An optional LOA template is provided to satisfy a request from foreign regulatory authorities for evidence of training and approval to fly Global Navigation Satellite System (GNSS)-based approaches. Unlike the other C052 templates, the inspector only has the option of GNSS Landing System (GLS) or area navigation (RNAV) (GNSS) approaches to lateral navigation (LNAV), LNAV/vertical navigation (VNAV), Localizer Performance with Vertical Guidance (LPV), or Localizer Performance (LP) lines of minima. As a result, this LOA is not a comprehensive list of authorized approaches for the operator, but only a subset to address foreign GNSS-based approaches. The inspector should ensure the applicant presents documentation of capability to perform these operations. Additionally, the inspector should verify evidence of training. After completing these actions, the inspector may select the appropriate lines of minima in Table 1 of the LOA. The inspector may find these resources helpful: information detailed in this section and the current edition of Advisory Circular (AC) 90-107, Guidance for Localizer Performance with Vertical Guidance and Localizer Performance without Vertical Guidance Approach Operations in the U.S. National Airspace System, paragraphs 7, 8, and 9, to determine GNSS-based approach eligibility. Finally, the inspector may also reference Aeronautical Information Manual (AIM) paragraphs 1-1-18 and 1-1-19, and FAA's Performance-Based Flight Systems Branch Web page, for more details.

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NOTE: Technical questions regarding the approaches authorized by C052 should be directed to the Flight Technologies and Procedures Division (AFS-400) at 202-267-8790. Questions regarding the issuance of C052, including operational and training requirements, should be directed to the Air Transportation Division (AFS-200) at 202-267-8166, or General Aviation and Commercial Division (AFS-800) at 202-267-1100.

B. Types of Instrument Approaches Authorized. In OpSpec/MSpec/LOA C052, Table 1 specifies the types of instrument approaches the operator is authorized to conduct under IFR and prohibits the use of other types of instrument approaches. In the Web-based Operations Safety System (WebOPSS), the principal operations inspector (POI) will select the approaches that apply to the operator. Reference the AIM for a detailed description of each approach.

1) Before authorizing a type of instrument approach procedure (IAP), the POI, principal maintenance inspector (PMI), and principal avionics inspector (PAI) must ensure that the operator has revised the training and operations manuals, established that flightcrew training and checking requirements have been met, and that the equipment and systems are appropriate for the types of approaches to be authorized.

2) See Volume 4, Chapter 2, Section 1 for information on required training for various types of approaches.

3) All the approaches approved by OpSpec/MSpec/LOA C052 must be published in accordance with 14 CFR part 97 or the Foreign State Authority.

4) If the certificate holder/program manager/operator is authorized to conduct Global Positioning System (GPS) procedures as listed in Table 1 of OpSpec/MSpec/LOA C052, the aircraft and equipment must be listed in Table 1 of OpSpec/MSpec/LOA B034.

5) Required Navigation Performance (RNP) approaches.

a) RNAV (RNP) approaches are different from RNAV (GPS) approaches. Due to the equipment qualifications and the associated procedures and training for the lower minima of the RNAV (RNP) approaches, they are labeled as “special aircraft and aircrew authorization required (SAAAR).” C052 does not authorize RNP SAAAR operations. Authorization for RNAV (RNP) approaches is through nonstandard OpSpecs (300-series OpSpecs, which require FAA headquarters (HQ) approval), such as OpSpec C384. (Refer to the current edition of AC 90-101, Approval Guidance for RNP Procedures with AR.)

b) Foreign RNP-like procedures not designed to U.S. RNP SAAAR criteria are authorized with a nonstandard C358 authorization. This is a nonstandard OpSpec paragraph that requires FAA HQ approval.

6) Three groups of IAPs may be authorized in OpSpec/MSpec/LOA C052:

a) Column one specifies the Nonprecision Approaches (NPA) without vertical guidance that are authorized by OpSpec/MSpec/LOA C052. Operators must ensure the aircraft

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will not go below the minimum descent altitude (MDA) without the required visual references specified in part 91, § 91.175.

1. Operators authorized OpSpec/MSpec/LOA C073, Vertical Navigation (VNAV) Instrument Approach Procedures (IAP) Using Minimum Descent Altitude (MDA) as a Decision Altitude (DA)/Decision Height (DH), in conjunction with C052 may momentarily descend below the MDA when executing a missed approach.

2. The International Civil Aviation Organization (ICAO) term for an airport surveillance radar (ASR) approach is surveillance radar approach (SRA). Belgium labels these approaches as "SRE." Select "ASR/SRA/SRE" in column one to authorize these approaches.

b) Column two of OpSpec/MSpec/LOA C052 provides for the authorization of APV. These approaches provide vertical guidance, but do not meet the same standards as precision approach systems (e.g., instrument landing system (ILS) and Ground Based Augmentation System (GBAS) Landing System (GLS)). These APVs are trained using an approved method that allows descent to a published decision altitude (DA).

1. APV approaches may contain LPV minima requiring wide area augmentation system (WAAS) and LNAV/VNAV minima that may be flown with either barometric vertical navigation (baro-VNAV) or WAAS-based VNAV. These are authorized in column two of Table 1 of OpSpec/MSpec/LOA C052. See subparagraph C to determine applicable lines of minima. The AIM and the approach chart legend also have this information.

2. Aircraft accomplishing RNP approaches (RNAV (GPS) or RNAV (GNSS) are required to monitor lateral and, if approved for operational credit, vertical guidance deviations. For baro-VNAV approach operations on an RNP approach using the LNAV/VNAV minima, the current vertical deviation limits are +100/-50 feet. Aircraft qualified using the current edition of AC 20-138, Airworthiness Approval of Positioning and Navigation Systems, deviation display requirements for navigation, may use a vertical deviation limit of ±75 feet (or a smaller value). This information must be published in the Airplane Flight Manual (AFM), a Supplemental Type Certificate (STC), or verified by the Aircraft Evaluation Group (AEG).

3. To authorize RNAV APVs, select "RNAV (GPS)" (for part 97 approaches) or "RNAV (GNSS)" (for foreign approaches) from the selectable menu for column two of Table 1 of the OpSpec/MSpec/LOA C052 template.

c) Column three of OpSpec/MSpec/LOA C052 provides for the authorization of CAT I precision IAPs from an electronic glideslope (ILS or GLS).

1. "RNAV/ILS" in column three may only be selected in C052, if the operator meets the requirements in OpSpec/MSpec/LOA C063. For example, the United Arab Emirates publishes approach plates for Dubai titled, "RNAV ILS" or "ILS RNAV." The RNAV portion of the approach constitutes an RNAV Standard Terminal Arrival Route (STAR).

2. For pilot qualifications, the initial qualification segment of the certificate holder's approved ILS precision runway monitor (PRM) training program must be successfully completed prior to conducting ILS PRM approach and landing operations. Initial training

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materials must include published ILS PRM approach chart materials, the AIM, related Notices to Airmen (NOTAM), and the latest available FAA-produced and -approved ILS PRM video titled "ILS PRM Approach for Air Carriers" that each pilot must view, and which appears on the FAA Web site at http://www.faa.gov/training_testing/training/prm/. Pilots trained in PRM operations under previous guidance are not required to retrain using the new version of the video. However, pilots are required to know the change in operations of Traffic Alert and Collision Avoidance System (TCAS) during PRM operations, as well as the required actions in response to a controller instruction. Testing of knowledge objectives is required as part of initial and recurrent qualification training. See subparagraph K.

Figure 3-66E. Sample OpSpec/MSpec/LOA C052 Table 1

Table 1 - Authorized Instrument Approach Procedures

Nonprecision Approaches Without Vertical Guidance	Approaches With Vertical Guidance (APV)	Precision Approach Procedures (ILS & GLS)
ASR/SRA/SRE	LDA w/glideslope	ILS
AZI	RNAV (GPS)	ILS/PRM
AZI/DME	RNAV (GNSS)	PAR
AZI/DME Back Course	LDA PRM	ILS/DME
GPS	LDA PRM DME	RNAV/ILS
LDA	SDF w/glideslope	GLS
LDA/DME	LOC BC w/glideslope	
LOC	RNAV (GPS) PRM	
LOC BC		
LOC/DME		
NDB		
NDB/DME		
RNAV (GPS)		
VOR/DME RNAV		
SDF		
TACAN		
VOR		
VOR/DME		
LOC/BC/DME		

C. GPS Authorization. Volume 4, Chapter 1, Section 2 provides more extensive guidance on GPS and GPS WAAS equipment. The applicant must show that it has the ability to safely conduct GPS operations.

1) Background. GPS approach procedures have evolved from overlays of existing conventional approaches to standalone GPS approaches. (Overlay approaches are predicated upon the design criteria of the ground-based Navigational Aid (NAVAID) used as the basis of the approach and do not adhere to the design criteria for standalone GPS approaches.) Due to this transition, the FAA has revised the titles of the approach procedures to reflect these upgrades. The titles of all remaining GPS overlay procedures have been revised on the approach charts to read "…or GPS" (e.g., very high frequency omni-directional range (VOR) or GPS RWY 24). Therefore, all the approaches that can be used by GPS now contain "GPS" in the title (e.g., "VOR or GPS RWY 24," "GPS RWY 24," or "RNAV (GPS) RWY 24"). During these GPS

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approaches, underlying ground-based NAVAIDs are not required to be operational and associated aircraft avionics need not be installed, operational, turned on, or monitored (although monitoring of the underlying approach is suggested when equipment is available and operational). Existing overlay approaches may be requested using the GPS title. For example, request "GPS RWY 24" to fly the VOR or GPS RWY 24 approach.

NOTE: VOR/distance measuring equipment (DME) RNAV approaches will continue to be identified as VOR/DME RNAV RWY (Number) (e.g., VOR/DME RNAV RWY 24). VOR/DME RNAV, procedures which can be flown by GPS will be annotated with "or GPS" (e.g., VOR/DME RNAV or GPS RWY 24).

2) WAAS. As the satellite navigation evolution continues, WAAS has been developed to improve the accuracy, integrity and availability of GPS signals. WAAS receivers support all basic GPS approach functions and will provide additional capabilities. One of the major improvements provided by WAAS is the ability to generate an electronic glidepath, independent of ground equipment or barometric aiding. There are differences in the capabilities of the WAAS receivers. Some approach-certified receivers will only support a glidepath with performance similar to baro-VNAV, and are authorized to fly the LNAV/VNAV line of minima on the RNAV (GPS) approach charts. Receivers with additional capabilities, such as update rate and integrity limits are authorized to fly the LPV or LP line of minima. WAAS approach procedures may provide LPV, LNAV/VNAV, LP, and LNAV minima, and are charted as RNAV (GPS) RWY (Number) (e.g., RNAV (GPS) RWY 24). For further guidance, please see the AIM or contact AFS-400 at FAA HQ.

NOTE: Some WAAS installations do not support approaches at all, while some do not support LPV or LP lines of minima.

3) Local Area Augmentation System (LAAS). An additional augmentation system, LAAS has been developed to provide precision approaches similar to ILS at airfields. These precise approaches are based on GPS signals augmented by ground equipment. The international term for LAAS is GBAS and the approaches that use the equipment are referred to as GLS or GNSS Landing System approaches. LAAS equipment consists of a GBAS Ground Facility (GGF) supported by a minimum of four accurately surveyed reference stations and an uplink antenna called the very high frequency (VHF) Data Broadcast (VDB) antenna, as well as an aircraft LAAS receiver. The GGF can support multiple runway ends or landing areas served by procedures that are within the service coverage.

a) Similar to LPV and ILS approaches, GLS provides lateral and vertical guidance. By design, LAAS was developed as an "ILS look-alike" system from the pilot perspective. Unlike WAAS, LAAS may support approaches to CAT III Approach minima in the future due to its nearly identical performance standards to ILS in terms of accuracy, integrity, availability, and continuity. Portions of the GLS approach prior to and after the Final Approach Segment (FAS) may be based on RNAV or RNP segments. Therefore, a switch transition between RNAV or RNP and GLS modes may be required. In the future, the GGF may be able to support portions of the procedure outside the FAS.

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b) There are also a few differences from LPV, GLS, and ILS approaches in terms of charting, procedure selection, and identification. The LAAS procedure is titled "GLS Rwy XX" on the approach chart. In the aircraft, pilots will select a five-digit GBAS channel number or associated approach within the flight management system (FMS) menu. Selection of the GBAS channel number by pilot or FMS also tunes the VDB. The VDB provides information to the airborne receiver where the guidance is synthesized. The LAAS procedure is identified by a four alpha-numeric character field referred to as the Reference Path Indicator (RPI) or approach ID. This identifier is analogous with the IDENT feature of the ILS. The RPI is charted. Following procedure selection, confirmation that the correct LAAS procedure is loaded can be accomplished by cross-checking the charted RPI with the cockpit displayed RPI or audio identification of the RPI with Morse code (for some systems). Once selected and identified, the pilot will fly the GLS approach using the same techniques as an ILS.

c) Additional training may be required to authorized GLS approach and landing operations for commercial operators. If the operator is authorized to fly GLS approaches, flightcrews must be able to tune, identify, and conduct all stages of a GLS approach, including different types of missed approaches. However, some or all of these requirements may be demonstrated when conducting other operations, and may require little or no additional training. For example, an RNAV Missed Approach Segment (MAS) on a GLS may be demonstrated on another required approach, and the actions required to tune and identify GLS may require nearly identical actions on the part of the crew, based on the type of avionics used. Inspector guidance will be updated as GLS policy and procedures continue to evolve. If you have any questions on GLS training issues, contact AFS-400 at 202-267-8806.

D. Crew Training and Qualification. Crew training and qualification for all authorized instrument approach operations should meet the requirements in:

- Volume 3, Chapter 19;
- AC 120-53, Guidance for Conducting and Use of Flight Standardization Board Evaluations (current edition);
- Title 14 CFR parts 61, 91, 121, 125, and 135; and
- Advanced Qualification Program (AQP) requirements, if applicable.

E. Authorized Criteria for Approved IAPs. For operations to all U.S. airports, operators are authorized to execute instrument approach operations on IAPs that have been published:

1) Under part 97.

2) Under criteria in the current edition of FAA Order 8260.3, United States Standard for Terminal Instrument Procedures (TERPS).

3) Under any other criteria authorized by AFS-400.

4) By the U.S. military agency operating the U.S. military airport.

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NOTE: All published Standard Instrument Approach Procedures (SIAP) in the United States meet this requirement.

F. Runway Visual Range (RVR). Touchdown zone (TDZ) RVR is controlling for all operations authorized in C052. All other RVR reports are advisory. A mid-field RVR report may substitute for an inoperative TDZ RVR report, except for Special Authorization (SA) CAT I operations as described in subparagraph J.

G. Continuous Descent Final Approach (CDFA) Technique. CDFA is a specific technique for flying the FAS of an IAP as a continuous descent, without level off, from an altitude at or above the final approach fix (FAF) altitude, typically to a point approximately 50 feet above the runway threshold or the point where the flare will begin. For approaches that do not use LNAV/VNAV, LPV, or an ILS/GLS glidepath, a CDFA technique is recommended. When electronic or a prestored computed vertical guidance is not used, Vertical Speed (VS) or Flight Path Angle (FPA) may be used to achieve a CDFA profile. Compared to the "step down" descent approach technique, where the aircraft descends step-by-step prior to the next minimum altitude, a CDFA technique has safety and operational advantages, such as standardization of procedures, simplification of the decision process (one technique and one decision at one point), and use of a stable flightpath. However, precision approach obstacle penetration is not provided.

1) When using a CDFA technique, the decision point to determine if the flightcrew has the required visual references in sight to continue below the MDA may only be treated like a DA in reference to approach profiles and procedures. The operator must add an altitude increment to the MDA (e.g., 50 feet) to determine the altitude at which the missed approach must be initiated in order to prevent descent below the MDA or flight beyond the missed approach point (MAP).

2) The operator should ensure, prior to conducting CDFA, each flightcrew member intending to fly CDFA profiles undertakes training appropriate to the aircraft, equipment, and the different kinds of IAPs to be flown.

H. Reduced Precision CAT I Landing Minima. C052 specifies the equipment usage requirements and part 97 SIAP depiction required for reduced CAT I landing minima. Credit is given for flight director (FD), autopilot, and Head-Up Display (HUD) usage. The POI should allow the use of 1800 RVR minima to runways without centerline (CL) lighting or TDZ lighting, provided the SIAP contains a straight-in ILS minimum with the chart note, "RVR 1800 Authorized with use of FD or AP or HUD to DA." Additionally, the operator issued C052 is allowed to continue to use 1800 RVR line of minima on SIAPs without the above procedural note when the TDZ and/or CL lights are inoperative, if the approach is conducted in accordance with the equipment requirements outlined in C052. This is also reflected in the published inoperative components table for IAPs.

1) FAA Approval. Operators may continue to use the standard CAT I minima based solely on ground lighting systems without alteration of current authorizations or procedures. Operators can utilize reduced CAT I landing minima, provided the SIAP contains a straight-in ILS minimum with the chart note, "RVR 1800 Authorized with use of FD or AP or HUD to DA."

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2) Conditions of Approval. Before issuing the C052 authorization to use reduced CAT I minima based on aircraft equipment and operation, inspectors shall ensure that each operator meets the following conditions:

a) Aircraft and Associated Aircraft Systems. The authorized aircraft must be equipped with an FD, autopilot, or HUD that provides guidance to DA. The FD, autopilot, or HUD must be used in approach mode (e.g., tracking the Localizer (LOC) and glideslope). Inspectors must establish that the FD, autopilot, or HUD are certified for use down to an altitude of 200 feet above ground level (AGL) or lower.

b) Flightcrew Procedures. The flightcrew must use the FD, autopilot, or HUD to DA or to the initiation of a missed approach, unless visual references with the runway environment are established, thus allowing safe continuation to a landing. If the FD, autopilot, or HUD malfunctions or becomes disconnected, the flightcrew must execute a missed approach unless the runway environment is in sight.

c) Flightcrew Qualification. Each member of the flightcrew must have demonstrated proficiency using the FD, autopilot, or HUD (as appropriate) on the most recent instrument proficiency check (IPC) required in part 61, §§ 61.57(e)(2) and 61.58; part 91, § 91.1069; part 121, § 121.441; part 125, § 125.291; and part 135, § 135.297 (as applicable), or in an approved AQP.

I. SA CAT I. OpSpec/MSpec/LOA C052 contains selectable text which authorizes SA CAT I ILS approaches to runways without TDZ or runway centerline (RCL) lights with a radar altimeter DH as low as 150 feet and a visibility minimum as low as RVR 1400 when using HUD to DH. The operator must meet all of the following requirements:

1) Aircraft Requirements. To be approved for SA CAT I, each airplane must be certified and maintained for CAT II Approach operations. Those airplanes and equipment must be listed in Table 2 of OpSpec C059. The authorized airplane(s) must be equipped with the HUD that is approved for CAT II or CAT III operations.

2) Training Requirements. The flightcrew must be current and qualified for CAT II operations. The flightcrew must demonstrate proficiency in ILS approaches and landings to this minimum or to a lower minimum using the HUD prior to commencing any SA CAT I operations. This requirement applies both to initial eligibility for SA CAT I, as well as recurrent training.

3) Operational Requirements.

a) The flightcrew must use the HUD to DH in a mode used for CAT II or CAT III operations. This mode provides greater lateral and vertical flightpath accuracy and more sensitive alarm limits.

b) The flightcrew must use the HUD to DH or to the initiation of a missed approach, unless adequate visual references with the runway environment are established that allow safe continuation to a landing. Should the HUD malfunction during the approach, the

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flightcrew must execute a missed approach unless visual reference to the runway environment has been established.

c) The crosswind component on the landing runway must be 15 knots or less, unless the AFM's crosswind limitations are more restrictive.

d) The part 97 SIAP must have a published SA CAT I minimum.

e) Unlike the other approaches authorized in C052, the mid RVR report may not be substituted for the TDZ RVR report when using SA CAT I minima.

f) Single-pilot operators are prohibited from using SA CAT I landing minima.

J. Instrument Approach Operations at Foreign Airports. C052 specifies the requirements for nonprecision, APV, and precision approach criteria at foreign airports.

1) The procedure must be constructed by the foreign state using criteria that is derived from (or based on) U.S. TERPS or ICAO Doc 8168, Procedures for Air Navigation Services, or it must be based on other criteria approved by AFS-400.

2) Visibility minima must be based on U.S. criteria, European Union (EU) or European Aviation Safety Agency (EASA) criteria, or the criteria in ICAO Doc 9365, Manual of All-Weather Operations.

3) The MDA/minimum descent height (MDH) or DA/H must be at least 200 feet height above touchdown (HAT) or height above threshold (HATh) unless otherwise authorized by an OpSpec/MSpec/LOA.

4) Sequenced flashing lights are not required when determining if the Approach Light System (ALS) is equivalent to U.S. standards.

5) This section also specifies the requirements for determining DA/MDA when an Obstacle Clearance Limit (OCL) or Obstacle Clearance Altitude (OCA) is specified.

K. PRM. The FAA began the Multiple Parallel Approach Program (MPAP) to research whether ILS approaches to parallel runways would improve capacity. The objective was to achieve improvements in airport arrival rates through the conduct of simultaneous, closely spaced parallel approaches. That objective is being met using PRM.

1) ILS PRM, Localizer-Type Directional Aid (LDA) PRM and RNAV (GPS) PRM Approaches with Vertical Guidance. Where parallel RCLs are less than 4,300 feet apart, but not less than 3,000 feet apart, simultaneous ILS PRM approaches may be conducted. Similarly, where parallel RCLs are less than 3,000 feet apart, but no less than 750 feet apart, simultaneous offset instrument approaches (SOIA) may be conducted using an ILS and an LDA approach with glideslope. Those approaches are labeled "ILS PRM" and "LDA PRM," respectively, on instrument approach charts. Air traffic control (ATC) provides one PRM monitor controller for each runway to provide intrusion protection for the no transgression zone (NTZ) located between the two final approach courses. Whenever the runway spacing

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(or in the case of SOIA, the approach course spacing) is less than 3,600 feet and at least 3,000 feet, NTZ monitoring is accomplished using a special PRM radar. Utilization of vertical guidance is required for all PRM approaches. RNAV (GPS) PRM approaches may be substituted for the ILS PRM and/or the LDA PRM approach. Pilots must have completed PRM training prior to conducting any PRM approach. An ILS PRM and its overlayed RNAV (GPS) PRM approach are procedurally equivalent. LDA PRM and its overlayed RNAV (GPS) PRM approach are procedurally equivalent. Pilots may request the RNAV (GPS) PRM approach in lieu of the ILS PRM or LDA PRM approach; however, they may only conduct the approach when specifically cleared to do so by ATC.

2) The Breakout Maneuver. Working with industry, the FAA conducted extensive analyses of simulation data and determined that the implementation of PRM and SOIA approach operations to closely spaced parallel runways requires additional crew training. The primary focus of this training is to raise each pilot's situational awareness in ILS PRM, LDA PRM, and RNAV (GPS) PRM operations. The breakout maneuver must be flown manually.

a) Traffic Alert. One important element of the additional training is the pilot's understanding of the difference between a normal missed approach initiated by a pilot, and a breakout initiated by a PRM final monitor controller. It must be clear to flightcrews that the words "Traffic Alert," when used by the final monitor controller, signal critical instructions that the pilot must act on promptly to preserve adequate separation from an airplane straying into the adjoining approach path.

b) ATC Breakout Maneuver Command to Turn and/or Descend, Climb, or Maintain Altitude. The flightcrew must immediately follow the final monitor controller's vertical (climb/descend/maintain altitude) and horizontal (turn) commands. If the flightcrew is operating the TCAS in the Traffic Advisory (TA)/Resolution Advisory (RA) mode and receives a TCAS RA at any time while following the final monitor controller's command, the flightcrew will simultaneously continue to turn to the controller's assigned heading and follow the vertical guidance provided by the TCAS RA.

c) Time-to-Turn Standard. Regardless of airplane type, tests and data analysis revealed that pilots normally passed through an angle of bank of at least 3 degrees while rolling into a breakout turn within 10 seconds of receiving a breakout command. (Bank angles of between 20 and 30 degrees were normally achieved during the breakout.) The operator must show that its pilots can readily meet this time-to-initiate-turn standard prior to the POI authorizing ILS/PRM or LDA/PRM approaches in OpSpec/MSpec/LOA C052. Flightcrews are required to manually fly the breakout maneuver unless otherwise approved by AFS-200 or AFS-800, as appropriate (AFS-200 and AFS-800 must have concurrence from AFS-400 to approve breakout in auto modes). The air carrier should demonstrate its ability to meet this standard by having representative pilots perform the breakout maneuver while the POI or the POI's designated representative observes. The demonstration should conform to procedures contained in the air carrier's approved operating manual for its flightcrews. The commercial operator should submit procedures to its POI for this authorization.

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NOTE: In a breakout, ATC will never command a descent below the applicable minimum vector altitude (MVA), thus assuring that no flight will be commanded to descend below 1,000 feet above the highest obstacle during a breakout.

3) ILS/PRM, LDA/PRM, RNAV (GPS) PRM and the Use of TCAS. TCAS may be operated in TA/RA mode while executing ILS PRM, LDA PRM or RNAV (GPS) PRM approaches. However, when conducting these operations, pilots must understand that the final monitor controller's instruction to turn is the primary means for ensuring safe separation from another airplane. Pilots must bear in mind that TCAS does not provide separation in the horizontal plane. TCAS accomplishes separation by commands solely in the vertical plane. Therefore, during final approach only the final monitor controller has the capability to command a turn for lateral separation. Flightcrews are expected to follow any ATC instruction to turn.

a) ATC Command to Turn with TCAS RA. In the unlikely event that a flightcrew should simultaneously receive a final monitor controller's command to turn and a TCAS RA, the flightcrew must follow both the final monitor controller's turn command and the TCAS RA's climb or descent command.

b) TCAS RA Alone. In the extremely unlikely event that an RA occurs without a concurrent breakout instruction from the final monitor controller, the pilot should follow the RA and advise the controller of the action taken as soon as possible. In this instance, it is likely that a breakout command would follow.

c) TCAS Not Required. An operative TCAS is not required to conduct ILS/PRM or LDA/PRM approaches.

4) Pilot Training. See Volume 4, Chapter 2, Section 5 for information on pilot training required prior to authorizing PRM approaches.

5) ILS PRM, LDA PRM, and RNAV (GPS) PRM Authorizations. Operators will be authorized ILS PRM, LDA PRM, and RNAV (GPS) PRM approaches in the OpSpec/MSpec/LOA C052 templates. A definition of RNAV (GPS) PRM has been added to the A002 template.

OPSPEC/LOA C054—SPECIAL LIMITATIONS AND PROVISIONS FOR INSTRUMENT APPROACH PROCEDURES AND IFR LANDING MINIMUMS.

A. General. C054 is issued to all operators conducting operations under 14 CFR part 121, 125, and 125 (LODA A125). It is also issued to operators who conduct turbine-powered airplane operations under 14 CFR part 135. It is not issued to part 135 operators who do not operate turbine-powered airplanes unless that operator also conducts operations under part 121. C054 specifies the Runway Visual Range (RVR) landing minimum equivalent to the published RVR landing minimum that must be used by high-minimum pilots (less than 100 hours in aircraft type).

B. PIC Qualifications. For part 121 and part 135 operations, C054 also specifies that before a pilot in command (PIC) of a turbojet can conduct an instrument approach with visibility conditions reported to be below ¾ statute mile or RVR 4000 (basic turbojet landing minimums),

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the pilot must be specifically qualified and authorized to use standard landing minimums. See Volume 4, Chapter 2 for information on the qualification and authorization requirements to use the standard landing minimums.

C. PIC Takeoff Guidance. Further, for part 121 and part 135 operations, after the PIC has been qualified to use lower landing minimums, and the destination visibility conditions are forecast to be less than ¾ statute mile or RVR 4000, the pilot of a turbojet airplane shall not take off unless:

1) The destination runway length has been determined prior to takeoff to be at least 115 percent of the runway field length required by the provisions of part 121, § 121.195(b) or part 135, § 135.385(b), as appropriate, and

2) Precision instrument (all weather) runway markings or runway centerline (RCL) lights must be operational on that runway.

3) Once airborne, additional consideration of landing field length by the flightcrew is not required for normal operations. If unforecasted adverse weather or failures occur, the crew and aircraft dispatchers should consider any adverse consequences that may result from a decision to make a landing. The runway length needed in these changed circumstances must be determined considering the runway in use, runway conditions, current weather, Aircraft Flight Manual (AFM) limitations, operational procedures, and aircraft equipment status at the time of landing.

OPSPEC/MSPEC/LOA C055—ALTERNATE AIRPORT IFR WEATHER MINIMUMS.

A. Applicability. OpSpec/MSpec/LOA C055 is an optional authorization available to the operator conducting airplane operations under 14 CFR parts 91 subpart K (part 91K), 121, 125 (including the Letter of Deviation Authority (LODA) 125 holders), and 135. C055 provides a table from which the operator derives alternate airport instrument flight rules (IFR) weather minimums in those cases that require an alternate airport.

NOTE: Technical questions regarding the alternate airports and approaches authorized by C055 should be directed to the Flight Technologies and Procedures Division (AFS-400) at 202-267-8790. Questions regarding the issuance of C055, including operational and training requirements, should be directed to the Air Transportation Division (AFS-200) at 202-267-8166, or General Aviation and Commercial Division (AFS-800) at 202-267-1081.

B. Airports With At Least One Operational Navigation Facility. The first row of Table 1, Alternate Airport IFR Weather Minimums, is for airports with at least one operational navigation facility providing a straight-in Nonprecision Approach (NPA) procedure, a Category (CAT) I precision approach, or, when applicable, a circling maneuver from an instrument approach procedure (IAP). The operator obtains the required ceiling and visibility by adding 400 feet to the minimum descent altitude (MDA) or, when applicable, the authorized decision altitude/height (DA/H) and by adding 1 statute mile (sm) (1,600 meters (m)) to the authorized landing minimum. Additives are applied only to the height value to determine the required ceiling.

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C. Airports With At Least Two Operational Navigation Facilities. The second row of Table 1 is for airports with at least two operational navigation facilities, each providing a straight-in NPA procedure or a straight-in CAT I precision approach procedure to different suitable runways. The operator obtains the required ceiling and visibility by adding 200 feet to the higher MDA or DA/H of the two approaches used and by adding ½ sm (800 m) of visibility to the higher authorized landing minimum of the two approaches used. Additives are applied only to the height value to determine the required ceiling.

NOTE: For operations outside the United States, because of variations in the international metric weather forecasting standard, 700 m may be used in lieu of 800 m.

D. Higher Alternate Minimums When Using Two Operational Navigation Facilities. In some cases, it is possible to have higher alternate minimums when using two operational navigation facilities than when using one.

1) For example, if an airport with one operational navigation facility providing a straight-in NPA procedure had an MDA of 400 feet and 1 sm visibility, the operator would have alternate minimums of 800 feet and 2 sm visibility (400 feet (procedure MDA) + 400 feet and 1 sm (procedure visibility) + 1 sm).

2) In this example, an airport has two operational navigation facilities each providing a straight-in approach procedure to a different suitable runway. One straight-in approach has a DA of 400 feet and ¾ sm visibility, and the other straight-in approach has an MDA of 600 feet and ½ sm visibility. The alternate minimums would be 800 feet and 1¼ sm. (600 feet (highest DA/H or MDA of the two approaches) + 200 feet = 800 feet, and ¾ sm (highest required visibility of the two approaches) + ½ sm = 1¼ sm.)

3) In some instances, deriving alternate minimums utilizing only one operational navigation facility will provide for lower minimums than utilizing the two operational navigation facility method. When this situation exists, the operator may elect to consider the airport as having only one operational navigation facility and, therefore, choose either method contained in Table 1 to derive the lowest alternate minimums for that airport.

NOTE: In determining alternate airport weather minimums, the operator must not use any published IAP, which specifies that alternate airport weather minimums are not authorized (NA). On charts produced by the government, this is depicted by "Alternate Minimums Not Authorized" symbol. A NA Other providers, such as Jeppesen, may not use this symbol.

E. Using Two Different Runways. Two different runways may be the different ends of the same physical runway surface (e.g., runway 4 and runway 22 are two different runways). When determining the suitability of a runway, wind (including gust) must be forecast to be within operating limits (including reduced visibility limits) and should be within the manufacturer's maximum demonstrated crosswind. All conditional forecast elements below the lowest applicable operating minimums must be taken into account. The operator should also take

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into account any other potential runway limitations, such as Notices to Airmen (NOTAM), which may affect the landing at the estimated time of arrival (ETA).

F. Credit for Alternate Minimums. OpSpec/MSpec/LOA C055 allows credit for alternate minimums based on engine inoperative CAT II or CAT III capability. Additional selectable rows for Table 1 list the appropriate credit based on either CAT II or CAT III. To authorize this credit, principal operations inspectors (POI) will place a check mark in the appropriate selectable row of C055 Table 1. When authorized in C055, flightcrews who are CAT II and/or CAT III trained and qualified may take credit for engine inoperative CAT II/III qualified aircraft and adjust the minimums accordingly. The alternate minimums are based on CAT III engine inoperative requirements. The following are some, but not all, of those requirements. Refer to criteria in the current edition of Advisory Circular (AC) 120-28, Criteria for Approval of Category III Weather Minima for Takeoff, Landing, and Rollout, for further engine inoperative requirements.

1) Aircraft receives approval for engine inoperative CAT III.

2) The operator establishes appropriate procedures.

3) The flightcrew receives performance and obstruction clearance information.

4) The flightcrew receives appropriate aircraft configuration information, wind limits, and other appropriate information.

G. Use of Global Positioning System (GPS)-Based IAP Minimums at an Alternate Airport. Alternate airport planning policy for the operator is based on their equipage. Use of GPS-based IAP minimums as the departure, en route, or destination alternate airport is authorized in the U.S. National Airspace System (NAS) and in any foreign State where GPS-based (or other Global Navigation Satellite System (GNSS)-based) approaches are authorized for alternate planning. To determine if a foreign State authorizes GPS-based (or other GNSS-based, including Satellite Based Augmentation System (SBAS)-based) approaches for alternate planning, consult the applicable Aeronautical Information Publication (AIP). The wide area augmentation system (WAAS) navigation-equipped operator may still plan for GPS-based IAP (e.g., GPS, Area Navigation (RNAV) (GPS), or RNAV Required Navigation Performance (RNP)) at both the destination and the alternate airport. The GPS navigation-equipped operator with fault detection and exclusion (FDE) capability, but without WAAS navigation equipment may now plan for GPS-based IAP at either the destination or the alternate airport. Finally, the GPS- or WAAS-equipped operator with barometric vertical navigation (baro-VNAV) equipment may plan to use this capability at either destination or alternate airports.

1) Use Table 2, GPS-Based IAP Authorizations, to authorize GPS-based IAP minimums at the alternate airport. Input airplane information in the “Make/Model/Series” (M/M/S as used in the “Job Aid”) column of Table 2. In the “Conditions and Limitations” column, select the applicable optional subparagraphs b(8)(e)(i)-(iv) for part 121, 125, 135, and 91K or subparagraphs 2h(5)(A)-(D) for part 125 LODA holders.

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2) If there are mixed fleets (e.g., retrofits or other changes), verify that the operator has a method to track various equipage levels of the fleet, and provides that information to appropriate flightcrew and ground personnel.

3) If the user is not equipped with FDE or WAAS, select "N/A" from the drop-down lists in the "Conditions and Limitations" and "Remarks" columns of Table 2.

4) For additional clarity, refer to the job aid and see Figure 3-196, GPS-Based Instrument Approach Procedures.

H. Use of GPS-Based IAP at an Extended Operations (ETOPS) Alternate Airport. The use of a GPS-based IAP at an ETOPS alternate airport requires prior approval from AFS-200. A part 121 and/or 135 certificate holder seeking this type of authorization will need to show that it has adequate procedures, flight planning capability, pilot training, and for part 121 operations, aircraft dispatcher or flight following personnel training (based on the kind of operation, flag or supplemental) to support the authorization. The certificate-holding district office (CHDO) with oversight responsibility of a certificate holder seeking this level of authorization is responsible for obtaining AFS-200's approval. The CHDO must request this approval via memo and provide the appropriate supporting documentation to AFS-200 (see subparagraph H3). There are two optional subparagraph b(10) text selections available in the C055 template for parts 121 and 135 (including 121/135 combination certificates). Both options authorize the use of a GPS-based IAP at an ETOPS alternate. Option 1 allows a certificate holder to use a GPS-based IAP when receiver autonomous integrity monitoring (RAIM) predictions indicate there will be a limited unavailability of RAIM at the ETOPS alternate. Option 2 authorizes the use of a GPS-based IAP at an ETOPS alternate airport provided there is no predicted loss RAIM. Both options are based on specific conditions and limitations. The CHDO will select one of the two options. The CHDO may not grant the certificate holder the authority to exercise both options. The CHDO's memo to AFS-200 must specify which optional subparagraph b(10) the CHDO is seeking approval to authorize.

1) Option 1: This selectable option allows for use of a GPS-based IAP at a designated ETOPS alternate when, from the earliest time to the latest time the airplane would arrive at the ETOPS alternate, a limited unavailability RAIM is predicted at the airport. This is allowable only when all of the conditions and limitations of this option are followed. Use of a GPS-based IAP at a designated ETOPS alternate airport under Option 1 may be authorized with approval from AFS-200, in accordance with the procedures listed below.

a) The certificate holder is authorized to use GPS-based IAP that meet the requirements in subparagraph b(8) of the OpSpec template and the alternate airport weather minimums derived from Table 1 to designate an ETOPS alternate airport.

b) The certificate holder may designate an ETOPS alternate airport that has a GPS-based IAP as the only IAP at that airport if the certificate holder meets the following requirements:

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1. The certificate holder must establish RAIM prediction for any designated ETOPS alternate airport during the entire time from the earliest to the latest time an airplane would arrive at the designated ETOPS alternate airport.

2. In the event of a predicted, continuous loss of RAIM (from the earliest time to the latest time the airplane would arrive), the certificate holder must not use the airport as an ETOPS alternate airport.

3. In the event of any limited unavailability of RAIM, the certificate holder must:

- Notify the flightcrew of any limited unavailability of RAIM at that ETOPS alternate.
- Prior to departure, ensure adequate fuel is onboard the airplane to account for the time period of predicted RAIM unavailability at the ETOPS alternate. This fuel must be calculated by adding the fuel required to account for the time of the predicted RAIM unavailability to the fuel required to fly to the affected ETOPS alternate from the Equal Time Point (ETP).
- Ensure the time of predicted RAIM unavailability plus the time to and from the ETP to the ETOPS alternate airport does not exceed the time specified for the airplane's most time-limited ETOPS significant system (including cargo fire suppression) minus 15 minutes.

2) Option 2: This option does not allow for any unavailability of RAIM at the ETOPS alternate airport during the period from the earliest time to the latest time the airplane would arrive at the ETOPS alternate. Use of a GPS-based IAP at an ETOPS alternate under Option 2, may be authorized with approval from AFS-200, in accordance with the procedures listed below.

a) The certificate holder is authorized to use GPS-based IAP that meet the requirements in subparagraph b(8) of the OpSpec template and the alternate airport weather minimums derived from Table 1 to designate an ETOPS alternate airport.

b) The certificate holder may designate an ETOPS alternate airport that has a GPS-based IAP as the only IAP at that airport if the certificate holder meets the following requirements:

1. The certificate holder must establish RAIM prediction for any designated ETOPS alternate airport during the entire time from the earliest to the latest time an airplane would arrive at the designated ETOPS alternate airport.

2. In the event of any predicted loss of RAIM, limited or continuous, (at any time during the period from the earliest time to the latest time the airplane would arrive) the certificate holder must not use the airport as an ETOPS alternate airport.

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3) Required Documentation for Submission to AFS-200. When submitting a request to AFS-200 for approval to issue the authority to a certificate holder to use a GPS-based IAP at an ETOPS alternate airport, send the request directly to the manager of AFS-200. (Do not send the memo through the regional Flight Standards division (RFSD)). Along with the memo, the CHDO must include the following information with the request. AFS-200 will not approve the CHDO to issue the authorization until AFS-200 determines the supporting documentation is adequate to support the authorization:

a) A copy of the certificate holder's RAIM prediction procedures.

b) A sample ETOPS flight plan and dispatch release that includes, or has attached to it, RAIM predictions. For Option 1, the flight plan must also depict the fuel account for the predicted RAIM unavailability at the ETOPS alternate.

c) A copy of the certificate holder's pilot/aircraft dispatcher/flight following personnel (depending on kind of operation) training that addresses this particular authority.

Figure 3-196. GPS-Based Instrument Approach Procedures

GPS-based IAP at Either Destination or Alternate (not both)					
Paragraph Reference	TSO	FDE	BaroVNAV	Opsec/MSpec /LOA	Alternate Restrictions
i	TSO-C129( ) or TSO-C196( )	yes	no	C052	LNAV MDA
ii	TSO-C129( ) or TSO-C196( )	yes	yes	C052	LNAV MDA or LNAV/VNAV DA
ii	TSO-C129( ) or TSO-C196( )	yes	yes	C052 & C384	RNAV (RNP) no lower than RNP 0.30 DA
GPS-based IAP at Destination and Alternate (may be either or both)					
iii	TSO-C145( ) or TSO-C146 ( )	yes	no	C052	LNAV MDA
iv	TSO-C145( ) or TSO-C146 ( )	yes	yes	C052	LNAV MDA or LNAV/VNAV DA
iv	TSO-C145( ) or TSO-C146 ( )	yes	yes	C052 & C384	RNAV (RNP) no lower than RNP 0.30 DA

I. Definition of "Two Operational Facilities."

1) The words "two operational facilities" mean that in the event there is a single failure of one facility, the other would be operational. For example, an airport has instrument landing system (ILS) RWY 2 with 110.9 as the frequency and (I-EZD) as the identifier. Additionally, this airport has an ILS or Localizer (LOC) RWY 34 with 110.7 as the frequency and (I-BNE) as the identifier. This airport has two distinct ILS frequencies and two ILS facilities.

2) On the other hand, an airport could have a single transmitter frequency to support ILS approaches at each runway end. Although the transmitter frequency is the same, there is a different identifier for each runway end. For example, an airport has ILS RWY 16 with 110.7 as the frequency and (I-RGJ) as the identifier. Additionally, this airport has ILS RWY 34 which uses the same transmitter and frequency of 110.7 and (I-BNE) as the identifier. This airport has one ILS frequency and one ILS facility.

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J. Helicopter Authorizations. For helicopter authorizations, see OpSpec/MSpec H105, Alternate Airport IFR Weather Minimums.

OPSPEC C056—IFR TAKEOFF MINIMUMS, PART 121 OPERATIONS—ALL AIRPORTS. C056 is issued to all operators who conduct operations under 14 CFR part 121.

A. General. C056 did not change in policy but was split into two paragraphs for programming purposes in the new automated Operations Safety System (OPSS): C056 and C078/C079.

B. Using Lower-Than-Standard Takeoff Minimums. If an operator is not authorized to use lower-than-standard takeoff minimums, C078 will not be issued. See Volume 4, Chapter 2 for information concerning requirements an operator must meet before being authorized to use lower–than-standard takeoff minimums. If an operator conducts operations under both 14 CFR parts 121 and 135, C056 and C057 may need to be issued. For more information, see the following:

- Part 121, §§ 121.649 and 121.651(a)(1).
- Title 14 CFR part 91, § 91.175(f).
- Volume 4, Chapter 2.
- Flight Standardization Board (FSB) report for specific aircraft.

C. Availability to Part 91 Subpart K (Part 91K) Program Managers. This is not available or applicable to part 91K program managers. See § 91.1039(e).

OPSPEC C057—IFR TAKEOFF MINIMUMS, PART 135 OPERATIONS—ALL AIRPORTS. C057 is issued to all 14 CFR part 135 operators who conduct instrument flight rules (IFR) airplane operations to authorize an operator to use takeoff minimums equal to the lowest straight-in landing minimums (part 135, § 135.225(h)).

A. Issuance for Conducting IFR Standard Takeoff Minimums. C057 is issued for conducting IFR standard takeoff minimums, which are defined as 1 statute mile visibility or Runway Visual Range (RVR) 5,000 for airplanes having two engines or fewer, and one-half statute mile visibility or RVR 2,400 for airplanes having more than two engines. RVR reports, when available for a particular runway, must be used for all takeoff operations on that runway. All takeoff operations, based on RVR, must use RVR reports from the locations along the runway specified in this paragraph.

B. Single Engine IFR (SEIFR) Authorization. The principal operations inspector (POI), principal maintenance inspector (PMI), and principal avionics inspector (PAI) must coordinate the issuance of OpSpecs A046, C057, and D071 once the operator has met the requirements for SEIFR operations. All three OpSpec paragraphs must be issued for SEIFR authorization.

1) OpSpec A046 contains specific maintenance and operational limitations and provisions necessary for the authority to operate under IFR while carrying passengers in a single-engine airplane.

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2) The standard OpSpec paragraph C079 is not authorized for SEIFR operations. SEIFR part 135 passenger-carrying operations are not authorized lower-than-standard takeoff minimums at any airport without concurrence and authorization from FAA headquarters (HQ). Thus, for SEIFR operations there is no automatic relief from the requirements of § 135.225(e).

3) OpSpec D071 contains requirements for airplanes operated in SEIFR operations.

C. Subparagraph Selectable for Issuance of C057. The following subparagraph is selectable for issuance in C057, if applicable:

> "c. When takeoff minimums are equal to or less than the applicable standard takeoff minimum, the certificate holder is authorized to use a takeoff minimum equal to the lowest authorized straight in CAT I IFR landing minimum applicable to the certificate holder for that particular airport. The Touchdown Zone RVR report, if available, is controlling."

D. Subparagraph Selectable for Issuance of C057 for Turbine-Powered, Single-Engine Airplanes. The following subparagraph is selectable for issuance in C057 for turbine-powered, single-engine airplanes only:

> "d. Notwithstanding the requirements of the "NOTE" in subparagraph b above, the certificate holder is authorized lower than standard takeoff minimums for its part 135 single engine passenger carrying operations in its turbine powered single engine airplanes only per the limitations and provisions of C057 including subparagraph c."

E. Authorizing Part 135 Operators to Use Takeoff Minimums Lower Than One-Half Mile or RVR 1,800. OpSpec C079 is applicable for authorizing the part 135 operator to use takeoff minimums lower than one-half mile or RVR 1,800. See the current edition of Advisory Circular (AC) 120-29, Criteria for Approval of Category I and Category II Weather Minima for Approach, for information concerning requirements an operator must meet before being authorized to use lower-than-standard takeoff minimums.

F. Other Applicability and Authorizations. C057 is not applicable or available for 14 CFR part 91 subpart K (part 91K) program managers. See part 91, § 91.1039(e). For helicopter authorizations, see OpSpecs H106 and H116.

OPSPEC C058—SPECIAL RESTRICTIONS FOR FOREIGN TERMINAL INSTRUMENT PROCEDURES.

A. General. C058 is issued only when the principal operations inspector (POI) (or region responsible for the geographic area where a foreign airport is located) finds it necessary to place special restrictions on a foreign terminal instrument procedure.

B. Purpose and Applicability of Restrictions. These special restrictions to foreign Terminal Instrument Procedures (TERPS) are applicable to U.S. air carriers (14 CFR parts 121 and 135) and program managers (14 CFR part 91 subpart K (part 91K)). The purpose of these special restrictions is to establish an equivalency between the foreign terminal instrument

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procedure and the International Civil Aviation Organization (ICAO) Procedures for Air Navigation Services Aircraft Operations (PANS-OPS) or TERPS criteria.

C. Other Guidance. FAA Order 8260.31, Foreign Terminal Instrument Procedures, current edition, provides direction and guidance on how to place restrictions on foreign instrument procedures. This order also contains a list of foreign TERPS that are currently restricted. If an operator conducts flights to any airport listed in the appendices of this order, the POI must issue C058 with the name of the airport, airport identification, procedure identification, and special restrictions listed.

D. Considerations and Procedures for Chek Lap Kok Airport. On July 6, 1998, Hong Kong's new airport (Chek Lap Kok) opened; at the same time, Hong Kong's old airport (Kai Tak) closed. Since there has been no revision to the appendices of Order 8260.31, we recommend removing the reference to Kai Tak airport from C058 and referencing the Chek Lap Kok airport. Consideration and procedures will be established for the following at the new Chek Lap Kok airport:

1) Loss of navigation capability;

2) Severe reduction of aircraft climb performance due to engine or aircraft system failures; and

3) Escape paths for the above situations.

E. Helicopter Authorization. For helicopter authorization, see OpSpec/MSpec H107.

OPSPEC/MSPEC/LOA C059—CATEGORY II INSTRUMENT APPROACH AND LANDING OPERATIONS (OPTIONAL: 14 CFR PARTS 91, 121, 125, 125M, 135, AND 91K OPERATORS) AND SPECIAL AUTHORIZATION CATEGORY I INSTRUMENT APPROACH AND LANDING OPERATIONS (OPTIONAL: PART 91 OPERATORS).

NOTE: NextGen Tracking. Applications for approvals for this paragraph must be entered in the Regional NextGen Tracker as indicated in the General Procedures Section (Volume 3, Chapter 1, Section 1).

A. General. Category (CAT) II operations are approved by issuance of OpSpec C059 to certificate holders for 14 CFR parts 121, 125, and 135; MSpec C059 to program managers for 14 CFR part 91 subpart K (part 91K) fractional ownership operations; and LOA C059 to operators for parts 91 and 125M operations. Guidance for authorizing helicopter CAT II/CAT III operations can be found in Volume 4, Chapter 2, Sections 2 and 3.

B. Authorization for CAT II Airplane Operations. All initial CAT II authorizations for each operator/program manager and each airplane type used by that operator/program manager require regional Flight Standards division (RFSD) Next Generation Air Transportation System (NextGen) branch review and concurrence before issuing OpSpec/MSpec/LOA C059. RFSD concurrence is also required before amending OpSpec/MSpec/LOA C059 to include an

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airplane make, model, and series (M/M/S) new to the operator/program manager. CAT II operations are evaluated for authorization with reference to the following:

1) Advisory Circular (AC) 120-29, Criteria for Approval of Category I and Category II Weather Minima for Approach (current edition).

2) Approval of U.S. Operators for Special Authorization Category I and All Category II/III Operations—Parts 91 (Large Aircraft), 91K, 121, 125, and 135.

3) Approval of Small Category A Aircraft for Category II Operations—Part 91.

4) Volume 4, Chapter 2, Section 6, Category II Operations.

5) Applicable Lower Landing Minimums (LLM) maintenance program approved by the assigned avionics inspector in accordance with Volume 4, Chapter 2, Section 10.

C. Approved Airplanes. Each airplane type (M/M/S) used in CAT II operations must be listed in Table 1 of C059 and have an acceptable LLM maintenance program. The approach/landing system used, lowest decision height (DH), lowest touchdown zone (TDZ) Runway Visual Range (RVR) authorized for each airplane type, and any special equipment and other limitations must also be specified. The example in Table 3-17, Example of Category II Approach and Landing Minimums, illustrates the method for authorizing each airplane in OpSpec/MSpec/LOA C059.

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Table 3-17. Example of Category II Approach and Landing Minimums

Airplane M/M/S	Approach/Landing System	DH	TDZ RVR	Special Operational Equipment and Limitations
DC-9-31	Autopilot	100 ft	1,600	N/A
B 727-217	Autopilot	100 ft	1,600	
ERJ-190-100	Manual (HUD)	100 ft	1,200	Dual HUD A3 Mode All engines and autothrottle operating
CL-600-2D24	Autopilot	100 ft	1,200	AFM supplement 4 equipment operating
A-320-12	Autopilot	100 ft	1,200	N/A
DHC-8-402	Manual (HUD)	100 ft	1,000	N/A
B-737-200	Autoland	100 ft	1,000	
B-777-F	Autopilot	100 ft	1,000	Autoland required for RVR 1000 (300m)

NOTE: Refer to Table 1 of OpSpec C059.

D. CAT II Approach and Landing Systems. The equipment required to conduct either manually or automatically flown CAT II operations is specified in Table 1 of OpSpec/MSpec/LOA C059 (see sample in Table 3-17 above). The equipment required is established in accordance with the applicable regulations, the approved Aircraft Flight Manual (AFM) (if applicable), and AC 120-29. There are two acceptable methods of demonstrating that an airplane meets the technical qualifications and is eligible for CAT II operations. These acceptable methods are by approval under the type certificate (TC) or Supplemental Type Certificate (STC) holder, or an operation demonstration conducted by an operator/program manager. Type design approval is discussed in AC 120-29, paragraphs 5.19 through 5.19.3, and paragraph 10.5.

1) TC or STC Approval. The approved AFM (or Aircraft Flight Manual Supplement (AFMS)) identified in the airplane type design typically contains a statement that the airborne systems and equipment meet performance requirements, a statement regarding reliability and/or redundancy, and affirmation that such systems and equipment have been demonstrated to be eligible for CAT II operations. The AFM or AFMS also may specify that certain equipment is required for airworthiness approval of the various kinds of CAT II operations. Some AFMs or AFMSs also may indicate that acceptable CAT II performance was demonstrated, both with and without certain equipment (e.g., “autothrottles w/wo”). AC 120-29 also specifies that certain types of equipment are required for operations approval of the various kinds of CAT II operations (manual/autopilot). Therefore, the approved AFM or AFMS and AC 120-29 must be considered in determining if the additional equipment requirement meets the criteria. The equipment must be listed (specified) in Table 1 of OpSpec/MSpec/LOA C059. See Table 3-17.

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a) Equipment that is explicitly required by the airplane certification regulations (14 CFR parts 23 and 25), the operating regulations (parts 91, 91K, 121, 125, and 135) and/or the approved AFM or AFMS *should not be listed* in Table 1 of the OpSpec/MSpec/LOA. The standard text of C059 requires that this equipment be installed and operational. The additional equipment or operational requirement that must be listed (specified) in OpSpec/MSpec/LOA C059 is determined by cross-checking the equipment required by regulations and the approved AFM or AFMS against the equipment required by AC 120-29 for the kinds of proposed CAT II operations.

b) Enter into Table 1 of OpSpec/MSpec/LOA C059 all additional equipment for the M/M/S and kind(s) of CAT II operations authorized. Include additional equipment required by any of the following (current editions):

- AC 120-29, Criteria for Approval of Category I and Category II Weather Minima for Approach,
- TC or STC, and
- FAA Order 8400.13, Procedures for the Evaluation and Approval of Facilities for Special Authorization Category I Operations and All Category II and III Operations.

c) If the AFM or AFMS describes acceptable performance both with and without certain items of equipment (that are not explicitly required by AC 120-29), it must be determined how the operator/program manager intends to conduct CAT II operations and train flightcrews with those items of equipment. If the operator/program manager proposes to conduct operations both with and without certain equipment (such as autothrottle, autopilot), flightcrews must be trained for both situations and the equipment does not need to be listed in Table 1 of OpSpec/MSpec/LOA C059.

2) Operational Demonstration of Equipment Eligibility. This method is used when equipment eligibility is not stated in the AFM, the AFMS, or the Flight Standardization Board (FSB) report. The operational demonstration method is only appropriate for airplanes and equipment that do not have CAT II reflected in the TC or STC. If the operational demonstration method is used:

a) Conduct the operational demonstration as described in AC 120-29. A part 121, 125, or 135 operator, or a part 91K program manager should request that its Flight Standards District Office (FSDO) provide assistance in the eligibility assessment.

b) The operator or program manager should provide the FSDO with the aircraft make, model, and serial number; any evidence of instrument flight rules (IFR) approach approval; and pertinent information from flightcrew operating procedures.

c) If the FSDO cannot determine equipment eligibility from the provided documentation (e.g., TC, STC, or AFM), it should forward the request and supporting data through its RFSD to the appropriate Aircraft Evaluation Group (AEG). The AEG will verify that the aircraft, its landing system, and equipment meet the criteria for CAT II operations, and that the system can safely fly the CAT II approach procedures. The AEG will provide written

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documentation (e.g., amended FSB report or other official documentation) to verify the eligibility of that equipment.

d) The equipment determined by an operational demonstration to be eligible and required to conduct either manually or automatically flown CAT II operations should be listed in Table 1.

E. Specify the Approach/Landing System in Table 1 of OpSpec/MSpec C059. The kind of CAT II approach/landing system (manual head-up display (HUD), i.e., manual control using a HUD to touchdown; autopilot, i.e., approach coupler used to DH, followed by manual control landing; or autoland) must be specified for each airplane listed in Table 1 of OpSpec/MSpec/LOA C059. The principal operations inspector (POI) will select the appropriate phrase to place in the Approach/Landing System column: Manual (HUD), Autopilot, or Autoland.

F. Operational RVR Minimums. Table 2 in OpSpec/MSpec/LOA C059, shown as Table 3-18, Example of Category II Runway Visual Range Minimums, below, is a summary of the required RVR minimums for each type of CAT II operation.

1) Row 1 of Table 3-18 shows that for Standard CAT II operations at 1600 RVR, only the touchdown RVR report is required. During the 6-month Operator Use Suitability Demonstration, 1600 RVR is commonly authorized for new CAT II operators. Also, if the rollout RVR is out of service, CAT II approaches may still be flown to 1600 RVR. Note, the intention of this requirement is not that rollout and mid RVR reports may be ignored and CAT II approaches may still be flown to 1600 RVR. If these reports are available, minimum RVR values shown in the lower rows of Table 3-18 must be used (i.e., if mid or rollout RVR reports are available, they must be equal to or greater than the values shown in the lower rows of Table 3-18.).

2) Rows 2–4 of Table 3-18 show the TDZ RVR requirements for other, lower visibility CAT II operations. While TDZ RVR report requirements remain unchanged, mid and rollout RVR report requirements are new as of May 2013. Mid RVR equal to 600 and rollout RVR equal to 300 are the lowest values that may be reported to conduct Standard CAT II, CAT II to 1000 RVR (TDZ), or Special Authorization (SA) CAT II operations. All available RVR reports are now controlling, and a TDZ and rollout report are required in order to conduct CAT II operations below 1600 RVR. If the rollout report is not available, the mid or far-end report may be substituted. Midfield reports substituted for unavailable rollout reports must report 600 RVR or greater; far-end reports substituted for unavailable rollout reports must report 300 RVR or greater.

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Table 3-18. Example of Category II Runway Visual Range Minimums

CAT II RVR Minimums			
Type of Operation	**TDZ RVR**	**Mid RVR**	**Rollout RVR**
Standard CAT II	1600 (500 m)	NR	NR
Standard CAT II	1200 (350 m)	600 (175 m)#	300 (75 m)
CAT II to 1000 RVR	1000 (300 m)	600 (175 m)#	300 (75 m)
Special Authorization CAT II	1200 (350 m)	600 (175 m)#	300 (75 m)

NOTE: NR = Not Required; # = If available.

G. Runway Field Length Requirements.

1) For all CAT II operations, the required field length (determined prior to takeoff) is at least 1.15 times the field length required by:

- Part 91K, § 91.1037(b) and the AFM,
- Part 121, § 121.195(b),
- The AFM for parts 91 and 125, or
- Part 135, § 135.385(b).

2) Once airborne, additional consideration of CAT II landing field length by the flightcrew is not required for normal operations. If unforecasted adverse weather or failures occur, the crew and aircraft dispatchers should consider any adverse consequences that may result from a decision to make a CAT II landing. The runway length needed in these changed circumstances must be determined considering the runway in use, runway conditions, current weather, AFM limitations, operational procedures, and aircraft equipment status at the time of landing.

3) Runway field length requirements for parts 121 and 135 are no longer contained in OpSpec C059. **They have been moved to OpSpec C054, and any part 121 or 135 operators issued OpSpec C059 *must* also be issued OpSpec C054.**

H. Airplane Maintenance. For CAT II authorization, the operator or program manager must have an approved LLM maintenance program, as described in subparagraph B5). The maintenance program should detail a specific maintenance interval, periodic tests, and inspections required on systems and equipment used for LLM. The maintenance program should identify or contain system and equipment reliability tracking methods derived from 14 CFR part 119 requirements.

I. Flightcrew Qualifications. A pilot in command (PIC) who has not met the requirements of part 91, § 91.1039(c), part 121, § 121.652, part 125, § 125.379, or part 135, § 135.225(e), as appropriate, must use the high minimum pilot RVR landing minimum equivalents, as determined from the table in OpSpec/MSpec/LOA C054. For the PIC to conduct the part 121 CAT II operations at the lower authorized minimums, he or she must have currently

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accumulated the hours required by § 121.652 in the aircraft type that he or she will fly for that carrier. The provision of Air Transport Association of America (A4A) Exemption 5549 for part 121 air carriers may also apply.

J. Authorized CAT II Approach and Landing Minimums. To determine the applicable minimums for an approach, the pilot must first compare the DH shown on the 14 CFR part 97 approach chart with the operator's lowest authorized DH for the airplane being flown. The higher minimum is applicable. Therefore, considering RVR sensor reports available, the RVR to be used for the approach is the highest RVR value in the approach chart, Table 1, or subparagraph f of the OpSpec/MSpec part 125 LOA or subparagraph 6 of the part 91 LOA.

K. Authorized CAT II Approaches, Airports, and Runways.

1) CAT II Operations. If the airport and runways are approved for CAT II operations in part 97, they should not be routinely listed in OpSpec/MSpec/LOA C059 unless the POI determines there is a need to specify a special limitation for an operator at a particular airport.

a) Standard CAT II approaches are published as CAT II procedures in the National Aeronautical Navigation Services (AeroNav Services), Air Traffic Products and Publications Group, instrument approach procedure (IAP) Flight Information Publication (FLIP). They are identified by the procedure name "ILS RWY 16C (CAT II)" and by the note in the minimums section stating "CATEGORY II ILS—SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED."

b) Special Authorization (SA) CAT II (formerly called reduced-lighting CAT II) approaches are published by AeroNav Services with the identifier "(SA CAT II)," and they also have a note in the Procedure Notes section stating "Reduced Lighting: Requires specific OPSPEC, MSPEC, or LOA approval and use of Autoland or HUD to touchdown." Some SA CAT II approaches were published without the "(SA CAT II)" identifier, but will have the same or similar note.

2) Standard CAT II. The operator may be authorized for up to three different minimums for use with published part 97 approaches: 1600 RVR, 1200 RVR, and 1000 RVR. Allowable minimums depend on the availability of RVR sensors and availability and use of required airplane equipment.

a) Minimums of TDZ 1600 RVR and TDZ 1200 RVR require the flightcrew to use an approach coupler or to fly at least to DH under manual control using a HUD for flight guidance. A manually flown landing is assumed and need not be specified. Autoland or HUD-to-touchdown operations for Standard CAT II may be authorized if the operators are also authorized OpSpec/MSpec/LOA C061 or C062.

b) Minimums of 1000 RVR require the flightcrew to use autoland or to fly under manual control using a HUD to touchdown.

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1. For operations to touchdown, the airplane and its automatic flight control guidance system (AFCGS), autoland system, or manually flown guidance system (HUD), are approved for approach and landing operations as specified by AC 120-29.

2. For manual control using a HUD to touchdown, the HUD must be flown in the AIII Approach mode.

3. The flightcrew has been trained at the lower visibilities before they can be authorized. If the flightcrew is currently authorized CAT III operations, no further training is required for this authorization in C059.

c) CAT II operations, with a DH of 100 feet and 1000 RVR (300 meters), may be authorized at certain foreign airports. Table 3-19, Example List of Authorized Foreign Airports and Runways for Category II Instrument Approach and Landing Operations, illustrates an example for listing authorized foreign airports and runways.

Table 3-19. Example List of Authorized Foreign Airports and Runways for Category II Instrument Approach and Landing Operations

Airport Name/Identifier	Runways	Limitations and Provisions
Mirabel, Canada CYMX	06	NA
Taipei— Chiang Kai Shek, Taiwan RCTP	10, 28	NA
Tokyo Narita, Japan RJAA	16	NA
Athens, Greece Eleftherios Venizelos LGAV	03L 03R 21L 21R	RVR 350 m

Refer to Table 3 in OpSpec C059.

d) Operators authorized SA CAT II, as described in subparagraph K3) below, may also be authorized to conduct approaches to standard CAT II facilities when the TDZ and/or centerline (CL) lights are inoperative. They must comply with all requirements in paragraph K3), using minimums appropriate to the RVR available and using autoland or manual (HUD) to touchdown.

3) SA CAT II. In addition to the standard CAT II operations authorized by OpSpec/MSpec/LOA C059, SA CAT II operations can be authorized to qualifying runways that do not meet the performance or ground equipment requirements normally associated with a compliant CAT II operation (e.g., TDZ lighting, CL lighting, or Approach Lighting System with Sequenced Flashing Lights (ALSF) 1 and 2).

a) Approval criteria for SA CAT II approaches are given in FAA Order 8400.13. The instrument landing system (ILS) facilities used are CAT I ILS installations that meet the glideslope (GS) and localizer signal quality requirements of CAT II facilities. The required

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increase in aircraft capabilities of HUD or autoland to touchdown mitigates the reduced-lighting requirements.

b) RVR requirements and available minimums are the same as standard CAT II and in accordance with Table 3-18, but these minimums require the flightcrew to use autoland or to fly under manual control using a HUD to touchdown.

c) Aircraft operation approval, HUD usage, and flightcrew training requirements are the same as for standard CAT II to 1000 RVR.

4) Lists. The lists "Foreign Facilities Approved for Category II/III Operations," "Restricted U.S. Facilities Approved for Category II/III Operations," and "U.S. Runways Approved for Special Authorization CAT II Operations" are located on the Flight Operations Branch (AFS-410) Web site at: http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs400/afs410/status_lists/.

NOTE: CAT II or III approaches in foreign states at airports that are controlled by the U.S. Department of Defense (DOD) and that meet FAA CAT II/III criteria do not need to be included on the approved foreign facilities list and do not need to be listed in Table 3 of OpSpec/MSpec/LOA C059.

L. Missed Approach Requirements. The missed approach decision point has been changed from 1,000 feet above touchdown to the final approach fix (FAF). After passing the FAF, if the required visual landing references are not acquired and any failure of required equipment occurs, or if the primary guidance system in use (autopilot/autoland or HUD) is disengaged or disabled for any reason, the flightcrew must execute the missed approach. The exception to this requirement is that if both guidance systems are properly briefed and engaged before reaching the FAF and one system is disengaged or fails inside the FAF, the remaining guidance system is considered the primary and the approach may be continued.

M. CAT II Runway Restrictions. The requirement to conduct automatic landings in reduced lighting and 1,000 RVR operations implies that autoland restrictions imposed by prethreshold terrain must be considered. Approaches that have prethreshold terrain characteristics that may cause abnormal performance in flight control systems will have a note on the approach chart requiring a special autoland evaluation. Approved runways will be on the AFS-410 restricted facilities list in subparagraph K4) above, and must be listed in Table 4 of OpSpec/MSpec/LOA C059.

N. SA CAT I for Part 91. The part 91 LOA contains selectable text that authorizes SA CAT I ILS approaches to runways without TDZ or runway centerline (RCL) lights with a radar altimeter (RA) DH as low as 150 feet and a visibility minimum as low as RVR 1400 when using a HUD to DH. This selectable text is only available in the part 91 LOA. SA CAT I authorization for operators under other 14 CFR parts is available in OpSpec/MSpec/LOA C052. The operator must meet *all* of the following requirements:

1) Aircraft Requirements. To be approved for SA CAT I, each airplane must be certified and maintained for CAT II operations. Those airplanes and equipment must be listed in

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Table 1 of OpSpec C059. The authorized airplane(s) must be equipped with a HUD that is approved for CAT II or CAT III operations.

2) Training Requirements. The flightcrew must be current and qualified for CAT II operations. The flightcrew must demonstrate proficiency in ILS approaches and landings to this minimum or to a lower minimum using the HUD prior to commencing any SA CAT I operations. This requirement applies both to initial eligibility for SA CAT I as well as recurrent training.

3) Operational Requirements.

a) The flightcrew must use the HUD to DH in a mode used for CAT II or CAT III operations. This mode provides greater lateral and vertical flightpath accuracy and more sensitive alarm limits.

b) The flightcrew must use the HUD to DH, or to the initiation of missed approach, unless adequate visual references with the runway environment are established that allow safe continuation to a landing. Should the HUD malfunction during the approach, the flightcrew must execute a missed approach unless visual reference to the runway environment has been established.

c) The crosswind component on the landing runway must be less than the AFM crosswind limitations, or 15 knots or less, whichever is more restrictive.

d) The part 97 Standard Instrument Approach Procedure (SIAP) must have a published SA CAT I minimum.

e) Unlike other CAT I approaches, the mid-RVR report may *not* be substituted for the TDZ RVR report when using SA CAT I minima.

f) Single-pilot operators are prohibited from using SA CAT I landing minima.

OPSPEC/MSPEC/LOA C060—CATEGORY (CAT) III INSTRUMENT APPROACH AND LANDING OPERATIONS.

NOTE: NextGen Tracking. Applications for approvals for this paragraph must be entered in the Regional NextGen Tracker as indicated in the General Procedures Section (Volume 3, Chapter 1, Section 1).

A. General. Category (CAT) III is an optional authorization. The following issuances are required for authorizing CAT III operations: OpSpec C060 for 14 CFR parts 121, 125, 121/135, and 135; MSpec C060 for 14 CFR part 91 subpart K (part 91K); and LOA C060 for parts 91 and 125M. For 14 CFR part 129 operations, see Volume 12, Chapter 2.

1) CAT III operations are evaluated in accordance with the current edition of Advisory Circular (AC) 120-28, Criteria for Approval of Category III Weather Minima for Takeoff, Landing, and Rollout.

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2) The initial CAT III authorization must be coordinated through the regional Flight Standards division (RFSD) Next Generation (NextGen) branch (see Volume 4, Chapter 2).

3) RFSD NextGen branch concurrence is also required before amending OpSpec/MSpec/LOA C060 to include an additional airplane make, model, and series (M/M/S) for an operator.

4) All reductions in CAT III operating minimums for each operator and aircraft also require RFSD NextGen Branch concurrence.

5) Initial CAT III authorizations may require the operator to use higher minimums for a period of time or number of operations. The principal operations inspector (POI) should issue an initial, interim authorization using the higher minimums, and reissue OpSpec/MSpec/LOA C060 authorizing lower minimums upon completion of the approval demonstration phases as shown in Volume 4, Chapter 2, Section 2, paragraph 4-194.

B. Applicability. The authorization is applicable to operations conducted by:

- Part 121 certificate holders,
- Part 125 certificate holders,
- Part 135 certificate holders,
- Part 121/135 certificate holders,
- Part 91K program managers,
- Part 91 operators, and
- Part 125M operators/companies.

C. Airplanes Approved for CAT III Operations. Airplanes with an approved Aircraft Flight Manual (AFM) entry authorizing CAT III may be approved for CAT III. In accordance with the AFM, CAT III operations may be conducted with either fail operational (FO) or fail passive (FP) systems. Table 3-20, Fail Operational Landing Systems, and Table 3-21, Fail Passive Landing Systems, classify all CAT III landing and rollout systems as either FP or FO and show the associated lowest Runway Visual Range (RVR) minimums. The type of landing and rollout system is specified (listed) in Table 1 (see Figure 3-67F, Example OpSpec/MSpec/LOA C060, Table 1) for each airplane M/M/S.

1) Each airplane type M/M/S and the equipment authorized to conduct CAT III operations must be listed in Table 1 (see Figure 3-67F). In order to select an operator's M/M/S in OpSpec/MSpec/LOA C060, Table 1, ensure that "CAT III" is selected under "Authorizations" on the "Edit Aircraft" page of "Operator Data." Aircraft (including wide-body aircraft such as the DC-10, L-1011, and B-747, which are authorized for FO CAT III, but which have not been demonstrated to meet the FP provisions of AC 120-28, Appendix 3) may be approved for FP operations with landing minimums of RVR 1000. (See AC 120-28 for further details.)

2) The equipment required to conduct CAT III operations is established in accordance with the applicable 14 CFR parts, the approved AFM, and AC 120-28.

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a) The only acceptable method of demonstrating that an airplane is Airworthy for CAT III operations is through a type design approval obtained by a manufacturer.

b) The approved AFM (or Aircraft Flight Manual Supplement (AFMS)) for airplanes that have CAT III type design approval contains a statement to the effect that the airborne systems have demonstrated the reliability and redundancy necessary for CAT III operations in accordance with AC 120-28.

c) The AFM also specifies that certain equipment is required for airworthiness approval of the various kinds of CAT III operations.

d) Some AFMs also indicate that acceptable CAT III performance was demonstrated both with and without ("w/wo") certain equipment (for example, "autothrottles w/wo"). AC 120-28 also specifies that certain types of equipment are required for operational approval of the various kinds of CAT III operations. Therefore, both the approved AFM and AC 120-28 must be considered in determining the additional equipment that must be listed in Table 1 (see Figure 3-67F).

3) Equipment that is explicitly required by the airplane certification regulations (14 CFR parts 23 and 25), the operating regulations (parts 91, 121, 125, and 135), and/or the approved AFM should not be listed in Table 1 (see Figure 3-67F).

a) Additional equipment that must be listed in Table 1 (see Figure 3-67F) is determined by cross-checking the types of equipment required by AC 120-28 for the kind(s) of CAT III operations proposed against the equipment required by the regulations and the approved AFM.

b) Also, the equipment required by the guidance and direction in the RFSD NextGen branch concurrence letter is listed in Table 1 (see Figure 3-67F) as additional equipment.

c) The standard text of OpSpec/MSpec/LOA C060 requires this equipment to be installed and operational.

4) When the AFM indicates acceptable performance, both with and without certain items of equipment (that are not explicitly required by AC 120-28 or the RFSD NextGen branch concurrence letter), it must be determined how the operator intends to conduct CAT III operations and train flightcrews with those items of equipment.

a) If the operator proposes to conduct operations both with and without certain equipment (such as autothrottle), the operator must train flightcrews for both situations, and the item of equipment does not need to be listed in OpSpec/MSpec/LOA C060.

b) If the operator proposes to conduct operations only when those items of equipment (with and without) are functional, then those items of equipment must be listed in OpSpec/MSpec/LOA C060.

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5) The authorizations for a decision height (DH)/alert height (AH), the lowest RVR (see subparagraph I), and the FP/FO landing systems must be specific for each airplane type. In general, Tables 3-20 and 3-21 summarize RVR and other requirements for different landing and rollout systems.

Table 3-20. Fail Operational Landing Systems

Fail Operational Landing Systems—General 1. Utilize an AH (typically 50 ft). 2. Must go-around if any system failure occurs above AH. 3. Could land safely if a failure occurs after AH.		
Fail Operational Without a Rollout System	**Fail Operational with a Fail Passive Rollout System**	**Fail Operational with a Fail Operational Rollout System**
1. No visual necessary. 2. Lowest allowable RVR 600/600/300.	1. No visual necessary. 2. Lowest allowable RVR 400/400/300.	1. No visual necessary. 2. Lowest allowable RVR 300/300/300.

Table 3-21. Fail Passive Landing Systems

Fail Passive Landing Systems—General 1. Utilize a DH (no less than 50 ft). 2. Must have visual references NLT DH to land, otherwise missed approach. 3. System not capable of autoland if a failure occurs after DH. 4. If visual references are lost after DH or a failure after DH (prior to touchdown), missed approach.	
Fail Passive Without a Rollout System	**Fail Passive with a Fail Passive or Fail Operational Rollout System**
Lowest allowable RVR 600/600/300.	Lowest allowable RVR 600/400/300.

D. Runway Field Length Requirements.

1) For all CAT III operations, the required field length (determined prior to takeoff) is at least 1.15 times the field length required by:

- Part 91K, § 91.1037(b) and the AFM,
- Part 121, § 121.195(b),
- The AFM for parts 91 and 125, or
- Part 135, § 135.385(b).

2) Once airborne, additional consideration of CAT III landing field length by the flightcrew is not required for normal operations. If unforecasted adverse weather or failures occur, the crew and aircraft dispatchers should consider any adverse consequences that may result from a decision to make a CAT III landing. The runway length needed in these changed

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circumstances must be determined considering the runway in use, runway conditions, current weather, AFM limitations, operational procedures, and aircraft equipment status at the time of landing.

3) Runway field length requirements for parts 121 and 135 are no longer contained in OpSpec C060. **They have been moved to OpSpec C054, and any part 121 or 135 operators issued OpSpec C060 *must* also be issued OpSpec C054.**

4) The "Special Operational Equipment and Limitations" column in Table 1 (see Figure 3-67F) is provided for equipment that is *in addition* to that required by 14 CFR and not included in the AFM. For example, additional equipment may be required to meet the field length requirement where "procedural" means alone is not acceptable.

E. Operators Authorized for CAT IIIa (RVR 700) Operations Can be Approved for RVR 600. Some aircraft were certified in the AFM for CAT IIIa operations. These operations are limited by regulation to no lower than RVR 700. If the AFM or AFMS also contains a statement that the CAT III systems are FP or have been demonstrated to meet the airworthiness criteria of AC 120-28 for FP systems, the aircraft may be approved for operations no lower than RVR 600. Most CAT III operations authorized for RVR 700 prior to issuance of AC 120-28 are now eligible for authorization to RVR 600, upon request of the operator for issuance of a revision to that operator's pertinent OpSpecs. Operators authorized RVR 700 may be approved for RVR 600/600/300 or RVR 600/400/300 operations in accordance with Table 3-21 when:

1) The AFM or AFMS contains a statement that the aircraft systems are FP.

2) The operator has incorporated changes reflecting RVR 600 into the approved training program (when applicable), bulletins, aircraft placards, etc., as appropriate.

3) A check airman or an FAA inspector has certified the flightcrews to fly to these reduced minimums.

F. Approval for RVR 600. An operator currently using RVR 600 or lower in its approved training for FP operations may be approved for RVR 600 without further checking. Approval may be given when the operator has updated the approved training program (when applicable) and flightcrew bulletins to reflect the RVR 600 authorization.

G. CAT III Approach and Landing Minimums. Figure 3-67F is an example of Table 1 with data inserted. If an operator is not authorized to conduct those kinds of CAT III operations with a particular airplane, or if the operator does not need special operational equipment, put "NA" under the appropriate column (do not delete or leave any cells blank).

NOTE: Include only the equipment that is not explicitly required by the regulations and/or the AFM. For new CAT III operators, inspectors must coordinate the operational equipment requirements with the RFSD NextGen branch during normal review processing.

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Figure 3-67F. Example OpSpec/MSpec/LOA C060, Table 1

Airplane M/M/S	Landing System*	Rollout System*	DH/AH	TDZ/Mid/RO RVR	Special Operational Equipment and Limitations
B-737-232	FP	NA	50 DH	600/600/300	NA
B-737-35B	FP	NA	50 DH	600/600/300	Either autoland or HGS must be operable
B-737-832	FP	NA	50 DH	600/600/300	Either autoland or HGS must be operable.
A-320-214	FO	FO	100 AH	300/300/300	NA
B-737-400	FP	FP	50 DH	600/400/300	1. Two EADI displays (EFI switch in NORMAL). 2. First Officer Flight Director Display. 3. Operational antiskid. 4. Cockpit LWMP status placard indicating CAT IIIa HGS capable.
B-747-47UF	FO	FO	100 AH	300/300/300	Antiskid and thrust reverser system must be fully operative for operations below RVR 600.
DASAULT FALCON-900EX	FP	FP	50	600/600/300	NA
B-757-225	FO	FO	50AH	300/300/300	1.30 required if thrust reverser or antiskid inoperative below RVR 600.
B-727-277	FP	NA	DH 50	600/600/300	NA
B-757-236	FO	FO	50 AH	300/300/300	NA
B-767-222	FO	FO	100 AH	300/300/300	Use 1.3 if autobrake is inoperative.
A319-112	FO	FO	100 AH	300/300/300	1.30 required if thrust reverser or antiskid inoperative below RVR 600.

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Airplane M/M/S	Landing System*	Rollout System*	DH/AH	TDZ/Mid/RO RVR	Special Operational Equipment and Limitations
B-777-236	FO	FO	50AH	300/300/300	NA
DC-10-10F	FO	FO	100 AH	300/300/300	Ground speed indicating system.
MD-11F	FO	FO	100 AH	300/300/300	Ground speed indicating system.

NOTE: Enter: "NA" for not applicable; "FP" for FP landing or rollout control system; and "FO" for FO landing or rollout control system (i.e., "FP/FO" systems include autoland and head-up display (HUD) guidance systems (also referred to as Head-Up-Guidance Systems (HGS))).

H. Additional Information. Some European Aviation Safety Agency (EASA) Member States apply a DH (as opposed to an AH) to operations at or below RVR 600 because of instrument landing system (ILS) facility integrity concerns.

I. Required RVR Reporting Equipment. The RVR reporting equipment authorizations were expanded to enable the use of new and more robust EASA approval and AC 120-28 certification criteria for autoflight or a guidance landing system(s) with FP rollout control or flight guidance landing systems. A summary of these authorizations is shown in Figure 3-67G, OpSpec/MSpec/LOA C060, Table 2.

1) OpSpec/MSpec/LOA C060 allows touchdown RVR 600; mid RVR 400; rollout RVR 300 (600/400/300) for appropriate FP landing and FP or FO rollout systems; and RVR 400/400/300 for FO landing systems with FP rollout control or flight guidance (HUD) landing systems.

2) Note that to use the touchdown RVR 600 with mid RVR 400 and rollout RVR 300, a published runway landing minimum of RVR 400 or lower is required—that is, mid RVR 400 and rollout RVR 300 cannot be used at runways where RVR 600 is the lowest published RVR minimum.

3) RVR 300/300/300 is allowed for FO landing systems with FO rollout control or flight guidance (HUD) landing systems.

4) The operator or program manager is not authorized to conduct operations using an RVR lower than the published minimums at any runway (domestic or foreign), even if the operator or program manager is authorized to conduct CAT III operations at a lower RVR than is published for that approach.

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Figure 3-67G. OpSpec/MSpec/LOA C060, Table 2

Landing System	Rollout System	TDZ RVR	Mid RVR	Rollout RVR
FP or FO	None	600 (175 m)	600 (175 m)	300 (75 m)
FP	FP or FO	600 (175 m)	400 (125 m)	300 (75 m)
FO	FP	400 (125 m)	400 (125 m)	300 (75 m)
FO	FO	300 (75 m)	300 (75 m)	300 (75 m)

J. Crosswind Limitations. The crosswind component on the landing runway must be 15 knots or less, unless the AFM's crosswind limitations are more restrictive. This should be reflected in the approved training program and flightcrew bulletins.

K. Authorized CAT III Airports and Runways. With the issuance of OpSpec/MSpec/LOA C060, the operator/program manager is authorized to conduct CAT III operations at all domestic airports and runways using an approved 14 CFR part 97 CAT III instrument approach procedure (IAP), unless the runway is on the Flight Technologies and Procedures Division's (AFS-400) Restricted U.S. Facilities Approved for Special Authorization Category II & Category III Operations list (http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs400/afs410/status_lists), or unless a restrictive Notice to Airmen (NOTAM) is issued for that approach. Domestic airports and runways that have no restrictions do not have to be individually listed in OpSpec/MSpec/LOA C060. All foreign airports and runways approved for CAT III operations and restricted U.S. airports and runways approved for CAT III operations must be specifically identified and listed in OpSpec/MSpec/LOA C060, Tables 3 and 4, respectively. The list of approved foreign CAT III airports and runways can be found at http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs400/afs410/status_lists.

1) Foreign Airports and Runways. CAT III operations may be authorized at the foreign airports and runways listed in Table 3 (see Figure 3-67H, Example OpSpec/MSpec/LOA C060, Table 3) from the selection list provided for in Table 3.

2) U.S. Facilities with Restrictions or Conditions. The U.S. ILS facilities provided in Table 4 (see Figure 3-67I, Example OpSpec/MSpec/LOA C060, Table 4) are approved for CAT III operations only for the specific aircraft listed. The characteristics of the prethreshold terrain, runway touchdown zone (TDZ) slope, or steep glideslope (GS) at these facilities may cause abnormal performance in flight control systems. Additional analysis and/or flight demonstrations are typically required for each aircraft type before approval of CAT III minimums at each runway. Publication of a part 97 Standard Instrument Approach Procedure (SIAP) or additional operators and their aircraft may be approved by the regional NextGen branch as provided in AC 120-28, Appendix 8. Approved aircraft are equipped with either autoland or HUD flight guidance equipment. The restrictions at U.S. facilities for the certificate holder are provided as selectables for listing in Table 4.

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Figure 3-67H. Example OpSpec/MSpec/LOA C060, Table 3

Foreign Airports and Runways Approved for CAT III Operations	
Airport Name/Identifier & Runway(s)	**Special Limitations**
London/Gatwick, England; EGKK; 8R/26L	None
Luxembourg, Luxembourg; ELLX; 24	None
Madrid/Barajas, Spain; LEMD; 18L/18R/33L/33R	None
Almaty, Kazakhstan; UAAA; 23R	None

Figure 3-67I. Example OpSpec/MSpec/LOA C060, Table 4

Runway and Aircraft Restrictions and Limiting Conditions for Part 97 CAT III Operations	
Airport Name/Identifier, Runway(s) & CAT III Minimums	**Restrictions & Limitations**
Pittsburgh/Greater Pittsburgh Intl, PA; KPIT RY10L; RVR 300	Aircraft approved: A319, A320, B-757, and B-767
Pittsburgh/Greater Pittsburgh Intl, PA; KPIT RY10R; RVR 600 and RVR 300	Restricted to 600 RVR until less-than 600 RVR SMGCS operations are approved. Aircraft approved RVR 600: B-757 and B-767. Aircraft approved RVR 300: A319 and A320.

L. Inoperative Lights. If CAT III operations are planned at a runway, but TDZ and/or centerline (CL) lights are inoperative, CAT II operations may be conducted if weather permits and the operator has the authorization described below in OpSpec/MSpec/LOA C059. OpSpec/MSpec/LOA C059 authorizes specific CAT II minimums for part 97 CAT II approaches when the TDZ and centerline lights are inoperative. These CAT II minimums (RVR 1200) are authorized under the selectable subparagraph g(2) in OpSpec/MSpec/LOA C059, and are the lowest minimums available to a runway with inoperative TDZ and/or centerline lights.

M. Lower Landing Minimums Maintenance Program. The operator/program manager must maintain the aircraft and equipment listed in Table 1 (see Figure 3-67F) in accordance with its approved Lower Landing Minimums (LLM) maintenance program or inspection program, as applicable.

N. Engine-Inoperative Operations. The operator may be authorized for engine-inoperative CAT III operations in accordance with the AFM and AC 120-28. Airplane M/M/S, operational requirements, and limitations must be listed in Table 5 (see Figure 3-67J, Example OpSpec/MSpec C060, Table 5 (LOA C060, Table 6)).

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1) With preplanned engine-inoperative CAT III capability, airports and minimums that otherwise may not be considered acceptable for use could be selected by the pilot or operator without having to subsequently justify its use based on emergency authority. This capability also has the advantage of allowing for full preassessment of the aircraft capability and engine inoperative aircraft configurations (e.g., flap settings, electrical system capability, hydraulic system capability, etc.), approach procedure characteristics, missed approach performance, and other factors that may be difficult to assess in real time if not previously assessed.

2) This capability can also permit an operator some additional flexibility in selecting alternate airports. Authorization to use CAT III alternate airport weather minimums is given in OpSpec C055, and should be based on the authorization in Table 5 (see Figure 3-67J).

3) Authorization to conduct engine-inoperative CAT III operations is based on the AFM and approved operator procedures and training. AC 120-28 describes in detail the requirements and considerations necessary for authorization. These include aircraft performance, configuration and systems requirements, crew training (if applicable), and dispatcher and crew preflight and en route planning and decisionmaking.

4) Operational authorizations are in accordance with AC 120-28. With preflight planning authorization, the operator may consider engine-inoperative CAT III capability in planning flights for a takeoff alternate, en route (Extended Operations (ETOPS) or Extended-Range Operations (ER-OPS)) alternate, redispatch alternate, destination, or destination alternate. With landing after engine failure en route authorization, the operator may initiate an engine-inoperative CAT III approach under the conditions specified in AC 120-28. With landing after engine failure during approach authorization, the operator may continue a CAT III approach after passing the final approach fix (FAF), unless required by the AFM to discontinue the approach in order to reconfigure the aircraft.

Figure 3-67J. Example OpSpec/MSpec C060, Table 5 (LOA C060, Table 6)

Engine Inoperative CAT III Operations		
Airplane M/M/S	**Operational Authorization**	**Limitations**
B-777	Preflight planning. Landing after engine failure en route. Landing after engine failure during approach.	Flaps 20 or 30. Minimum TCH: 40 feet.
B-747	Preflight planning. Landing after engine failure en route.	Flaps 25 or 30. Minimum TCH: 42 feet. Rudder trim or manual control required until below 1500 feet RA with LAND 3. 5-kt crosswind limit with rudder ratio system inoperative and engine inoperative.

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O. Nonstandard Requests. All requests for operational nonstandard OpSpec/MSpec/LOA authorizations must be submitted to the Air Transportation Division (AFS-200) using the nonstandard request policy outlined in Volume 3, Chapter 18, Section 2, paragraph 3-713.

OPSPEC/MSPEC/LOA C061—FLIGHT CONTROL GUIDANCE SYSTEMS FOR AUTOMATIC LANDING OPERATIONS OTHER THAN CATEGORIES II AND III.

A. General. OpSpec/MSpec C061 authorizes an operator to use a flight control guidance system with automatic landing capabilities to touchdown. Title 14 CFR part 121, § 121.579(f); part 125, § 125.329(f); and part 135, § 135.93(f) specify that this type of operation must be authorized by an OpSpec. A 14 CFR part 91K program manager is issued MSpec C061, if applicable. Before issuing C061, the principal operations inspector (POI) must determine the following:

1) The Aircraft Flight Manual (AFM) permits use of the flight control guidance system (autoland system) to touchdown.

2) Training on the use of the flight control guidance system and autoland procedures to touchdown is provided to flightcrew members.

3) The operator continually maintains flight control guidance and autoland systems in accordance with an approved maintenance program for autoland operations.

NOTE: The current edition of Federal Aviation Administration (FAA) Order 8400.13, Procedures for the Evaluation and Approval of Facilities for Special Authorization Category I Operations and All Category II and III Operations, also provides credit for other-than-standard Category II (CAT II) minimums using an autoland system to touchdown.

B. Listing Flight Control Guidance Systems. The airplanes (make/model) and the flight control guidance systems (manufacturer/model) authorized for this type of operation must be listed in C061a.

C. Exceptions to Issuance of C061. When the autoland system is not used to touchdown on a Category I (CAT I) instrument landing system (ILS), C061 is not required to be issued.

D. Additional Information. The current edition of Advisory Circular (AC) 120-67, Criteria for Operational Approval of Auto Flight Guidance Systems, provides additional information.

OPSPEC/MSPEC/LOA C062—MANUALLY FLOWN FLIGHT CONTROL GUIDANCE SYSTEM CERTIFIED FOR LANDING OPERATIONS OTHER THAN CATEGORIES II AND III.

A. General. OpSpec/MSpec C062 is optional for 14 CFR parts 91K, 121, 125, and 135 operations to authorize operators to use manually flown flight control guidance systems to

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conduct approach and landing operations to fly a Category I (CAT I) instrument landing system (ILS) using a Head Up Display (HUD). C062 is issued to use an HUD just as C061 is issued to use an autoland system for other than Category II (CAT II) or Category III (CAT III) operations.

1) This authorization is independent of CAT II/III authorizations. Typically, this authorization is issued prior to CAT II/III authorizations and is kept after the issuance of CAT II/III authorizations.

2) The current edition of Federal Aviation Administration (FAA) Order 8400.13, Procedures for the Evaluation and Approval of Facilities for Special Authorization Category I Operations and All Category II and III Operations, also provides credit for lower-than-standard CAT I minimums using HUD to touchdown.

3) It is required to list series of aircraft in addition to make/model due to the distinct differences in series of models (especially in the newer aircraft). The aircraft listed must have a manual flight control guidance system installed and certified for manually flown landings (HUD).

B. Exceptions to Issuance of C062. When HUD guidance is not used to touchdown on a CAT I ILS, C062 is not required to be issued.

C. Requirements for Operators Conducting Operations in MD-11 Aircraft. National Transportation Safety Board (NTSB) safety recommendation A-99-40 recommends the FAA "issue a flight standards information bulletin that directs principal operations inspectors to ensure that MD-11 training programs provide simulator instruction in the proper procedure for autopilot disengagement and the subsequent manual control of the airplane." As a result, Flight Standards (AFS) recommends that principal operations inspectors (POI) ensure that each operator conducting operations in an MD-11:

1) Has included in its Company Flight Manual (CFM) information regarding the potential for pitch attitude upsets caused by improper operation of the autopilot and disseminate that information to each flightcrew member of the MD-11.

2) Has included simulator instruction in the proper operating procedure for autopilot disengagement and subsequent manual control of the airplane in its MD-11 initial, upgrade, recurrent, transition, and requalification training programs.

D. Helicopter Authorization. See OpSpec/MSpec H111, Manually Flown Flight Control Guidance System Certified for Landing Operations Other Than Categories II and III, for the helicopter equivalent of this authorization.

OPSPEC/MSPEC/LOA C063—AREA NAVIGATION (RNAV) AND REQUIRED NAVIGATION PERFORMANCE (RNP) TERMINAL OPERATIONS.

A. General. The authorization provided by OpSpec/MSpec/LOA C063 is applicable to certificate holders/operators/program managers conducting operations under 14 CFR parts 91

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subpart K (part 91K), 121, 125 (including A125 Letter of Deviation Authority (LODA) holders), and 135. (For 14 CFR part 129, see Volume 12, Chapter 2, Section 5.)

1) OpSpec/MSpec/LOA C063 authorizes certificate holders/operators/program managers to conduct operations using 14 CFR part 97 U.S. instrument flight rules (IFR) terminal Area Navigation 1 (RNAV 1) and/or Required Navigation Performance 1 (RNP 1) departure procedures (DP) and RNAV 1 and/or RNP 1 Standard Terminal Arrival Routes (STAR) in the National Airspace System (NAS). This guidance addresses RNAV 1, RNP 1, and other RNAV flight operations. It also provides guidance authorization for certificate holders/operators/ program managers to conduct RNP 1 procedures that include Radius to Fix (RF) path terminators and Tailored Arrivals (TA). Part 91 operators do not need to obtain an LOA for RNAV 1 or RNP 1 operations.

2) The term “RNAV 1 DP” or “RNP 1 DP” includes Standard Instrument Departures (SID) and Obstacle Departure Procedures (ODP).

3) RNP 1 requires a Global Positioning System (GPS) and additional requirements for operating on procedures that contain RF legs, as outlined in the current edition of Advisory Circular (AC) 90-105, Approval Guidance for RNP Operations and Barometric Vertical Navigation in the U.S. National Airspace System and in Oceanic and Remote Continental Airspace.

4) RF legs are an optional capability rather than a minimum requirement for RNP 1 operations. However, RF capability is required for Advanced RNP (A-RNP) certificate holders. For RNP 1 systems incorporating RF leg capability, the systems must comply with the requirements in AC 90-105, Appendices C, H, and I.

B. Determining Eligibility for RNP 1 and RNAV 1.

1) RNP Compliance. AC 90-105 provides the minimum criteria for RNP systems to operate on RNP routes and procedures. Manufacturers should evaluate their systems against these criteria and document the RNP capabilities as per guidance in AC 90-105.

2) Certificate holders/operators/program managers and pilots should use the guidance in AC 90-100, U.S. Terminal and En Route Area Navigation (RNAV) Operations, to determine their eligibility for domestic U.S. RNAV 1 terminal procedures. For the purpose of this authorization, “compliance” means meeting operational and functional performance criteria.

NOTE: Per AC 90-100 and AC 90-105, data suppliers and avionics data suppliers must have an LOA in accordance with the current edition of AC 20-153, Acceptance of Aeronautical Data Processes and Associated Databases. Operators must ensure that data supplier(s) are compliant. Aircraft/equipment with approval under AC 90-100 for use of GPS are approved under AC 90-105 for RNP operations.

3) RNAV 1 procedures require distance measuring equipment (DME)/DME/Inertial Reference Unit (IRU) sensors and/or GPS inputs. Due to gaps in the DME infrastructure of the

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NAS, RNAV 1 procedures require IRU sensor inputs to augment DME/DME, which is often referred to as DME/DME/IRU.

4) RNP 1 operations are based on GPS positioning and, if adequate coverage is available, DME/DME/IRU.

5) The certificate holder/operator/program manager is responsible for providing equipment eligibility documented by the Airplane Flight Manual (AFM) or other FAA-recognized means. If the operators are unable to determine that the aircraft is eligible, they must provide the following required documentation for RNAV 1 and/or RNP 1 terminal procedures to the certificate-holding district office (CHDO):

a) RNAV system make, model, and part number(s);

b) Evidence of compliance with AC 90-100 or AC 90-105 criteria;

c) Crew operating procedures;

d) Evidence of control of operation procedures;

e) Crew training program;

f) Evidence of control of navigation database processes; and

g) Any other pertinent information.

6) Based on the information supplied by the operator, the principal operations inspector (POI) must coordinate with the principal avionics inspector (PAI) to determine equipment eligibility. If unable to determine eligibility, contact the FAA Performance-Based Flight Systems Branch (AFS-470).

a) As described in the AC 90-100 and AC 90-105, the term “compliance” means meeting the operational and functional performance criteria. For the intended purpose of this policy, “compatible” means equipment and systems that perform their intended function and meet performance requirements for RNAV 1 and RNP 1 operations.

b) The PAI determines the proper nomenclature of the equipment manufacturer’s make, model, and software version, and verifies the RNAV equipment and system is installed in accordance with approved data and meets the criteria of the most recent version of AC 90-100 or AC 90-105. To ensure the proper configuration control of the approved RNAV operating system, it is required to list both the hardware and the software part numbers or version/revision numbers in Table 1 of OpSpec C063.

c) If the CHDO is unable to determine equipment eligibility for RNAV 1 or RNP 1 DPs and STARs, contact AFS-470 for guidance.

7) Based on the information supplied by the certificate holder/operator/program manager, the POI must coordinate with the PAI to determine if the aircraft’s system meets the

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performance and functionality requirements for RNP 1 operations. The equipment must not permit the flightcrew to select a procedure or route that is not supported by the equipment, either manually or automatically (e.g., a procedure is not supported if it incorporates an RF leg and the equipment does not provide RF leg capability).The system must also restrict pilot access to procedures requiring RF leg capability if the system can select the procedure, but the aircraft is not otherwise equipped (e.g., the aircraft does not have the required roll steering autopilot or flight director (FD) installed).

8) Some RNAV equipment and systems may not be able to perform multiple STAR runway transitions, sometimes known as route Type 3, because of database limitations. Operators of such RNAV systems must procure a tailored database and charts to allow the use of multiple runway transitions in order to qualify for RNAV 1 and/or RNP 1 approval.

9) After the POI and PAI agree that the certificate holder's/operator's/program manager's navigation equipment, procedures, and flightcrew training are eligible for authorization(s) in Table 1, the OpSpec/MSpec/LOA C063 template may be issued, indicating the appropriate bundled authorizations as follows:

- A-RNP, RNP 1, TA, RNAV 1;
- RNP 1, RF, TA, RNAV 1;
- RNP 1, RF, RNAV 1;
- RNP 1, TA, RNAV 1;
- RNP 1, RNAV 1; or
- RNAV 1.

10) Every effort should be made to bundle qualifications within the hierarchy of an OpSpec/MSpec/LOA where applicable and also combine other OpSpecs/MSpecs/LOAs as desired by qualified operators. (Refer to AC 90-105).

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Figure 3-67D. Sample C063 Table 1 – Airplane(s), RNAV Equipment, Navigation Specification(s)

Airplane	Compliant RNAV System(s) and Software			Navigation Specification(s)	Additional Capabilities	Limitation and Provisions
M/M/S	**Manufacturer**	**Model/HW Part Number**	**Software Part/ Version/ Revision Number**			
B-747-451	Honeywell Rockwell-Collins Honeywell Rockwell-Collins Rockwell-Collins Honeywell	FMC-4052508 FCGS-FCS-700 IRU-HG1050 DME-DME-700 MMR(GPS)-GLU-925 MMR(GPS)-RMA-55B		A-RNP/RNP 1/ TA/RNAV 1	FRT/TOAC	GPS Required
B-757-212	Honeywell Rockwell-Collins Honeywell Rockwell-Collins Honeywell Rockwell-Collins	FMC-4052506 FCGS-FCS-700 IRU-HG1050 DME-DME-700/ DME-900 DME-DMA-37B MMR(GPS)-GLU-920		RNP 1/RF/TA/ RNAV 1	FRT	GPS Required
A-320-212	Thales Thales Honeywell Rockwell-Collins Thales	FMGC-C13043 C13403 ADIRU-HG1150/ HG2030 DME-DME-700/ DME-900 MMR(GPS)-TLS755-01		RNP 1/RF/ RNAV 1	TOAC	
A-330-223	Thales Thales Honeywell Rockwell-Collins Thales	FMGEC-C12858 C12858 ADIRU-HG2030 DME-DME-900 MMR(GPS)-TLS755-01		RNP 1/TA/ RNAV 1		DME/DME Only
B-717-200	Honeywell Honeywell Honeywell Honeywell Honeywell	FMC-4081570 B717ACF ADIRU-HG2080 DME-DMA-37B MMR(GPS)–RMA-55B		RNP 1/ RNAV 1		
B-737-832	GE (Smiths) Honeywell Rockwell-Collins Honeywell Rockwell-Collins Rockwell-Collins	FMC-2907A4/2907C1 FCGS–SP-300 FCGS-EDFCS-730 ADIRU-HG2050 DME-DME-900 MMR(GPS)–GLU-920/ GLU-925		RNAV 1		

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11) A-RNP Authorization. In paragraph C063, Table 1 provides an option for six bundled options starting with A-RNP, RNP 1 with TA. Lesser bundles are also available with the following options: RNP 1 with RF and TA and RNAV 1; RNP 1 with RF and RNAV 1; RNP 1 with TA and RNAV 1; RNP 1 and RNAV 1; or RNAV 1 only. As a minimum for A-RNP, the certificate holder must be qualified for the following advanced capabilities: scalability, RF, and parallel offset. Operators applying for A-RNP must be functionally and operationally capable of performing the required A-RNP functions and meet the continuity requirements for the operation.

12) Additional Capabilities. A-RNP functions Fix Radius Transition (FRT) and/or Time of Arrival Control (TOAC) may be selected in Table 1 under additional capabilities for those who qualify for A-RNP.

C. RNAV 1 and/or RNP 1 DPs and STARs. AC 90-100 provides detailed guidance for certificate holders/operators/program managers regarding operations on RNAV 1 DPs and STARs. AC 90-105 provides guidance for system and operational approval for conducting RNP 1 DPs and STARs.

1) For current ACs, policy, guidance, and compliance tables, see http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs400/afs470/pbn. For further questions, contact the Performance Based Flight Systems Branch (AFS-470) at 202-267-8790. Based on the information supplied by the certificate holder/operator/program manager, the POI must coordinate with the PAI to determine equipment eligibility. For TAs, a Future Air Navigation System (FANS)-1/A is required, as indicated in OpSpec/MSpec/LOA A056.

2) Additional information may also be found in the Web-based Operations Safety System (WebOPSS) guidance associated with OpSpec/MSpec/LOA C063 by clicking on "Guidance."

D. Outlining Procedures Using This Approval. Procedures used under this approval should be outlined in the appropriate operations manual or within the OpSpec/MSpec/LOA C063 template for certificate holders/operators/program managers conducting operations under parts 91K, 125 (including A125 LODA holders), and 135 who do not have an operations manual. For part 91 operators, LOAs are optional and may be obtained through the application process.

E. Designation of RNAV 1 RNP 1. U.S. RNAV DPs and STARs throughout the NAS are designated as RNAV 1 and published in accordance with part 97.

F. Definitions Related to This Authorization. Some important definitions as they relate to this authorization are as follows:

1) Instrument Departure Procedure (DP). Instrument DPs are published IFR procedures that provide obstruction clearance from the terminal area to the en route structure. There are two types of DPs: SIDs and ODPs.

a) A SID is a published IFR air traffic control (ATC) DP that provides obstacle clearance and a transition from the terminal area to the en route structure. SIDs are primarily

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designed for air traffic system enhancement to expedite traffic flow and to reduce pilot/controller workload.

b) An ODP is a published IFR DP that provides obstruction clearance via the least onerous route from the terminal area to the appropriate en route structure. ODPs are recommended for obstruction clearance unless an alternate DP (such as a SID or radar vector) has been specifically assigned by ATC.

c) The RNAV 1 or RNP 1 DP must be retrievable from the flight management system (FMS) database and included in the filed flight plan.

G. Certificate Holders and Program Managers Authorized European Precision Area Navigation (P-RNAV) Operations. The criteria in AC 90-100, required for U.S. RNAV procedures, are generally consistent (but there are exceptions) with the criteria for P-RNAV operations in Europe.

1) P-RNAV terminal and en route operations require a track-keeping accuracy of ± 1 NM for 95 percent of the flight time.

2) If an operator has met the requirements for and is authorized P-RNAV (OpSpec/MSpec/LOA B034), that operator may also be eligible for RNAV 1 after consideration of the issues listed below regarding equipment. POIs should still evaluate their operator's procedures and training to confirm compliance with AC 90-100.

a) If approval for the P-RNAV included the use of Very High Frequency omni-directional range station (VOR)/DME, then RNAV system performance must be based on the GNSS, DME/DME, or DME/DME/IRU for RNAV 1. However, VOR/DME inputs do not have to be inhibited or deselected.

b) If approval for the P-RNAV included the use of DME/DME, the operator can ask the manufacturer or check the FAA Web site for a list of compliant systems. However, DME/DME-only systems are not authorized to conduct RNAV 1 operations.

c) Operators must be able to follow RNAV guidance no later than 500 feet above field elevation (AFE).

3) Appropriate P-RNAV references.

a) The current edition of AC 90-96, Approval of U.S. Operators and Aircraft to Operate Under Instrument Flight Rules (IFR) in European Airspace Designated for Basic Area Navigation (B-RNAV) and Precision Area Navigation (P-RNAV);

b) Joint Aviation Authority (JAA) temporary guidance leaflet (TGL) Number 10, Airworthiness and Operational Approval for Precision RNAV Operations in Designated European Airspace; and

c) Volume 3, Chapter 18, Section 4, OpSpec/MSpec/LOA B034.

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H. TAs. Currently, the TA model is limited and TAs are preplanned fixed routes received via data link from ATC's Ocean21 system to FANS-1/A-equipped aircraft. Except for the instrument approach portion of the operation, these routes are neither stored in the aircraft navigation database nor published.

1) TAs Consist of Three Elements.

- Delivery of the TA clearance through the ATC Ocean21 system via data link to FANS-1/A-equipped aircraft;
- An RNAV lateral, vertical, and speed profile; and
- Connection to a published instrument approach stored in the aircraft navigation database.

2) TA Clearances. Because TAs are complex clearances, only aircraft with an FMS autoload/uplink function can request a TA. Pilots may not manually enter a TA procedure into the FMS. ATC issues TA clearances. Pilots fly the TA procedure according to the operator's standard operating procedures (SOP).

3) Approval. The POI should contact the Air Transportation Division (AFS-200), General Aviation and Commercial Division (AFS-800), and AFS-470 at FAA headquarters (HQ) for concurrence prior to issuing the appropriate OpSpec, MSpec, or LOA. If the POI, AFS-200, and AFS-470 agree that the operator is authorized to conduct TA operations, authorization should be given by adding TA into the "Authorization" column of Table 1.

4) Certificate holders/operators/program managers must have all the following OpSpecs/MSpecs/LOAs for TA authorization:

a) OpSpec A056. OpSpec A056 will include FANS-1/A equipment in Table 1.

b) OpSpec B050.

c) OpSpec C063. In the "Limitations and Provisions" column of Table 1 add the following phrase: "Operator is authorized to conduct TAs with FANS-1/A-equipped aircraft listed in OpSpec A056." If the POI wishes to restrict the authorization to only specific airports, this may also be added to the "Limitations and Provisions" column of Table 1.

I. References (current editions):

- Title 14 CFR Part 91, §§ 91.123, 91.205, and 91.503.
- Title 14 CFR Part 95.
- Title 14 CFR Part 121, § 121.349.
- Title 14 CFR Part 125, § 125.203.
- Title 14 CFR Part 135, § 135.165.
- Order 1050.1, Environmental Impacts: Policies and Procedures.
- Order JO 7100.9, Standard Terminal Arrival Program and Procedures.
- Order JO 7110.65, Air Traffic Control.
- Order JO 7400.2, Procedures for Handling Airspace Matters.

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- Order 8260.3, United States Standard for Terminal Instrument Procedures (TERPS).
- Order 8260.19, Flight Procedures and Airspace.
- Order 8260.58, United States Standard for Performance Based Navigation (PBN) Instrument Procedure Design.
- AC 20-153, Acceptance of Aeronautical Data Processes and Associated Databases.
- AC 90-45, Approval of Area Navigation Systems for Use in the U.S. National Airspace System.
- AC 90-96, Approval of U.S. Operators and Aircraft to Operate Under Instrument Flight Rules (IFR) In European Airspace Designated for Basic Area Navigation (B-NAV)/RNAV 5 and Precision Area Navigation (P-RNAV).
- AC 90-100, U.S. Terminal and En Route Area Navigation (RNAV) Operations.
- AC 90-105, Approval Guidance for RNP Operations and Barometric Vertical Navigation in the U.S. National Airspace System.
- TSO C-129a, Airborne Supplemental Navigation Equipment Using the Global Positioning System (GPS).
- TSO C-145(), Airborne Navigation Sensors Using the Global Positioning System (GPS) Augmented by the Wide Area Augmentation System (WAAS).
- TSO C-146(), Stand-Alone Airborne Navigation Equipment Using the Global Positioning System (GPS) Augmented by the Wide Area Augmentation System (WAAS).
- TSO C-196(), Airborne Supplemental Navigation Sensors for Global Positioning System Equipment using Aircraft-Based Augmentation.
- ICAO Global Operational Data Link Document (GOLD).

OPSPEC C064—TERMINAL AREA IFR OPERATIONS IN CLASS G AIRSPACE AND AT AIRPORTS WITHOUT AN OPERATING CONTROL TOWER—NONSCHEDULED PASSENGER AND ALL CARGO OPERATIONS. C064 authorizes an operator to conduct nonscheduled passenger and all cargo (scheduled and nonscheduled) terminal area instrument flight rules (IFR) operations in Class G airspace or into airports without an operating control tower, with the following limitations and provisions:

A. Operation Information. Before authorizing C064, the principal operations inspectors (POI) must ensure that the operator has sufficient content in its manual(s) and training program to cover common traffic advisory frequency (CTAF) and pilot controlled lighting (PCL) information and procedures. The POI must also determine that the operator has a method or procedure for obtaining and disseminating necessary operation information. This operation information must include the following:

1) The airport is served by an authorized instrument approach procedure (IAP) (and departure procedure when applicable);

2) Applicable charts for crewmember use;

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3) Operational weather data from an approved source for control of flight movements and crewmember use;

4) Status of airport services and facilities at the time of the operation;

5) Suitable means for pilots to obtain traffic advisories (TA); and

6) Sources of TA and airport advisories.

B. Radio Sources of Air TA Information. Certificate holders may be authorized to use any two-way radio source of air TA information listed in the Aeronautical Information Manual (AIM) (for operations in U.S. airspace) or equivalent Aeronautical Information Publications (AIP) (for foreign operations).

1) These sources include CTAFs, Aeronautical Advisory Stations (UNICOM), Aeronautical Multicom Stations (MULTICOM), and Flight Service Stations (FSS).

2) In those cases where two sources are listed at the same airport, inspectors must ensure that the operator's manuals have procedures that require pilots to continuously monitor and use the TA frequency when operating within 10 nautical miles (NM) of the airport. The procedures should require communication concerning airport services and facilities to be completed while more than 10 NM from the airport.

3) At some airports, no public use frequencies may be available. In those cases, a certificate holder must arrange for radio communication of essential information including surveillance of local or transient aircraft operations by ground personnel. Ground personnel who operate a company radio for airport status and TA must be able to view airspace around the airport.

C. Issuance of C064 for C081 Authorization. OpSpecs C064 and/or C080 may need to be issued to the certificate holder in order for the OpSpec C081 to be issued. C081 authorizes the use of special (non-14 CFR part 97) IAPs or departure procedures (DPs).

D. Other Authorizations. C064 is applicable to 14 CFR part 121, 125, 121/135, and 135 certificate holders. For helicopter authorization, see OpSpec H121. Title 14 CFR part 91 subpart K (part 91K) program managers should use MSpec A014 for Class G operations.

OPSPEC C065—POWERBACK OPERATIONS WITH AIRPLANES.

A. General. C065 authorizes the use of powerplant reversing systems for rearward taxi operations. Before issuing C065, the principal operations inspector (POI) must determine whether the operator meets requirements discussed in AC 120-29, Criteria for Approval of Category I and Category II Weather Minima for Approach, current edition. Airplane types' make, model, and series (M/M/S) authorized for powerback operations must be listed in C065. Airports where powerback operations are authorized must also be listed. If the POI and/or operator determine that restrictions to powerback operations are required at certain gates or ramp areas, the restrictions must be described (adjacent to the airport name) in the "Restrictions and

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Limitations" column. OpSpecs worksheets provide a template for listing authorized airplanes, airports, and restrictions.

B. Policies and Procedures for Ground Personnel During Ground Operations. Title 14 CFR part 121, §§ 121.133 and 121.135, part 134, § 134.23, and part 135, § 135.21, require certificate holders to prepare manuals setting forth procedures and policies that must be used by ground and maintenance personnel in conducting their ground operations. Sufficient procedures must be established to maintain an adequate level of passenger and company ground personnel safety during ramp operations. Procedures should emphasize safety during boarding and deplaning of passengers or cargo, specifically during times when an engine(s) may be running or a propeller(s) is turning during ground operations. Procedures should include, as a minimum, a means for defining no access areas around the propeller(s), as well as the landing gear and tugs, during push and ground marshaling operations. Policies should provide that an adequate number of ground personnel are assigned to ensure safety of company personnel and passengers.

C. Pushback and Ground Marshaling. Procedures for pushback and ground marshaling activities should be clearly defined and should include safety precautions and signals, and should ensure adequate visibility of assigned personnel during the time of aircraft movement.

D. Increased Awareness. FAA air carrier surveillance programs should emphasize increased awareness by inspectors and the strict need to follow safety procedures around turning propellers, in marshalling and pushback procedures, and/or other ground activities.

E. Other References. Additional references can be found in National Transportation Safety Board (NTSB) Recommendations 91-297, 91-298, and 93-146, and Air Carrier Operating Bulletin (ACOB) 8-94-2, Safety in Ground Operations.

OPSPEC C067—SPECIAL AIRPLANE AUTHORIZATIONS, PROVISIONS, AND LIMITATIONS FOR CERTAIN AIRPORTS.

A. General. OpSpec C067 authorizes certificate holders to operate airplanes into certain airports. The authorizations include the following:

1) Title 14 CFR part 121 air carriers to conduct passenger-carrying operations into uncertificated airports (see subparagraph C);

2) Part 121 air carriers to conduct operations at airports that require curfew limitations for flights into or out of specific airports (see subparagraph D);

3) Part 121 or 14 CFR part 135 air carriers to conduct operations into airports that have operational considerations such as special aircraft performance charts and equipment, special lighting (flare pots, etc.), or unpaved runways (see subparagraph D);

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4) Part 121 or 135 air carriers to conduct operations using the Reginald Bennett International Runway (RBI) Reflectorization System in Alaska (see subparagraph D); and

5) Part 135 transport category airplane deviations from part 135, § 135.376(a)(3) or § 135.379(d). (See subparagraph D and Volume 4, Chapter 3, Section 5.)

B. Authorizations Where Other OpSpecs Are Applicable.

1) OpSpec C050 for "special PIC qualification airports" is applicable to the authorization described in part 121, § 121.445. Do not list special pilot in command (PIC) qualification airports in OpSpec C067 unless one of the items in subparagraph A also applies.

2) OpSpec C081 should be used for listing the airports/runways where the Flight Technologies and Procedures Division (AFS-400) has approved specific "special" instrument procedures for a certificate holder.

3) OpSpec C058 is used for authorizing specific foreign Terminal Instrument Procedures (TERPS).

4) OpSpec C064 and C080 are used for authorizing a certificate holder to conduct airplane operations in airport terminal areas in Class G and E airspace.

5) OpSpec C070 is used for authorizing airports where certificate holders conduct scheduled operations.

C. Uncertificated Airports.

1) In accordance with § 121.590(c) and (e), a certificate holder may be authorized to conduct passenger-carrying airplane operations into an airport (nonmilitary) operated by the U.S. Government that is not certificated under 14 CFR part 139 if those airports meet:

a) The equivalent safety standards for airports certificated under part 139, and

b) The equivalent airport classification requirements under part 139 to serve the type airplanes to be operated and the type of operations to be conducted.

2) Authorization to use such airports may be granted by entering the location/identifier of each airport, and the make and model (if applicable) of the airplanes to be operated in Table 3-24, Sample of Airports and Special Provisions:

a) Operators should obtain permission from the airport manager of nonmilitary airports to operate at these airports before starting operations.

b) This permission is not needed for operations at joint-use civil and military airports.

3) The FAA may authorize a certificate holder to conduct passenger-carrying airplane operations into a domestic military airport that is not certificated under part 139

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(by selecting this text in the OpSpec) if the certificate holder ensures the following in advance of starting operations into that airport:

a) Certificate holders should obtain permission from the base commander of military airports that are not certificated under part 139 in advance of commencement of operations.

b) In accordance with the requirements of § 121.590, certificate holders must ensure that the airport:

1. Meets the equivalent safety standards for airports certificated under part 139, and

2. Meets the equivalent airport classification requirements under part 139 to serve the type airplanes to be operated and the type of operations to be conducted.

D. Other Special Authorizations.

1) Other special authorizations include those that may require special operational considerations and special flightcrew member training. (See guidance in Volume 4, Chapter 3, Section 5, paragraph 4-601.) These authorizations may include but are not limited to:

a) Operations into airports with special runway markings, such as flare pots or trees;

b) High-altitude airports with special airplane performance requirements;

c) Airports in or near precipitous terrain (§ 135.363(h)); and

d) Airports with unpaved runways or runways constructed on frozen lakes and rivers.

2) Special authorization for conducting operations at airports in Alaska. For authorization to conduct airplane operations using the RBI Runway Reflectorization System in Alaska:

a) The air carrier must provide a station agent at the airport trained to give wind information to the flightcrew, and

b) The air carrier must train its flightcrews on this specific system in accordance with an approved training program. The training program must be approved in accordance with the following criteria:

1. Each pilot must receive initial and follow-on recurrent training in accordance with the company approved training program.

2. Ground and flight personnel must complete initial training before participation with this authorization.

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3. Recurrent training must be completed every 12 calendar-months following completion of initial training.

4. Whenever a person who is required to take this recurrent training completes the training in the calendar-month before or the calendar-month after the month in which this recurrent training is required, that person is considered to have completed it in the calendar-month in which it was required.

NOTE: The sample Table 3-24 shows how to provide authorization for conducting operations after curfew hours at specific airports or use of the RBI Runway Reflectorization system at specific airports in Table 3-24 of OpSpec C067.

3) Unpaved Runways for Turbojet Operations. To use an airport with unpaved runways, an operator is required to have special operational procedures and flightcrew member training. For approval of operations at an airport with unpaved runways, the principal operations inspector (POI) must identify the airport and reference the appropriate section of the operator's manuals in Table 3-24 of OpSpec C067. See Volume 4, Chapter 3, Section 5.

4) You may list in OpSpec C067 flag or supplemental destination airports that do not have an available alternate airport (in accordance with § 121.621(a)(2) or § 121.623(b)), for use by airplanes that are dispatched in accordance with the required fuel reserves set forth in § 121.641(b) or § 121.645(c).

5) Although the FAA does not encourage operators to list aircraft limitations at certain airports during curfew hours in their OpSpecs, if an airport authority requires operators to list these limitations in their OpSpecs, then operators may list them in Table 3-24 of OpSpec C067. A sample of Table 3-24, below, shows an example of limitations for air carrier operations into specific airports during curfew hours.

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Table 3-24. Sample of Airports and Special Provisions

Airport Location/Identifier	Aircraft M/M (enter N/A if not applicable)	Special Provisions and Limitations and Special Flightcrew Member Training
PKEK, Ekwok, Alaska	N/A	A station agent is required to give wind information to the flightcrews and the flightcrew must have completed the required approved training on the RBI Runway Reflectorization System.
DCA, Ronald Reagan Washington National Airport	Boeing 737-800	Limitations during the curfew hours. Boeing 737-800 Max Takeoff—159,000 pounds. Max Landing—137,600 pounds.
Tahiti Island, Society IS; PPT/NTAA	N/A	Approved as destination airport without an available alternate.

6) Deviation from the requirement to obtain obstacle clearance data for takeoff. This OpSpec provides for the authorization of certain transport category airplanes a deviation from § 135.367(a)(3) or § 135.379(d). Guidance for this deviation authorization is contained in Volume 4, Chapter 3, Section 5, paragraph 4-599. To authorize this deviation, it must be listed in OpSpec A005 and the following statement must be selected in OpSpec C067:

> "The certificate holder is authorized to conduct takeoff operations using transport category airplanes weighing no more than 19,000 pounds and having a seating configuration of no more than 19 passenger seats without showing compliance with part 135, §§ 135.367(a)(3) and 135.379(d). This authorization is limited to only the following operations conducted:
>
> - At airports of 4,000 feet mean sea level or less field elevation;
> - On runways on which the available length of runway is equal to or greater than 150 percent of the runway required by part 135, § 135.367(a)(1) and (2) or part 135, § 135.379(c), as applicable; and
> - In weather conditions equal to or greater than straight-in Category I landing minimums for the runway being used."

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OPSPEC C068—NOISE ABATEMENT DEPARTURE PROFILES (NADP) ITEM 7K.

A. General. C068 authorizes an operator to conduct Noise Abatement Departure Profiles (NADP) using aircraft with a maximum certificated gross takeoff weight (GTOW) of more than 75,000 pounds. Operators may use either or both of two standard NADPs as described in Advisory Circular (AC) 91-53, Noise Abatement Departure Profiles, current edition.

B. Compliance of Vertical Departure Profiles. Before authorizing this paragraph, the principal operations inspector (POI) must ensure that all airplane vertical departure profiles described in the certificate holder operations and/or training manuals comply with the minimums criteria established in AC 91-53 for NADPs (close-in and distant) before approving paragraph C068 for the certificate holder's OpSpecs. The certificate holder must not use any other departure profile (except as stated in 14 CFR part 91) that is not defined within the AC.

NOTE: Use of part 91 procedures does not require OpSpecs authorization. If the operator does not meet the criteria established in AC 91-53, then OpSpec C068 will not be issued.

C. Proposed Exceptions to This OpSpec. Proposed exceptions to the criteria as stated in this OpSpec, which would be less limiting (less than 800 feet above field elevation (AFE)), must be addressed by the certificate holder to the certificate holder's POI for concurrence by the Flight Technologies and Procedures Division (AFS-400) of the Flight Standards Service (AFS).

D. Criteria for Close-In and Distant NADPs. AC 91-53, effective July 22, 1993, established minimum acceptable criteria for speed, thrust settings, airplane configurations, and the criteria for both the close-in and distant NADPs. These NADPs can be combined with preferential runway selection and flightpath techniques to minimize noise impact. For helicopter information, see the current edition of AC 91-66, Noise Abatement for Helicopters.

NOTE: The distant departure profile requires an initiation of flaps/slats retraction prior to thrust cutback initiation with the thrust cutback initiation at an altitude of no less than 800 feet AFE. Configuration changes necessary to meet regulatory performance or operations requirements will not be affected by this procedure. For those airplanes that have a performance requirement to reduce takeoff flaps to an intermediate takeoff flap setting at 400 feet AFE or above, the next flap/slats retraction should be initiated at an altitude of no less than 800 feet AFE.

OPSPEC C070—AIRPORTS AUTHORIZED FOR SCHEDULED OPERATIONS.

A. General. Under 14 CFR part 119, § 119.49, the OpSpecs must prescribe the authorizations and limitations for each type of operation. All regular airports shall be listed in the OpSpecs of all operators conducting scheduled operations. This includes domestic operations, flag operations, and commuter operations. Provisional and refueling airports will be listed for 14 CFR part 121 domestic and flag operations:

- Airport name,
- Four-letter identifier of the airport,

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- Airplanes authorized to use the airport, and
- A notation as to whether the airport is regular (R), refueling (F), or provisional (P) for each type of airplane authorized (refueling and provisional airports are not applicable to part 135 operators).

NOTE: If an airport is designated as provisional, the regular airport or airports for which it serves as a provisional airport must be annotated. (Except in unique situations, an airport should not be designated as a provisional airport if it is located more than 100 statute miles outside of the metropolitan area served by the regular airport.)

B. Requirements for List of Airports. If the operator provides a list of airports to be incorporated into C070, this list must provide the same type of information discussed in subparagraph A. This list must be annotated with the effective date of the listing.

C. List of Alternate Airports. C070 specifies that the operator must maintain a list of alternate airports that can be used. This list of alternates may be integrated into the list provided by the operator, if desired. The principal operations inspector (POI) should occasionally inspect the list of alternates to determine airport and airplane compatibility.

OPSPEC/LOA C071—AUTOPILOT MINIMUM USE ALTITUDES/HEIGHTS (MUH).

A. Applicability. OpSpec/LOA C071 is a mandatory authorization for certificate holders/operators who want to operate an autopilot below 500 feet above ground level (AGL), during takeoff or approach operations. Autopilot minimum use altitudes/heights (MUHs) in this OpSpec/LOA are applicable to 14 CFR parts 121, 125 (including 125 Letter of Deviation Authority (LODA) holders), and 135. OpSpec/LOA C071 will base its authorization on part 121, § 121.579; part 125, § 125.329; and part 135, § 135.93. OpSpec/LOA C071 does not replace or override OpSpec/LOA C059, Category II Instrument Approach and Landing Operations (Optional: 14 CFR Parts 121, 125, 125M, and 135 Operators) and Special Authorization Category I Instrument Approach and Landing Operations; OpSpec/LOA C060, Category (CAT) III Instrument Approach and Landing Operations; or OpSpec C061, Flight Control Guidance Systems For Automatic Landing Operations Other Than Categories II and III authorizations. The Administrator has authorization to require an altitude higher than the Airplane Flight Manual (AFM).

1) Approved Airplanes and Equipment. Table 1 lists the airplane configuration and the associated MUHs approved for each individual phase of flight. Airplanes with same M/M/S, but equipped with a different autopilot model/version and MUHs must be listed separately.

NOTE: This OpSpec/LOA uses “altitude/height” when referencing MUHs. AFMs use “altitude” or “height” in referencing MUH.

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Table 1 – Approved Airplanes, Equipment and MUHs

Airplane Type (M/M/S)	Autopilot Manufacturer	Autopilot Model/Version	Minimum Use Heights/Altitudes (feet)		
			Takeoff/Initial Climb	Enroute	Approach

2) Determining MUHs. Specified MUHs and/or specified altitude/height losses published in the AFM will be the basis for this OpSpec/LOA. The following criteria will be used by this OpSpec/LOA to authorize any alternatives to these altitudes:

a) If the Flight Standardization Board (FSB) report recommends a higher altitude than the AFM, the higher FSB (Administrator) altitude will be the authorized altitude.

b) If an FSB report is not available, or does not address autopilot use altitudes, the lowest authorized altitude in the AFM will be used.

c) If an FSB report is not available and the AFM does not address autopilot use altitudes/heights, the lowest authorized altitude/height shall be the basic MUH for a given phase of flight.

3) Takeoff/Initial Climb and Go-Around/Missed Approach Engagement Height. The basic minimum engagement height for an autopilot on takeoff/initial climb and go-around/missed approach is 500 ft. The following exceptions to the 500 ft. basic engagement height are:

a) A higher altitude/height if doubling the “altitude/height loss” specified in the AFM is greater than 500 ft.,

b) A minimum engagement altitude is specified in the AFM, or

c) An altitude/height recommended by FSB, that is no lower than the AFM or double the “altitude/height loss.”

4) Enroute MUHs. The lowest MUH during enroute operations is 500 ft. above the ground, except as follows:

a) If doubling the “altitude/height loss” specified in the AFM results in an altitude/height greater than 500 ft., or

b) A greater altitude recommended by FSB.

5) Approach MUHs. The MUH during approach operations is no lower than 50 ft. below the lowest DA/H or MDA/H for the instrument procedure being flown, except as follows:

a) For autopilots with an AFM specified altitude/height loss for approach operations:

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1. An altitude no lower than twice the specified altitude/height loss if greater than 50 ft. below the DA/H or MDA.

2. An altitude no lower than 50 ft. higher than the altitude loss specified in the AFM when:

a. Reported weather conditions are less than the basic VFR weather conditions in 14 CFR part 91, § 91.155,

b. Suitable visual references specified in § 91.175 have been established on the instrument approach procedure (IAP), and

c. The autopilot is coupled and receiving both lateral and vertical path references.

3. An altitude no lower than the greater of the altitude loss specified in the AFM or 50 ft. when:

a. Reported weather conditions are equal to or better than the basic VFR weather conditions in § 91.155, and

b. The autopilot is coupled and receiving both lateral and vertical path references.

4. A greater altitude recommended by FSB.

b) For autopilots with AFM specified approach altitude/height limitations, and the autopilot is coupled and receiving both lateral and vertical path references, the greater of:

1. The MUH specified for the coupled approach mode selected,

2. Fifty feet, or

3. An altitude recommended by FSB.

c) For autopilots with an AFM specified negligible or zero altitude loss for an autopilot approach mode malfunction, and the autopilot is coupled and receiving both lateral and vertical path references, the greater of:

1. Fifty feet, or

2. An altitude specified by Administrator.

6) Types of Certificates. Airplanes with specified MUHs, specified negligible or zero height loss, or specified height loss will meet the following criteria:

a) Will be published in the AFM and the autopilot approved in accordance with an FAA type certificate (TC).

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b) Will be published in an AFM supplement and issued as a Supplemental Type Certificate (STC).

7) AFM. The AFM and its supplements are the primary resource for establishing autopilot MUHs and issuing OpSpec/LOA C071. The AFM contains operational procedures and limitations approved by Aircraft Certification Offices (ACO).

8) Aircraft Evaluation Group (AEG). The principal operations inspector (POI) may use the AEG as a liaison between the PI and ACO during the AFM approval process when there are any questions regarding the AFM, FSB, or any other subject found in the list above.

9) Operator Produced Manuals. An Airplane Operations Manual (AOM), General Operations Manual (GOM), or Flightcrew Operating Manual (FCOM) is an operator published document. Although produced in accordance with parts 121, 125, and 135, use information directly from AFM to issue OpSpec/LOA C071. Do not solely use information from operator produced manuals to issue OpSpec/LOA C071. The AFM establishes the basis for the limitations, operational procedures, and performance sections published in these documents.

10) Manuals with Takeoff Procedures. Some AOMs, GOMs, or FCOMs contain procedures for systems not specifically designed with a takeoff or approach mode. Do not use these types of procedures as a basis for approving procedures and training programs that relate to achieving necessary takeoff or approach performance.

a) Principal inspectors (PI) approving, or who have approved, performance-related takeoff or approach procedures and training for systems not specifically designed with these modes should coordinate with the responsible AEG.

b) The AEG, in coordination with the responsible ACO, should be able to provide inputs on the procedure, and propose conditions and limitations, if any, as appropriate.

B. Training Program. Flightcrews must be trained in accordance with the certificate holder/operator's training program. Certificate holder/operator training programs should specifically address the following topics:

1) Autopilot function, use, and limitations relative to approach and navigational source used.

2) Flight management system (FMS) function, use, and limitations relative to approach and navigational source used.

3) Procedures, modes, and configurations for flying an autopilot coupled approach.

4) Applicable monitoring and cross check requirements.

5) Suitable accuracy checks using control display unit (CDU) pages or flight instrument displays.

6) Display use, including deviation indications and display scaling.

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7) Pilot Flying (PF) and pilot monitoring (PM) duties and callouts during: descent, approach, landing, and missed approach.

8) Understanding and interpretation of U.S. terminal procedures (e.g., departure procedures, Standard Terminal Arrival Routes (STAR), and IAPs).

9) Understanding, interpretation, and proper response to appropriate failure indications prior to initiation of an approach or during an approach.

10) Proper techniques to accomplish any special flight deck procedure specified by the certificate holder/operator for the approach type used or for the particular approach to be flown.

11) Any unique issues particular to a specific approach or family of approach procedures, airplane or FMS.

12) Proper techniques for executing a missed approach during any segment of the approach with the autopilot engaged or disengaged.

13) The flightcrew must have successfully completed training for Auto Flight Guidance System (AFGS) operations at the MUHs.

14) Understanding the limitations of navigational systems used for approach operations (e.g., Instrument Landing System (ILS) facility performance classification codes and their expected performance found in the Airport Facility Directory (AFD)).

C. Maintenance Program. The certificate holder/operator shall conduct operations in accordance with the airworthiness certification of the autopilot found in 14 CFR part 25, § 25.1329. The certificate holder/operator must also review the established maintenance and reliability program. The design of the program should ensure the equipment functions to the prescribed levels as delivered by the manufacturer, and include maintenance and preventative maintenance. Reference appropriate manuals for compliance with manufacturers' recommendations.

OPSPEC C072—ENGINE-OUT DEPARTURE PROCEDURES WITH APPROVED 10 MINUTE TAKEOFF THRUST TIME LIMITS.

A. General. OpSpec C072 is optional and authorizes the certificate holder to use engine-out departure procedures (DPs) under the provisions of 14 CFR parts 121, 125, and/or 135, as appropriate, using airplanes that are equipped with powerplants that are approved 10-minute takeoff thrust time limits in accordance with the provisions of this guidance and OpSpec C070.

B. Takeoff Obstacle Climb Data in the Aircraft Flight Manual (AFM). The manufacturer's AFM must include takeoff obstacle climb data for use with a 10-minute, engine-out takeoff thrust time limit. This AFM data must be applied to the certificate holder's airplane engine-out takeoff obstacle analysis to provide critical obstacle clearance in the event of an engine failure during takeoff.

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1) The FAA Transport Airplane Directorate and the Engine and Propeller Directorate have developed a procedure to certify and revise airplane manufacturers' AFMs to include takeoff obstacle climb data for use with a 10-minute, engine-out takeoff thrust time limit.

2) Previously, airplane operators' AFM takeoff data only provided data for a 5-minute takeoff thrust time limit. Airplane operators may obtain revised AFMs from airplane manufacturers for specific airplane/engine combinations. This AFM data may then be applied to the airplane operator's engine-out takeoff obstacle analysis to provide critical obstacle clearance in the event of an engine failure during takeoff.

C. Airplane Thrust Limit Restrictions. Because it is assumed that not all airplanes operated by an air carrier will have their AFMs revised for 10-minute takeoff thrust data, some operators' airplane takeoff thrust limits may be restricted to 5 minutes, while other airplanes in the same fleet may have the 10-minute restriction. Certain criteria must be addressed to inform the pilot which limit is applicable in the event of an engine failure during takeoff.

D. Engine-Out DPs. The certificate holder's approved operations manual and training program must include the engine-out DPs specifically designed to use the 10-minute takeoff thrust time limits. These DPs require that airplane operator's training programs, manuals, and procedures address the following areas:

1) Air carrier performance engineers' evaluation of engine-out DPs specifically designed to use the 10-minute takeoff thrust time limit.

2) An FAA AFM revision outlining operational procedures with specific airplane/engine lists that involve the 10-minute takeoff thrust time limit.

3) An FAA-approved dispatch or similar acceptable system that provides specific 10–minute, engine-out takeoff thrust departure procedure information to the pilot for the impending flight concerning the airport, aircraft weight, and departure path.

4) Information readily available to the pilot that indicates airplanes authorized for 10-minute takeoff thrust operations in the event of an engine failure on takeoff.

5) Pilot knowledge of the designed engine-out departure procedure that uses the 10-minute takeoff thrust time limit.

6) Pilot training of the 10-minute takeoff thrust time limit departure flight procedure.

OPSPEC/MSPEC/LOA C073—VERTICAL NAVIGATION (VNAV) INSTRUMENT APPROACH PROCEDURES (IAP) USING MINIMUM DESCENT ALTITUDE (MDA) AS A DECISION ALTITUDE (DA)/DECISION HEIGHT (DH).

A. Applicability. OpSpec/MSpec/LOA C073 is applicable to all certificate holders/operators/program managers conducting airplane operations under 14 CFR parts 91, 91 subpart K (part 91K), 121, 125 (including part 125 Letter of Deviation Authority (LODA) holders), and 135. OpSpec/MSpec/LOA C073 will be used in conjunction with OpSpec/MSpec/LOA C052 (not applicable to part 91 operators). OpSpec/MSpec/LOA C073, in

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accordance with part 91, § 91.175, which states "unless otherwise authorized by the FAA," authorizes certificate holders/operators/program managers to use a minimum descent altitude (MDA) as a decision altitude (DA)/decision height (DH) using vertical navigation (VNAV).

B. VNAV Operating Concept. The VNAV operating concept is to fly approach procedures using VNAV guidance with a defined Vertical Path (VPATH) that provides a continuous descent final approach (CDFA). All 14 CFR part 97 Nonprecision Approach (NPA) straight-in IAPs may be flown using an MDA as a DA/DH.

NOTE: The use of MDA as a DA/DH does not ensure obstacle clearance from the MDA to the landing runway. Operators must see and avoid obstacles between the MDA and the runway when § 91.175 requirements are met and the approach is continued below the MDA for landing.

C. Airplane Type and Area Navigation (RNAV) System. OpSpec/MSpec/LOA C073, Table 1 will list the airplane type by make, model, and series (M/M/S) and the RNAV system by model and version.

1) The installed navigation equipment with VNAV must be certified and documented in accordance with FAA Advisory Circular (AC) 20-129, Airworthiness Approval of Vertical Navigation (VNAV) Systems for use in the U.S. National Airspace System (NAS) and Alaska, or AC 20-138 (revision A and later), Airworthiness Approval of Positioning and Navigation Systems. The types of certification include: type certificate (TC), amended TC, Supplemental Type Certificate (STC), and amended STC. An FAA equivalent approval may also include a Service Bulletin (SB) installation with approved data by the air carrier. The following are accepted ways to determine certification:

a) A statement in the FAA-approved Airplane Flight Manual (AFM) showing that the aircraft is equipped with a VNAV system certified in accordance with AC 20-129 or AC 20-138 (revision A and later).

NOTE: AC 20-129 applies only to barometric vertical navigation (baro-VNAV), while AC 20-138A applies only to Satellite-based Augmentation Systems (SBAS) and Ground-Based Augmentation Systems (GBAS). AC 20-129 was cancelled when guidance information for baro-VNAV, SBAS, and GBAS was combined into AC 20-138B and later versions.

b) An Aircraft Evaluation Group (AEG) verification that the applicant's aircraft and flight management system (FMS) meets AC 20-129 or AC 20-138 (revision A or later) criteria for VNAV operations. This may replace the requirement for an FAA-approved AFM statement or an applicable Flight Standardization Board (FSB) report.

2) The certificate holder/operator/program manager is required to provide documentation proving that airworthiness maintenance practices and procedures are being accomplished.

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3) The certificate holder/operator/program manager must review and revise the minimum equipment list (MEL), as necessary, to address any pertinent VNAV or FMS operating requirements.

D. Public Vertically Guided IAP Assessment. Obstacle clearance surface (OCS) assessments protect the instrument procedure, including the missed approach. Glidepath Qualification Surface (GQS) assessments protect the landing area and are accomplished on part 97 IAPs with a published DA/DH. These approaches conform to the U.S. standard for Terminal Instrument Procedures (TERPS) and include instrument landing system (ILS), Ground Based Augmentation System (GBAS) Landing System (GLS), RNAV (Required Navigation Performance (RNP)), and RNAV Global Positioning System (GPS)) IAP with a localizer performance with vertical guidance (LPV) DA and/or lateral navigation (LNAV)/VNAV DA.

E. Visual Approach Slope Indicator (VASI)/Precision Approach Path Indicator (PAPI) Requirements. VASI/PAPI lighting systems are normally set at a descent angle of 3.0 degrees or with the electronic ILS glideslope (GS), if applicable. Variances to the normal requirements are issued by a Notice to Airmen (NOTAM) and permanently published in the Airport/Facility Directory. A note in the profile view will state if the VASI/PAPI descent angle is not coincident with the published VDA or GS. VASI/PAPI is referenced as Visual Glide Slope Indicator (VGSI) in the C073 template and subparagraph F3).

F. Authorized Approaches. The certificate holder/operator/program manager may fly all part 97 nonprecision straight-in IAPs listed as authorized in their OpSpec/MSpec/LOA C052, Table 1, columns 1 and 2 (C052 not applicable to part 91 operators), using an MDA as a DA/DH if the approach meets one of the following requirements and its subcomponents:

1) Serves a runway that has a published RNAV IAP ("RNAV (GPS)," "RNAV (RNP)," or "GPS" in the title) with a published LNAV/VNAV or RNP DA, and:

a) Has the exact published final approach course as the RNAV IAP.

b) Has a published VDA coincident with or higher than the the barometric vertical guidance GS on the published RNAV IAP.

NOTE: A published VDA is not required when using the LNAV minima line on an RNAV approach that has a published LPV or LNAV/VNAV DA. Use the published GS. The VNAV path must be at or above all stepdown fixes.

c) Is selected from an approved and current database and the FMS displays a final approach Flight Path Angle (FPA) in tenths or hundredths. The displayed FPA may have a maximum difference of minus .04 from the IAP VDA or GS. The displayed FPA may always be rounded up to the next tenth. The range for a given FPA will be 2.9 to 3.0, 3.1 to 3.2, 3.2 to 3.3, 4.0 to 4.1, etc. See examples below.

1. For FMS FPAs displayed in tenths, 3.1 may be displayed for a published IAP with a VDA or GS of 3.10 to 3.14. An FPA of 3.2 may be displayed for a published IAP with a VDA of 3.10 to 3.20.

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2. For FMS FPAs displayed in hundredths, 3.10 may be displayed if the FMS FPA does not match the published IAP with a VDA or GS of 3.10 to 3.14. An FPA of 3.20 may be displayed for a published IAP with a VDA of 3.10 to 3.20.

NOTE: Aircraft without an FMS FPA display meeting previous AC 20-129 criteria may have been approved for LNAV/VNAV approaches using baro-VNAV. Certificate holders/operators/program managers currently approved C073, using AC 20-129 criteria, may continue C073 operations.

2) Serves a runway that has a published ILS, GLS, or RNAV IAP with LPV minima and:

a) Has the exact published final approach course as the ILS, GLS, or RNAV IAP.

b) Has a published VDA or GS coincident with or higher than the GS on the published ILS, GLS, or RNAV IAP.

1. A published VDA is not required on a LOC-only approach when the ILS GS is out of service. Use the published GS. VNAV path must be at or above all stepdown fixes.

2. A published VDA is not required when using the LNAV minima line on an RNAV approach that has a published LPV or LNAV/VNAV DA. Use the published GS. VNAV path must be at or above all stepdown fixes.

c) Is selected from an approved and current database and the FMS displays a FPA in tenths or hundredths. The displayed FPA may have a maximum difference of minus .04 from the IAP VDA or GS. The displayed FPA may always be rounded up to the next tenth. The range for a given FPA will be 2.9 to 3.0, 3.1 to 3.2, 3.2 to 3.3, 4.0 to 4.1, etc. See examples below.

1. For FMS FPAs displayed in tenths, 3.1 may be displayed for a published IAP with a VDA or GS of 3.10 to 3.14. An FPA of 3.2 may be displayed for a published IAP with a VDA or GS of 3.10 to 3.20.

2. For FMS FPAs displayed in hundredths, 3.10 may be displayed if the FMS FPA does not match the published IAP with a VDA or GS of 3.10 to 3.14. An FPA of 3.20 may be displayed for a published IAP with a VDA of 3.10 to 3.20.

NOTE: Aircraft without an FMS FPA display meeting previous AC 20-129 criteria may have been approved for LNAV/VNAV approaches using baro-VNAV. Certificate holders/operators/program managers currently approved C073, using AC 20-129 criteria, may continue C073 operations.

3) Serves a runway to an airport operating under 14 CFR part 139 with a VGSI.

a) The VDA or GS on the published final approach course must be coincident with or higher than the published VGSI descent angle.

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b) The published final approach course is within plus or minus 4 degrees of the runway centerline (RCL) course.

G. Approach Design Requirements. The IAP must conform to the following procedural design:

1) Be published with a VDA or GS found in the profile view.

2) Have a VNAV path angle greater than 2.75 and less than 3.77 degrees for Category A, B, and C aircraft, and a VNAV path angle greater than 2.75 and less than 3.50 degrees for Category D/E aircraft.

3) Steeper descent paths may be authorized in accordance with the current edition of AC 120-29. Submit aircraft capability and supporting procedures to the Flight Technologies and Procedures Division (AFS-400) via the principal operations inspector (POI).

H. Database. Waypoint and procedure data must be retrievable from an approved and current database. Source data or database providers must provide for the specification of a VPATH that ensures operation above stepdown fixes between the threshold and the final approach fix (FAF).

NOTE: The procedure must be loaded from the database and cannot be modified.

I. Operational Considerations. The certificate holder/operator/program manager will comply with the following operational conditions:

1) They will follow the lateral flightpath to the missed approach point (MAP) before beginning any turns, unless air traffic control (ATC) has provided alternate climb-out instructions when executing a missed approach before the MAP. He or she will comply with published altitude restrictions between the FAF and the MAP and continue on or climb to the altitude specified in the missed approach procedure. He or she will ensure that the altitude at the published MAP is equal to or greater than the published MDA.

2) They will not use an MDA as a DA/DH if the requirements specified in this guidance are not met. The certificate holder/operator/program manager may use a CDFA, but will begin the missed approach at an altitude above the MDA that will not allow the aircraft to descend below the MDA.

J. Flightcrew Training. Flightcrews must be trained in accordance with the certificate holder/operator/program manager's OpSpec/MSpec/LOA C052. Part 91 operators must be proficient with VNAV and the IAP to be flown.

OPSPEC C075—CAT I IFR LANDING MINIMUMS—CIRCLING APPROACHES.

A. General. OpSpec C075 is issued to operators who conduct 14 CFR part 121, 125, and 135 operations with fixed-wing airplanes. OpSpec C075 specifies the lowest minimums that can be used for Category (CAT) I circling approach maneuvers. It also provides special

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limitations and provisions for instrument approach procedures (IAP) at foreign airports. See Volume 4, Chapter 2 for more information on required training for circling maneuvers.

B. Circle-to-Land Maneuver. For the purpose of this OpSpec authorization, any operator issued this paragraph is authorized to conduct circle-to-land maneuvers. In any weather condition, a certificate holder that permits its pilots to accept a "circle to land" or a "circle to runway (runway number)" clearance from air traffic control (ATC) conducts circle-to-land maneuvers. The term "circle-to-land maneuver" includes the maneuver that is referenced in various regulations, publications, and documents as "circle to land maneuver," "circling," "circling maneuver," "circle," "circling approach," and "circling approach maneuver." With regard to pilots, "conducting" a circle-to-land maneuver means to act as the Pilot Flying (PF) when a circle-to-land maneuver is being conducted.

C. Operations Under IFR During Circle-to-Land. Aircraft operating under instrument flight rules (IFR) during all circle-to-land maneuvers are required to remain clear of clouds. If visual reference to the airport is lost while conducting a circle-to-land maneuver, the missed approach procedure specified for the applicable instrument approach must be followed, unless an alternate missed approach procedure is specified by ATC.

D. Documenting Maneuver Descriptions and Procedures. Each certificate holder who is issued OpSpec C075, and who is also required to have maneuver descriptions/procedures, must publish in its training manual, or must incorporate in its training manual by reference to another approved manual, a detailed description of the procedures used to conduct a circle to land maneuver. Pilots must conduct circle-to-land maneuvers using those procedures.

E. Provisions for Part 121 Certificate Holders to Perform Circle-to-Land Maneuvers. Part 121 certificate holders may conduct circle-to-land maneuvers under two separate provisions within OpSpec C075.

1) Part 121 Operations with Flight Training and Flight Checking. Part 121 certificate holders whose pilots have been trained and checked for the circling maneuver in accordance with part 121 appendices E and F, or in accordance with an Advanced Qualification Program (AQP), may conduct a circle-to-land maneuver:

- At the published circling landing minimums for the instrument approach to be used; or
- At the minimums specified in the chart contained within the OpSpec paragraph, whichever is higher.

a) Appendix E does not require a part 121 certificate holder to train a second in command (SIC) in the circling maneuver if the certificate holder prohibits the SIC from performing/conducting (acting as PF) a circling maneuver. However, an SIC must be trained and can be checked in those functions specific to the circle-to-land maneuver that the SIC is required to perform while acting as pilot-not-flying (PNF).

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b) Any pilot who possesses a pilot certificate restricting circling approaches to visual meteorological conditions (VMC) is not eligible to conduct circle-to-land maneuvers, except as provided in subparagraph E.

2) Part 121 Operations Without Flight Training and Flight Checking. Certificate holders conducting circle-to-land maneuvers without training and checking must use a minimum descent altitude (MDA) of 1,000 feet height above airport (HAA) or the MDA of the published circling landing minimums for the instrument approach to be used, whichever is higher. Certificate holders that conduct a circle-to-land maneuver under this provision remain under an IFR clearance and must comply with those procedures otherwise required for circle-to-land maneuvers. Certificate holders must ensure that pilots are familiar with those procedures. Part 121 pilots who have not been trained and checked for the circling maneuver in accordance with part 121 appendices E and F, or in accordance with an AQP, may conduct a circle-to-land maneuver when:

- The reported ceiling is at least 1,000 feet and the visibility is at least 3 statute miles (see part 121 appendices E and F); or
- The reported weather is at least equal to the published circling landing minimums for the instrument approach to be used, whichever is higher.

F. Circle-to-Land Maneuvers Regarding Part 125. Part 125 certificate holders are not permitted to conduct circle-to-land maneuvers in airplanes without their pilots having been checked in that maneuver.

1) Part 125, § 125.291(b) States: "The IAP or procedures must include at least one straight in approach, one circling approach, and one missed approach. Each type of approach procedure demonstrated must be conducted to published minimums for that procedure."

2) Required Part 125 SIC. The SIC must complete the annual competency check required by § 125.287. The circle-to-land maneuver is not part of the § 125.287 competency check. However, each SIC is evaluated for flightcrew coordination.

3) PNF Duties. Each crewmember can be checked in those functions specific to the circle-to-land maneuver that the pilot is required to perform while acting as PNF.

G. Circle-to-Land Maneuvers Regarding Part 135. Part 135 certificate holders are not permitted to conduct circle-to-land maneuvers in aircraft without their pilots having been checked in that maneuver. (Helicopter IFR circle-to-land maneuvers are authorized in OpSpec H118.)

1) Part 135, § 135.297.

a) Section 135.297(a) does not allow "any person to serve, as pilot in command of an aircraft under IFR unless, since the beginning of the 6th calendar month before that service, that pilot has passed an instrument proficiency check under this section…."

b) Section 135.297(b) requires, "The IAP or procedures must include at least one straight in approach, one circling approach, and one missed approach. Each type of approach

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procedure demonstrated must be conducted to published minimums for that procedure." The requirement to demonstrate a circle-to-land maneuver applies to both airplanes and helicopters.

c) Part 135 single-pilot and single pilot-in-command (PIC) operators are not required to have training programs. However, the circle-to-land maneuver must be successfully demonstrated in every § 135.297 instrument proficiency check (IPC).

2) In accordance with § 135.293, a part 135 IFR operator must ensure that each IFR SIC has an annual competency check. In accordance with Volume 3, Chapter 19, Section 7, paragraph 3-1279, an SIC need not be evaluated in "circling approaches" when an operator's procedures restrict an SIC from conducting (acting as PF) this event in revenue service. However, each required IFR SIC is evaluated for flightcrew coordination.

3) PNF duties. Each pilot must be trained and can be checked in those functions specific to the circle-to-land maneuver that the pilot is required to perform while acting as PNF.

4) The standard of competence for part 135 IPCs is specified in § 135.293(d). This standard is also specified in the Airline Transport Pilot and Aircraft Type Rating Practical Test Standards for Airplane (FAA S-8081-5) and the Instrument Rating Practical Test Standards for Airplane Helicopter Powered Lift (FAA S-8081-4).

H. Helicopter Authorization. For helicopter authorization, see OpSpec H118.

OPSPEC/MSPEC C076—CAT I IFR LANDING MINIMUMS—CONTACT APPROACHES. The certificate holder must not use any instrument flight rules (IFR) Category (CAT) I landing minimum lower than that prescribed by the applicable published instrument approach procedures (IAP). The IFR landing minimums prescribed in paragraph C052 for nonprecision and precision approaches are the lowest CAT I minimums authorized for use at any airport. For helicopter authorization, see OpSpec H119.

OPSPEC C077—TERMINAL FLIGHT RULES LIMITATIONS AND PROVISIONS.

A. OpSpec C077. OpSpec C077 is an optional authorization that is applicable to all operators conducting operations under the provisions for 14 CFR part 135 on-demand turbojet, all 14 CFR part 121 certificate holders, and 14 CFR part 129 foreign air carriers (except for rotorcraft operations). Information on C077 for part 129 foreign air carriers is contained in Volume 12, Chapter 2, Section 5 of this handbook. Information regarding C077 contained in this section applies only to certificate holders conducting part 121 and part 135 operations.

B. Charted Visual Flight Procedure (CVFP). OpSpec C077 provides for operations under a CVFP unless operating under the provisions of 14 CFR part 93, Special Federal Aviation Regulation (SFAR) 50-2. The minimums in the CVFP may not be lower than those required by part 121, § 121.649 or part 135, § 135.205, as applicable.

C. Visual Flight Rules (VFR) Weather Condition Minimums. The VFR weather conditions specified in part 91, § 91.155 may be used. However, where § 91.155(c) and (d) refers to § 91.157, the minimums set forth in § 121.649 or § 135.205, as applicable, take precedence for operations conducted under part 121 or 135.

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D. Subparagraph c.(2)(b). Uncontrolled airports can be in either controlled or uncontrolled airspace. As long as the provisions listed in this subparagraph are met, the operator may operate VFR in uncontrolled airspace in the terminal area in accordance with this OpSpec. For the purpose of direct communication at uncontrolled airports, a common traffic advisory frequency (CTAF) may be utilized as long as it is associated with an air/ground communication facility. The CTAF may be an Aeronautical Advisory Station (UNICOM), Aeronautical Multicom System (MULTICOM), Flight Service Station (FSS), or a tower frequency. Acceptable air/ground communication is a demonstrated reliable means to directly relay traffic advisories (TA) and information that is pertinent to conditions on and around the landing surface during the terminal phase of flight. For example, if the certificate holder adequately demonstrates to the principal operations inspector (POI) its reliability to relay essential information, via radio or another type of communication, through an agent located near the landing surface, it is considered to be a "demonstrated reliable means" of communication.

E. Subparagraph c.(3). In lieu of a published CVFP, an authorized visual guidance procedure such as the use of RNAV Visual Flight Procedures (RVFP) is highly recommended for all terminal VFR departures/arrivals that fall under this OpSpec. The proximity of obstacles to the departure flightpath, the visibility, the accuracy of the guidance and control systems, the pilot's proficiency, and the operator's training should determine the size of the area in which obstacle clearance or avoidance must be considered. The POI should also take into account the airplane performance data described in Volume 4, Chapter 3 of this handbook.

F. Terminal Departures VFR. At airports that do not have an operating air traffic control (ATC) facility, subparagraph d. of C077 allows a flightcrew on an instrument flight route (IFR) flight to take off and depart under VFR without obtaining an IFR clearance, provided all of the conditions and limitations of C077 subparagraph d.(1) through d.(4) are met. The flightcrew must obtain an IFR clearance as soon as it is practical after takeoff, but under no circumstances farther than 50 nautical miles (NM) from the departure airport. In the case where a certificate holder is issued OpSpec B051 for VFR en route operations in conjunction with C077, the flightcrew may apply the provisions B051, where applicable, in lieu of obtaining an IFR clearance.

G. Terminal Departure IFR Requirements in Subparagraph e. This subparagraph allows the flightcrew to accept an IFR clearance that contains a takeoff and climb in VFR conditions to a specified point in the clearance. The certificate holder must ensure that the obstacle performance requirements are met.

H. Special Limitations and Provisions for All VFR Operations. C077 subparagraph f. provides special limitations and provisions for all VFR operations. This subparagraph is applicable to all the provisions and limitations of C077.

1) Subparagraph f.(1). In order for the certificate holder or operator to conduct terminal VFR operations under C077, they must have in place either a procedure or program which can identify obstacles and the airport obstacle data. Further, they must ensure use of that information by the flightcrew.

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2) Subparagraph f.(2). Although each subparagraph has specific details and minimums regarding VFR, the requirements for sufficient visibility to identify and avoid obstacles is required for all VFR operations.

OPSPEC C078/C079—IFR LOWER-THAN-STANDARD TAKEOFF MINIMA, 14 CFR PART 121 AIRPLANE OPERATIONS—ALL AIRPORTS.

A. General. C078 and C079 are optional for authorizing lower-than-standard takeoff minimums. The authority for lower-than-standard takeoff minimums is contained in 14 CFR part 91, § 91.1039(e); 14 CFR part 121, § 121.651(a)(1); 14 CFR part 125, § 125.381(a)(1); and 14 CFR part 135, § 135.225(g) and (h). When appropriate, principal operations inspectors (POI) will issue OpSpec C078 to part 121 or 125 operators, LOA C078 to part 125M operators, OpSpec C079 to part 135 operators, and MSpec C079 to part 91 subpart K (part 91K) operators. These authorizations contain specific criteria regarding pilots, training and qualifications, aircraft, and airports when lower-than-standard takeoff minimums are used.

NOTE: C078 and C079 are applicable to all airports utilized by the operator.

NOTE: There may be additional limitations and guidance for specific airplanes in Flight Standardization Board (FSB) reports, which are binding upon all parts 121 and 135 operators.

NOTE: For the purpose of this OpSpec/MSpec/LOA, the word “sensor” is used to indicate all approved Runway Visual Range (RVR) systems.

B. Lower-Than-Standard Takeoff Minimums for Part 121 or 125. C078 allows for lower-than-standard takeoff minimums for operators conducting operations under part 121 or 125 (including Letter of Deviation Authority (LODA) holders operating under part 125) with the following limitations and provisions:

1) Takeoff operations without runway centerline (RCL) lighting are not allowed at less than RVR 1000 (300 meters),

2) Takeoff operations using only visual references are not allowed at less than RVR 500 (150 meters),

3) Takeoff operations with visibility down to, but not lower than, RVR 300 (75 meters) using approved Head-Up Display (HUD) takeoff guidance systems,

4) Authorization for pilot assessment of touchdown zone (TDZ) RVR for takeoff when the installed RVR sensor is inoperative (see subparagraph H), and

5) Lower-than-standard takeoff minimums include paragraphs addressing takeoffs down to RVR 1600 (500 meters), RVR 1200 (350 meters), RVR 1000 (300 meters), RVR 600 (175 meters), and RVR 500 (150 meters).

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C. Lower-Than-Standard Takeoff Minimums for Part 91K or 135. C079 allows for lower-than-standard takeoff minimums for operators conducting operations under parts 91K and 135 with the following limitations and provisions:

1) Lower-than-standard takeoff minimums down to RVR 1600 (500 meters), RVR 1200 (350 meters), RVR 1000 (300 meters), or RVR 500 (150 meters) for part 135 domestic operations. Section 135.225(f) restricts part 135 domestic operators to 1-mile visibility for takeoffs at foreign or military airports unless approved in the certificate holder's OpSpecs.

2) Lower-than-standard takeoff minimums down to RVR 1600 (500 meters), RVR 1200 (350 meters), RVR 1000 (300 meters), or RVR 600 (175 meters) for part 91K operations at all airports.

3) Each aircraft must be operated with a flightcrew consisting of at least two pilots. Use of an autopilot in lieu of a required second in command (SIC) is prohibited.

4) There are some circumstances in which an Operations inspector for a part 121 or 135 air carrier may consider issuing this OpSpec for airplanes certificated under Civil Air Regulations (CAR) 3 or 14 CFR part 23. Those airplanes have to meet the 14 CFR part 25 avionics equipment requirements necessary to hold a C079 authorization. The following statement becomes binding on such aircraft and must be added using the "Remarks" paragraph selection for C079 to be issued:

a) Each pilot station must have operational equipment that displays a reliable indication of the following:

1. Aircraft pitch and bank information (attitude) (from a gyroscopic or attitude heading reference system source);

2. Aircraft heading (from a gyroscopic or magnetic direction indicating source);

3. Vertical Speed (VS);

4. Airspeed; and

5. Altitude.

b) Each pilot station must have an independent source of power for the equipment required by subparagraph C4)a)*1* and C4)a)*2*.

5) Each pilot in command (PIC) must have at least 100 hours of flight time as PIC in the specific make and model airplane used under this authorization. Each PIC must have satisfactorily completed the operator's approved training program (as applicable) and a qualification check for the minimums approved by this authorization. This includes the methods to be used to ensure compliance with the aircraft performance limitations during takeoffs with RVR less than RVR 1000 (300 meters), when applicable.

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6) Any part 91K or 135 SIC authorized to manipulate the flight controls during lower-than-standard takeoff minimums must have at least 100 hours of flight time as a pilot in the specific make and model airplane, and must have satisfactorily completed the operator's approved training program and qualifications check for those minimums, when applicable.

7) For takeoffs when the RVR is less than RVR 1000 (300 meters), each airplane used must be operated at a takeoff weight that permits the airplane to achieve the performance equivalent to the takeoff performance specified in § 135.367 (for reciprocating-powered airplanes), § 135.379 (for turbine-powered airplanes), or § 135.398 (for commuter category airplanes).

D. Lower-Than-Standard Takeoff Minimums Using HUD Systems. C078 and C079 provide for the authorization of lower-than-standard takeoff minimums using HUD systems with certain limitations and provisions. Although RVR 500 (150 meters) is the lowest authorized minimum when the takeoff is based upon outside visual references (with the exception of operations conducted under part 91K and operations to foreign or military airports conducted under part 135), RVR 300 (75 meters) is the lowest authorized minimum when using an HUD system on a runway that has been determined to be served by a localizer providing Category (CAT) III rollout guidance, as indicated by a III/E/4 facility classification. As the HUD systems use the localizer signal for steering commands, the localizer needs to be III/E/4 certified (III=CAT III, E=accurate to at least 2,000 feet from the departure end of the runway, and 4=4,000 hours mean time between failures for the localizer signal). A listing of runways with III/E/4 localizer classifications is available on the Flight Operations Branch (AFS-410) Web site at http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs400/afs410.

E. Lower-Than-Standard Takeoff Minimums for TDZ RVR. C078 and C079 authorize lower-than-standard takeoff minimums for TDZ RVR 1600 (500 meters). If TDZ RVR is inoperative, mid-point RVR may substitute for TDZ RVR. Below RVR 1600, two operating RVR sensors are required and controlling. If more than two RVR sensors are installed, all operating RVR sensors are controlling, with the exception of a fourth, far-end RVR sensor that may be installed on extremely long runways. A far-end RVR sensor is advisory only. C078 and C079 allow the selection of the following lower-than-standard takeoff minimums based on flightcrew training, checking, and allowed authorizations:

1) TDZ RVR 1200 (350 meters), mid-point (if installed) RVR 1200 (350 meters), and rollout RVR 1000 (300 meters).

2) TDZ, mid-point (if installed), and rollout RVR 1000 (300 meters).

3) TDZ, mid-point (if installed), and rollout RVR 600 (175 meters) (part 91K).

4) TDZ, mid-point (if installed), and rollout RVR 500 (150 meters) (part 121, 125, or 135). Part 91K program managers are limited by regulation to RVR 600 (175 meters) takeoff authorization without an exemption. The RVR 500 (150 meters) and RVR 300 (75 meters) authorization will not be available in the part 91K MSpec C079. Tables 3-24A, Runway Equipment Requirements for Lower-Than-Standard Takeoff Minimums, and 3-26A, Runway

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Equipment Requirements for Lower-Than-Standard Takeoff Minimums, provide examples of tables that may be included in flightcrew manuals, such as the Flight Operations Manual (FOM).

Table 3-24A. Runway Equipment Requirements for Lower-Than-Standard Takeoff Minimums

Serviceable Runway Visual Aid Required	Lowest Allowable Takeoff Minimum Authorization
If an RVR sensor is not available:	
Adequate visual reference, *or* any *one* of the following: HIRL/CLL/RCLM	1/4 sm (400 m)
If an RVR sensor is available:	Note: Below RVR 1600, two operating RVR sensors are required. All operating RVR sensors are controlling (except per the note below for far-end sensors).
Adequate visual reference, *or* any *one* of the following: HIRL/CLL/RCLM	RVR 1600 (500 m)/NR/NR Mid-point can substitute for an unavailable touchdown.
Day: CLL or RCLM or HIRL Night: CLL or HIRL	RVR 1200 (350 m)/1200 (350 m)/1000 (300 m)
RCLM and HIRL, or CLL	RVR 1000/1000/1000 (300 m)
HIRL and CLL	RVR 600/600/600 (175 m) or RVR 500/500/500 (150 m)
With an approved HUD takeoff guidance system, HIRL, and CLL	RVR 300/300/300 (75 m)

NOTE: Extremely long runways (e.g., DEN 16R) utilize four RVR sensors (i.e., TDZ, mid, rollout, and far-end). When a fourth far-end RVR value is reported, it is not controlling and is not to be used as one of the two required operative RVR sensors.

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Table 3-26A. Runway Equipment Requirements for Lower-Than-Standard Takeoff Minimums

Runways with 1 RVR Sensor		
RCLM or CLL or HIRL or Adequate Visual Reference	Standard	
TDZ RVR 16 or 1/4	3 & 4 Eng	1 & 2 Eng
	RVR 24 or 1/2	RVR 50 or 1

Runways with 2 RVR Sensors						
Both RVR sensors are required and controlling.				RCLM or CLL or HIRL or Adequate Visual Reference	Standard	
HUD & CLL & HIRL	CLL & HIRL	CLL, or RCLM & HIRL	RCLM (day only) or CLL or HIRL			
TDZ RVR 3 Rollout RVR 3	TDZ RVR 5 Rollout RVR 5	TDZ RVR 10 Rollout RVR 10	TDZ RVR 12 Rollout RVR 10	TDZ RVR 16 or 1/4	3 & 4 Eng	1 & 2 Eng
					RVR 24 or 1/2	RVR 50 or 1

Runways with 3 RVR Sensors						
Two operating RVR sensors are required. All operating RVR sensors are controlling.				RCLM or CLL or HIRL or Adequate Visual Reference	Standard	
HUD & CLL & HIRL	CLL & HIRL	CLL, or RCLM & HIRL	RCLM (day only) or CLL or HIRL			
TDZ RVR 3 Mid RVR 3 Rollout RVR 3	TDZ RVR 5 Mid RVR 5 Rollout RVR 5	TDZ RVR 10 Mid RVR 10 Rollout RVR 10	TDZ RVR 12 Mid RVR 12 Rollout RVR 10	TDZ RVR 16 (if TDZ inop) Mid RVR 16 or 1/4	3 & 4 Eng	1 & 2 Eng
					RVR 24 or 1/2	RVR 50 or 1

Runways with 4 RVR Sensors						
Two RVR sensors below must be operational. All operating RVR sensors are controlling except far end, which is advisory only.				RCLM or CLL or HIRL or Adequate Visual Reference	Standard	
HUD & CLL & HIRL	CLL & HIRL	CLL, or RCLM & HIRL	RCLM (day only) or CLL or HIRL			
TDZ RVR 3 Mid RVR 3 Rollout RVR 3	TDZ RVR 5 Mid RVR 5 Rollout RVR 5	TDZ RVR 10 Mid RVR 10 Rollout RVR 10	TDZ RVR 12 Mid RVR 12 Rollout RVR 10	TDZ RVR 16 (if TDZ inop) Mid RVR 16 or 1/4	3 & 4 Eng	1 & 2 Eng
					RVR 24 or 1/2	RVR 50 or 1

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F. RVR Applicability to Lower-Than-Standard Takeoff Minimums.

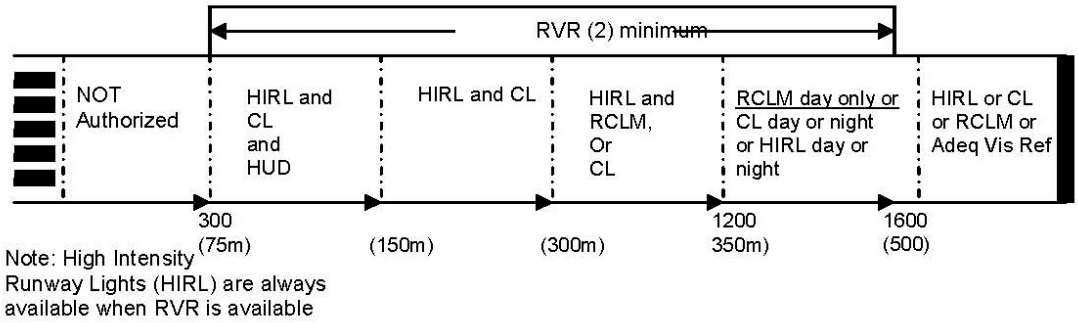
1) Other than the authorization for RVR 1600 (500 meters), which permits use of Runway Visibility Values (RVV) under the appropriate authorization for an operator issued C078 or C079, all the authorizations in C078 and C079 are based on RVR reports that are generated by RVR sensors.

a) "Controlling" RVR means that RVR reports are used to determine operating minimums whenever operating minimums are specified in terms of RVR, and that RVR reports are available for the runway being used.

b) All CAT I operating minimums below one-half statute mile (RVR 2400) and all CAT II and III operating minimums are based on RVR. The use of visibility is prohibited because the reported visibility may not represent the seeing-conditions on the runway. (See Volume 4, Chapter 2, Section 3, paragraphs 4-208 and 4-213.)

c) All takeoff minimums below 1/4 statue mile visibility require RVR values, and the use of RVV for takeoff clearances is prohibited. In these situations, RVR is said to be "controlling"; that is, RVR must be operating and reporting (by requirement, High Intensity Runway Lights (HIRL) also must be working) and at a value equal to or greater than the lowest authorized RVR for the particular clearance. Takeoffs or approaches and landings in these conditions require actual RVR values to be authorized by the controlling agency.

C078 Lower Than Standard Takeoff Visibility Quick Reference Chart



NOTE: The diagram above is intended as a memory aid intended to help in remembering the various RVR breakdowns and associated requirements within each grouping. For example, two RVR sensors are required for all takeoffs at RVR values less than 1600 (500 meters) (shown above the runway).

2) The following requirements and restrictions apply to the use of RVR values below 1600 feet (500 meters) (in the C078 and C079 templates, simplified wording is used):

a) Where only two RVR sensors are installed, the TDZ and rollout RVR sensors are both required and controlling.

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b) Where three RVR sensors are installed on the runway to be used:

1. The TDZ, mid, and rollout RVR reports are controlling for all operations.

2. The failure of any one RVR will not affect operations provided the remaining two RVR sensors are reporting values at or above the appropriate minimums in this subparagraph.

NOTE: Extremely long runways (e.g., DEN 16R) utilize four RVR sensors (e.g., TDZ, mid, rollout, and far-end). When a fourth far-end RVR value is reported, it is not controlling and is not to be used as one of the two required operative RVR systems.

G. Flightcrew Training and Qualification Requirements. If an operator requests authorization to conduct lower-than-standard takeoffs, the flightcrew must be trained and qualified in their respective crew positions for the applicable takeoff minimums requested. The PIC is ultimately responsible for ensuring that the flightcrew members are appropriately qualified before conducting an authorized lower-than-standard takeoff.

1) Individual pilots must be trained in their respective crew positions (parts 91K, 121, and 135) and checked (parts 91K, 121, 125, and 135) in takeoffs using the appropriate requested minimums before being approved for conducting such takeoffs.

2) Pilot qualification must consist of an initial check that includes one takeoff at the lowest requested takeoff minimums (simulator or simulated in the aircraft with a view limiting device). It is also required during each pilot's recurrent qualification cycle.

3) Additional crew qualification for a check airman or a qualified FAA inspector, beyond that shown herein for regular flightcrews, is not required.

4) POIs must ensure that operators requesting lower-than-standard takeoff minimums provide appropriate training for flightcrews, including the procedures listed below, as appropriate:

- Confirming the takeoff runway alignment (Safety Alert for Operators (SAFO) 07003 includes guidance and/or advisory information about acceptable techniques);
- Rejected takeoffs in a low-visibility environment;
- Low-visibility instrument takeoff cross-check priorities;
- Engine failure during critical phases of takeoff in low visibility;
- Acceleration and climb disorientation factors and illusions;
- Use of HUD takeoff guidance systems (when installed in aircraft for RVR 300 authorization only);
- Taxiing in a low visibility environment with emphasis on preventing runway incursion, and Surface Movement Guidance and Control System (SMGCS) training Advisory Circular (AC) 120-57, Surface Movement Guidance and

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Control System, current edition, includes guidance and/or advisory information about acceptable techniques;

- Taxiway critical areas;
- Crew coordination and planning;
- Required ground-based visual aids (such as stop bars and taxi holding position lights);
- Required ground-based electronic aids (such as instrument landing system (ILS) and transmissometers); and
- Determination of takeoff alternate airports.

H. Pilot Assessment of Instrument Flight Rules (IFR) Lower-Than-Standard Takeoff Minimums. C078 and C079 allow pilots to make an assessment of the touchdown RVR when the TDZ RVR sensor is inoperative, is not reported, or the pilot determines that the reported TDZ RVR report is in error. This assessment, when equal to or greater than the TDZ RVR requirement for takeoffs made with only outside visual references, or for takeoffs using HUD systems, can be used for takeoff when mid and rollout RVR sensors are available, and are equal to or greater than the required minimums. To be authorized for this pilot assessment, each operator must meet the following requirements:

1) For each specific runway for which the assessment is allowed, have an FAA-approved procedure for assessing RVR values that includes:

a) Identification of actual distances between runway lights (from 160 feet to 200 feet) on the particular runway for the takeoff in question.

b) Identification of an appropriate number and type of runway lights that matches the particular RVR minimums or required visual distance for the takeoff being made.

c) Identification of runway markings of known spacing with corresponding distances that must be visible to the pilot from the flight deck when the aircraft is in the takeoff position.

2) This procedure must include the effects of variability of runway light intensity settings and changing ambient lighting (day or night). Flightcrew training and checking must assess knowledge of this specific subject area by requiring crews to relate runway markings and number of lights visible to specific known distances.

3) For each type of runway where an assessment is allowed, have an FAA-approved procedure for describing the actions to be taken when local visibility conditions, as determined by the pilot, indicate that a significantly different visibility exists from that reported for the TDZ recorded by RVR sensor. The procedure will address types of runway markings, runway lights and distances between lights, and any other runway environmental cues that permit precise distance evaluations by flightcrews.

4) For each runway where an assessment is allowed, have an FAA-approved procedure for coordinating release with air traffic control (ATC) and dispatch for part 121 operations.

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5) For part 135 air carriers, the operator must have an FAA-approved procedure for conducting pilot assessment of takeoff visibility contained in its manual, as defined by § 135.21. That procedure will cover the following requirements:

a) How to determine actual visibility measured in number and type of runway lights that are seen, or markings of known spacing that are visible to the pilot when viewed from the cockpit in the takeoff position.

b) How all flightcrew members will be trained and checked in the procedures used to determine visibilities, as described above.

6) Have FAA-approved procedures for RVR assessment, for determining that TDZ RVR sensor reports are in error, and for takeoff and flight release coordination in operating manuals and in such materials that are readily available to the flightcrew in the cockpit.

7) Have an FAA-approved training and validation program of the FAA-approved procedures for all flightcrews authorized to participate. No flightcrew member may participate in these operations until this portion of the approved training program is accomplished satisfactorily.

OPSPEC C080—TERMINAL AREA IFR OPERATIONS IN CLASS G AIRSPACE AND AT AIRPORTS WITHOUT AN OPERATING CONTROL TOWER FOR SCHEDULED PASSENGER OPERATIONS. C080 is used to authorize terminal-area instrument flight rules (IFR) operations for scheduled passenger operations in Class G airspace or at airports without an operating control tower.

A. Authorizing Scheduled Terminal-Area IFR Operations in Class G Airspace. Before authorizing scheduled terminal-area IFR operations in Class G airspace, or at airports without an operating control tower, the principal operations inspector (POI) must ensure the operator has sufficient content in its manual(s) and training program to cover common traffic advisory frequency (CTAF) and pilot controlled lighting (PCL) information and procedures. The POI must also obtain and list the following information in C080.

1) Names of airports.

2) Sources of weather information to be used by flightcrews (see Volume 3, Chapter 26, Section 3; and Volume 3, Chapter 2).

3) Source of traffic advisories (TA) and airport advisories.

B. Sources of TAs and Airport Advisories. Certificate holders may be authorized to use any two-way radio source of air TA information listed in the Aeronautical Information Manual (AIM) (for operations in U.S. airspace) or equivalent Aeronautical Information Publication (AIP) (for foreign operations).

1) These sources include CTAFs, Aeronautical Advisory Stations (UNICOM), Aeronautical Multicom Stations (MULTICOM), and Flight Service Stations (FSS).

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2) If an air TA source is also suitable for determining the status of airport services and facilities, it is the only source which needs to be listed in C080.

3) When airport services and facilities information is on a different frequency, both sources should be listed in C080.

4) In cases where two sources are listed at the same airport, inspectors must ensure the operator's manuals have procedures that require pilots to continuously monitor and use the TA frequency when operating within 10 nautical miles (NM) of the airport. The procedures should require communication concerning airport services and facilities to be completed while more than 10 NM from the airport.

5) At some airports, no public use frequencies may be available. In those cases, a certificate holder must arrange for radio communication of essential information including surveillance of local or transient aircraft operations by ground personnel. Ground personnel, who operate a company radio for airport status and traffic advisory, must be able to view airspace around the airport.

6) OpSpec C080 may need to be issued to the certificate holder authorized scheduled passenger operations in order for the C081 to be issued.

C. Part 125 Operators. C080 is not applicable for part 125 operators.

OPSPEC/MSPEC/LOA C081—SPECIAL INSTRUMENT AND RNAV VISUAL FLIGHT PROCEDURES.

A. Applicability. OpSpec/MSpec/LOA C081 authorizes special non-14 CFR part 97 instrument approach procedures (IAP) and departure procedures (DP). It also authorizes the use of special Standard Terminal Arrivals (STAR) and Area Navigation (RNAV) Visual Flight Procedure (RVFP) operations. C081 applies to all certificate holders/operators/program managers conducting airplane operations under 14 CFR parts 91 (including part 91K), 121, 121/135, 125 (including 125 Letter of Deviation Authority (LODA) holders), and 135. For 14 CFR part 129 foreign air carriers, the guidance for OpSpec C381 is in Volume 12, Chapter 2, Section 5.

B. Helicopter Authorization. Guidance for submitting and processing "special" helicopter instrument procedures will use this guidance. Use OpSpec/LOA H122 to issue a "special" to parts 91, 91K, 121/135, and 135 operators.

C. Responsibilities. The Flight Technologies and Procedures Division (AFS-400) provides policy, oversees approved procedure developers, and approves special instrument procedures and RVFPs that are authorized for specific certificate holders/program managers/operators by their principal operations inspector (POI). The regional Flight Standards division (RFSD) NextGen Branch (RNGB/AXX-220) is the field focal point that assists in the design, distribution, and coordination of special instrument procedures and RVFPs within their regional geographic boundaries. POIs authorize the use of approved special instrument procedures and/or RVFPs via OpSpec/MSpec/LOA, as appropriate.

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D. Program Tracking and Reporting Subsystem (PTRS) Activity Codes.

1) PTRS Activity Codes—Initial Issuance.

- Special Authorization: 1404.
- Approval of Special Navigation Procedures: 1410.
- Special Performance Authorizations: 1441.

2) PTRS Activity Codes—Future Actions or Surveillance.

- Surveillance Operator Facility: 1635.
- Surveillance Miscellaneous Executive Corporate Operator: 1682.
- Surveillance Miscellaneous 14 CFR Part 125 LODA Holder: 1683.

E. Background. Instrument Flight Procedures (IFP) not published in the Federal Register (FR) are identified as "special procedures." Any instrument procedure serving a private-use, permission-required airport/heliport must be a special procedure. Special procedures may also be developed to lower approach and/or departure minimums. Aircraft equipment/avionics, performance standards, and/or crew training may be used to mitigate factors that would require higher minimums. Specials may also require the use of landing aids, communications, or weather services not available for public use. For more information, refer to the current edition of FAA Order 8260.60, Special Instrument Procedures.

F. Development of a New Special or RVFP. Refer to Order 8260.60 for developing special instrument procedures and the current edition of FAA Order 8260.55, Special Area Navigation Visual Flight Procedures, for information on developing RVFPs.

1) Specials are typically developed and/or maintained by either an FAA-approved third party or by the FAA via a reimbursable agreement. The cost of the reimbursable agreement may be waived or reduced if the special is determined to be in the public's interest. Development and approval will take 12 to 24 months or more in most cases.

2) RVFPs are developed by the operator with oversight by the FAA Flight Standards Service (AFS).

NOTE: A list of approved specials and RVFPs is available at https://nfdc.faa.gov/xwiki/bin/view/NFDC/Flight+Procedures.

G. Authorize an Approved Special or RVFP. The operator requesting the procedure must submit a written request, via the POI, to the RNGB in the region responsible for the physical landing area. This request does not require a memo from the POI. The RNGB will then provide the POI with the appropriate information. For example, to authorize a special approach procedure into Aspen, CO, contact the RNGB (in this case ANM-220) to get the required information.

NOTE: The RNGB, at their discretion, may inform the POI that RNGB concurrence is required (typically for procedures with more complex performance, equipment, or training requirements).

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1) FAA 8260 Forms. The RNGB will email the POI the appropriate 8260 forms for each procedure. The RNGB will include a form that defines the procedure for charting purposes and a form that describes any applicable operator requirements (if required). These forms are:

a) For new approaches, FAA Form 8260-7A, Special Instrument Approach Procedure, defines the procedure, and FAA Form 8260-7B, Special Instrument Procedure Authorization, defines the operator requirements, with FAA Form 8260-7B requiring POI and operator signatures.

b) For older approaches, FAA Form 8260-7 defines the procedure, and FAA Form 8260-10, Standard Instrument Approach Procedure (Continuation), defines the operator requirements, with FAA Form 8260-7 requiring POI and operator signatures.

c) For departures, FAA Form 8260-15A/B/C, Takeoff Minimums and Obstacle Departure Procedures (ODP)/Graphic Departure Procedures (DP)/Departure (Data Record), defines the procedure, and FAA Form 8260-7B defines the operator requirements, with FAA Form 8260-7B requiring POI and operator signatures.

NOTE: Department of Defense (DOD) requests for specials will be managed by the RNGB in the region responsible for the special or RVFP (with AFS-400 coordination, if necessary). The RNGB may supply the DOD with appropriate forms. The RNGB should maintain records and contact information so any revisions or possible cancellation of the special may be disseminated to the DOD point of contact (POC).

2) Form Review and Distribution. The POI will provide the 8260 forms to the operator.

a) POIs will review the operator's existing procedures, documentation, equipment, manuals, and training to ensure any requirements specific to the procedure and listed on the 8260 forms are satisfactorily addressed. These requirements may require special aircraft performance, equipment, avionics/software, and/or crew training. If existing operator procedures do not address all requirements, the operator must submit a plan to the POI with the necessary changes needed to comply with the requirements of the special procedure. This plan must address any aircraft specific requirements for each make, model, and series (M/M/S) that they plan to use to fly the special. Once the implementation plan is accepted, the operator may receive the applicable signed forms needed to continue the process. Contact the Aircraft Evaluation Group (AEG) for aircraft specific questions and the RNGB for technical questions about special procedures and requirements. Ensure that the OpSpec/MSpec/LOA authorization includes an entry in the fourth column of Table 1 listing only the aircraft approved to fly the procedure(s). This ensures that any new aircraft added at a future date are not inadvertently authorized without conducting the appropriate review. If the 8260 forms or the RNGB require a demonstration flight, see subparagraph G5) below.

b) POIs and the operator's representative will sign FAA Form 8260-7B after the POI has discussed the procedure requirements with the operator and the operator has provided the POI with documentation showing compliance with procedure requirements (i.e., aircraft

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performance, aircraft equipment, crew qualifications, etc.) or an implementation plan that shows a reasonable expectation that they will be able to safely meet all procedural requirements. If RNGB concurrence is required, the RNGB may issue their concurrence to the POI by email or, upon request, a memo (the RNGB will determine if they want to maintain a record of their request for concurrence and their actual concurrence of the authorization in their files). The POI will give a signed copy of the FAA Form 8260-7B to the operator and maintain a signed copy in the office file. The POI will notify the RNGB via email when appropriate forms are signed and forward those forms, if requested by the RNGB (RNGBs may individually determine if they will require a copy of the signed forms to be maintained in their files). These forms allow the operator to receive customized charts and navigation database coding (if applicable) from chart vendors and also training from most contract training vendors. It may take some time for the operator to fully implement their plan and qualify all relevant personnel to conduct the procedure(s). The OpSpec/MSpec/LOA must not be authorized until the operator has implemented their plan and is fully prepared to fly the procedure.

NOTE: Signing the back of FAA Form 8260-7B or 8260-7 is not the formal issuance of the authority for use of a special procedure. That is conveyed by the issuance of OpSpec/MSpec/LOA C081, H122, or LOA C381.

c) If applicable, the principal maintenance inspector (PMI) and principal avionics inspector (PAI) should review the requirements contained in the procedure and affirm for the record (such as a PTRS record of review) that the aircraft type(s) in question can perform the procedure. Some special instrument procedures require nonstandard/higher missed approach climb gradients and specific qualities or levels of avionics.

3) Training. A certificate holder/program manager's training program must include training on the procedure and equipment required to accomplish the procedure. An operator/company must be proficient on the procedure and the equipment required to accomplish the procedure. All FAA Form 8260-7B and 8260-10 training requirements must be met for all procedures. Training for specific procedures may be required if the performance, equipment, services, terrain effects, or a combination of factors is emphasized to ensure a safe operation. However, if the operator is seeking authorization for multiple specials or RVFPs, training for each specific procedure may not be required if the training is duplicative, the multiple specials are basic instrument approaches to a private-use landing area, and no additional performance or training requirements for a specific airfield are noted on forms.

NOTE: For questions about training at 14 CFR part 142 training centers, contact the Training Center Program Manager (TCPM). The Air Transportation Division (AFS-200) is responsible for part 142 training center policy and guidance.

4) Charts. The RNGB will send the POI the 8260 forms described above. These forms will be used by the operator to get a chart produced. The operator will submit a copy of the completed chart to the POI. Upon receipt, the POI will forward a copy of the chart to the RNGB for distribution in accordance with Order 8260.60. The Flight Standards District Office (FSDO)/certificate management office (CMO) must not authorize operational implementation of the procedure until the chart is received by the RNGB. In some cases, a third-party developer

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will create a chart for the operator and submit it to the RNGB for distribution. The RNGB will distribute this chart to the POI who, in turn, will give it to the operator.

5) Demonstration Flights. The 8260 forms may require a demonstration flight, or the POI and the RNGB may require a demonstration flight, at their discretion, to verify the suitability of the operator's aircraft, equipment, procedures, and profiles, as described in the subparagraphs below.

a) Special Pilot Qualification Airports—Part 121. Part 121 air carriers are required to perform an in-flight demonstration of a new special IFP at a special pilot qualification airport. If an existing special IFP is amended, a demonstration flight may be required at the discretion of the POI and the RNGB based on the changes to the procedure. OpSpec C050 is used to authorize part 121 air carrier certificate holders to conduct instrument flight rule (IFR) operations into special airports requiring special airport qualification and validation in accordance with the provisions and limitations of the OpSpec and part 121, § 121.445. The list of special pilot qualification airports can be found at http://fsims.faa.gov/PICResults.aspx?mode=Publication&doctype=OPSS Guidance.

b) Other Airports—Parts 91, 91K, 121, 125, 129, and 135. If the airport served is not a special pilot qualification airport and a demonstration flight is not stipulated on FAA Form 8260-7B, a demonstration flight may still be required at the discretion of the POI and the RNGB before an operator can use a new or amended special IFP. Flight simulator and tabletop reviews are other ways to confirm an operation can be conducted safely. The POI and the RNGB should consider the operator's experience at that airport, profiles and procedures, aircraft capabilities, deviation from IFP criteria, and local environmental considerations (e.g., terrain, radar and communications coverage, and obstacles) when determining if a flight demonstration, simulator, or tabletop review is required.

c) Requirements. If the POI and the RNGB require a demonstration flight, they must dictate the requirements and criteria for satisfactorily completing the demonstration. The POI may issue a provisional authorization allowing an operator to conduct a special IFP if an FAA Operations inspector is observing the flight to evaluate that procedure during routine operations in visual meteorological conditions (VMC). The provisional authorization should only be used after a careful evaluation has been made of the special IFP for safety-related factors. Issue this provisional authorization by adding the special IAP to the appropriate OpSpec/MSpec/LOA (C081, H122, or LOA C381) with the provision that the authorization is only applicable to flights observed by an FAA Operations inspector in VMC.

6) Authorization. POIs will issue the approved procedure via OpSpec/MSpec/LOA C081 (H122 for helicopter operations) as described below, once the operator has implemented their plan to address all of the FAA Form 8260 requirements (including training, dispatch, equipment, performance, etc.), has submitted a chart to the POI (and the POI has forwarded that chart to the RNGB), satisfactorily completed the demonstration flight (if required), and the RNGB concurs with the authorization (if required). Enter the aircraft M/M/S that have been reviewed and found suitable in the "Airplane (Rotorcraft) M/M/S" column of Table 1. The POI must review the specific FAA Form 8260-7B requirements (and

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obtain concurrence from the RNGB, if necessary) before authorizing any additional aircraft M/M/S and/or any aircraft that has modified its avionics package.

NOTE: The issuing authority for "special procedures" remains with the FAA. An operator who has been issued authority to use a special procedure will not authorize other operators to use the procedure. If additional users wish to be authorized, they must apply to use the procedure through their POIs and the appropriate RNGB.

a) The RNGB will notify POIs of all approved operators when a special or RVFP is amended or canceled. This notification will typically include an effective date when the old procedure is canceled (if applicable), and an effective date when the new procedure is active. Procedure effective dates can be critical to flight safety. Procedures must not be used after the expired effective date. For example, some procedure amendments use the same fix names but with the fixes in a slightly different location, and those fix locations will change on the effective date, allowing the use of the expiring procedure until the effective date and the new procedure on and after the effective date. If the procedure has a specific effective date set by the RNGB, add a reference to that effective date in the "Limitations and Provisions" column of Table 1 for the new procedure as well as the expiring procedure (if applicable).

b) For new, amended, or canceled specials or RVFPs, the POI will issue the OpSpec/MSpec/LOA revision in accordance with this subparagraph within 30 days of RNGB notification or by the effective date, whichever is later. If the POI/operator cannot meet this deadline, the POI must, at a minimum, remove the expiring procedure from the operator's authorization by the effective date canceling that special or RVFP. To ensure that operators are using the correct, current procedure, the POI will enter the procedure amendment number (ORIG, 1, 2, etc.) as part of the procedure name in the second column of Table 1. POIs may also want to add a reference to that effective date in the "Limitations and Provisions" column of Table 1 for the new procedure. POIs will reference the cancellation date of the expiring procedure in the "Limitations and Provisions" column of Table 1 or remove the authorization for the expiring procedure (if applicable).

c) The RNGB has the authority to rescind their concurrence with an operator authorization if the operator deviates from the procedure requirements, the RNGB becomes aware of any additional operational/training requirements, or any other factors that affect the safe operation of the procedure become known. The POI must rescind authorization for use of a procedure immediately upon notification from the RNGB in accordance with 14 CFR part 119, § 119.51.

H. Table 1 Instructions. When authorizing a special or RVFP, enter the airport identifier (International Civil Aviation Organization (ICAO)), city, airport name, state, full procedure name, airport state, airplane M/M/S, and any limitations and/or provisions in Table 1 as shown in the example below (Figure 3-67L, Sample C081/H122 Table 1 – Authorized Airports, Procedures, and Airplane (Rotorcraft)). The Web-based Operations Safety System (WebOPSS) does not provide drop-down fields for the instrument procedures to be listed in OpSpec/MSpec/LOA C081 or H122.

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Figure 3-67L. Sample C081/H122 Table 1 – Authorized Airports, Procedures, and Airplane (Rotorcraft)

Airport Identifier (ICAO)	Procedure Name, ORIG or AMDT #	Airport State	Airplane (Rotorcraft) M/M/S	Limitations and Provisions
KJFK; New York/John F. Kennedy Intl, NY	RNAV (RNP) RWY 13R, AMDT 2	NY	B-737-800	
KJFK; New York/John F. Kennedy Intl, NY	RNAV Visual RWY 13R, AMDT 2	NY	All B-767 All B-757	
KRNO; Reno/Reno/Tahoe Intl, NV	ILS/DME RWY 16R, AMDT 3	NV	All A-319 All B-757	
99OI, Fostoria Community Hospital, Fostoria, OH	Copter RNAV (GPS) 10, ORIG-B	OH	EC-130-T2 BHT-412-EP	Authorized on and after April 4, 2013
KEGE, Eagle County Regional Airport, Eagle, CO	ILS or LOC/DME RWY 25, ORIG	CO	G550 G650	

1) Airport Identifier (ICAO). Select airport using ICAO airport identifier. Field will populate with ICAO Identifier, City, Airport Name, and State. Use third column when accomplishing state query.

2) Procedure Name. Use procedure name found on FAA Form 8260-7 or 7B to complete this block in the template. This will aid the WebOPSS query process. These procedures are subject to revision, so ensure that the amendment number (including ORIG for “original”) is included in the procedure name.

3) Airport State. List airport state with two-letter identifier. Added to aid WebOPSS query.

4) Airplane M/M/S. List airplanes (rotorcraft) that are approved to fly the special procedure. To authorize a new airplane (rotorcraft) to use a special that is already authorized for an existing airplane (rotorcraft), contact the geographic RNGB for a joint review of the new aircraft’s (rotorcraft’s) capabilities. POIs should ask the responsible RNGB if concurrence is required to authorize any new airplane (rotorcraft) to fly these procedures.

5) Limitations and Provisions. For procedures that require specific review and evaluation of aircraft performance, equipment/avionics, training, or other criteria that would require that an authorization be limited to a specific airplane (rotorcraft) M/M/S, enter the limitation or provision after the approved M/M/S to ensure that any future airplane (rotorcraft) added by the operator is not authorized by default without completing the same review of the new airplane (rotorcraft) capabilities.

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I. Additional Requirements. The following OpSpec/MSpec/LOAs may be required for the authorization of specific procedures.

1) OpSpec C081 or LOA C381.

a) OpSpec/MSpec/LOA C052, Straight-In Non-Precision, APV, and Category I Precision Approach and Landing Minima—All Airports. Parts 91K, 121, 121/135, 125 (including 125 LODA holders), and 135 certificate holders/operators/program managers must be issued C052. The "type" (e.g., RNAV, instrument landing system (ILS), and localizer-type directional aid (LDA)) of instrument approach listed in C081 in Table 1 must be listed in the table of authorized approaches in C052. RVFP and Required Navigation Performance Authorization Required (RNP AR) procedures will not be listed in C052.

b) OpSpec/MSpec/LOA C063, Area Navigation (RNAV) and Required Navigation Performance (RNP) Terminal Operations. Parts 91K, 121, 121/135, 125 (including 125 LODA holders), and 135 certificate holders/operators/program managers may require a C063 authorization. C063 authorizes RNAV 1, RNP 1, and other Performance-based Navigation (PBN) flight operations, and is required for certificate holders/operators/program managers authorized to conduct RNAV 1, RNP 1, or other PBN flight operation in C081.

c) OpSpec/LOA C064, Terminal Area IFR Operations in Class G Airspace and at Airports Without an Operating Control Tower—Nonscheduled Passenger and All Cargo Operations. Parts 121, 121/135, 125 (including 125 LODA holders), and 135 certificate holders may require a C064 authorization. Determine the type of airport and operation being conducted in association with the C081 authorization.

d) OpSpec C077, Terminal Flight Rules Limitations and Provisions. Parts 121, 121/135, and 135 certificate holders may require a C077 authorization. C077 provides arrival and departure guidance for instrument and visual flight operations (e.g., visual flight rule (VFR) departure on an IFR clearance). C077 provides guidance on the use of a charted visual flight procedure (CVFP). Determine if a VFR operation into or out of an airport is part of the C081 authorization.

e) OpSpec C080, Terminal Area IFR Operations in Class G Airspace and at Airports Without an Operating Control Tower for Scheduled Passenger Operations. Parts 121 and 121/135 certificate holders may require a C080 authorization. Determine the type of airport and operation being conducted in association with C081 authorization.

f) OpSpec/MSpec/LOA C384, Required Navigation Performance Procedures with Authorization Required. Parts 91, 91K, 121, 121/135, 125 (including 125 LODA operators), and 135 certificate holders/operators/program managers should be authorized C384 when an RNP AR-like special procedure, normally titled RNAV (RNP), is authorized in C081. Approval to fly an RNP AR-like special without C384 will be granted by AFS-400 and documented on FAA Form 8260-7B. The authorization in C384 must contain the "lowest RNP" and "additional aircraft capabilities" meeting the requirements of the special procedure authorized in C081.

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2) Helicopter OpSpec/MSpec/LOA H122.

a) OpSpec/MSpec/LOA H102, Basic Instrument Approach Procedure Authorizations—All Airports. Parts 91, 91K, 121/135, and 135 certificate holders/operators/program managers must be issued H102. The "type" of approach authorized in H122 must be authorized in H102.

b) OpSpec/MSpec/LOA H112, Instrument Approach Operations Using an Area Navigation System. Parts 91, 91K, 121/135, and 135 certificate holders/operators/program managers may require an H112 authorization.

c) OpSpec/MSpec/LOA H113, Special Terminal Area IFR Rotorcraft Operations in Class G Airspace—Nonscheduled Passenger and All-Cargo Operations. Parts 91, 91K, 121/135, and 135 certificate holders/operators/program managers may require an H113 authorization.

d) OpSpec/MSpec/LOA H121, Special Terminal IFR Rotorcraft Operations in Class G Airspace—Scheduled Passenger Operations. Parts 91, 91K, 121/135, and 135 certificate holders/operators/program managers may require an H121 authorization.

3) Example. Table 2 (Figure 3-67M, Sample C081/H122 Table 2 – Additional Authorizations) below shows a matrix of airplane and rotorcraft additional authorizations. C052 and H102 are required because they authorize the "type of procedure" requested by C081. The "may be required" authorizations are based on the "type of operation" sought along with the procedure. Authorizations are not permitted for those parts with an NA.

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Figure 3-67M. Sample C081/H122 Table 2 – Additional Authorizations

NOTE: The table in this guidance is a graphical depiction on additional authorizations that are: required, may be required, or not applicable.

Airplane						
	C052	C063	C064	C077	C080	C384
91	Optional	Optional	NA	NA	NA	*
91K	R	*	NA	NA	NA	*
121	R	*	*	*	*	*
121/135	R	*	*	*	*	*
135	R	*	*	*	*	*
125	R	*	*	NA	NA	*
125 LODA	R	*	*	NA	NA	*
Rotorcraft						
	H102	H112	H113	H121		
91	NA	NA	NA	NA		
91K	R	*	*	NA		
121/135	R	*	*	*		
135	R	*	*	NA		

R – Required * – May Be Required NA – Not Applicable

J. Amendments. The geographic RNGB will notify the POI of procedure amendments and send the POI all of the new forms required for the amendment. In most cases, this entire process will need to be reviewed to ensure operator compliance with the amended procedure requirements, and the operator will be required to get a new chart, which they must submit to the POI. The POI will forward the new chart to the RNGB for distribution.

K. Cancellations. If an operator is no longer going to use a procedure, the POI must remove the procedure from the operator's OpSpec/MSpec/LOA and advise the appropriate RNGB that the operator is no longer authorized to use that procedure. If the procedure is canceled, the RNGB will notify the POI, and the POI will remove the procedure from the operator's OpSpec/MSpec/LOA.

L. Notices to Airmen (NOTAM). Special procedures exist outside of the normal notification system for standard instrument procedures. Many special procedures serve landing areas that are in the public NOTAM system, and public NOTAMs will be issued for specials whenever possible. However, sometimes it is not possible to issue a NOTAM for a special, which requires updates and changes to be issued to all authorized operators through their POI. Therefore, it is critical to record, maintain, and update operator contact data with the appropriate RNGB.

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M. Adding an Aircraft. If the operator requests to fly an authorized RVFP or special procedure in a new aircraft (e.g., one that they are not currently authorized to fly), the POI should review this entire process to ensure the suitability of the proposed aircraft.

N. Oversight and Auditing. Oversight management and guidance of operator authority and use of special instrument procedures is not currently in the FAA automated work programs. It may occur under the initiative of planned activities by POIs for those certificated operators who are addressed in National Work Programs for inspectors. POIs are requested to review the OpSpec/MSpec/LOA for their assigned operators annually to ensure the currency of the special instrument procedures. Part 91 operators are normally not addressed in the national programs. It is therefore critical that this certification and approval process be tracked directly by the FSDO. The FSDO should maintain files (paper/electronic, etc.) for operators authorized to conduct special procedures and conduct an annual review of the files to ensure that current information is maintained and disseminated.

1) The documentary elements of the special instrument procedure (e.g., FAA Form 8260 series, a copy of the current chart as issued to the operator, and related correspondences) should be maintained in the FSDO's part 121, 125, 129, or 135 operator files. The FSDO should create and maintain a specific file for parts 91 and 91K operators that are authorized to use special IAPs.

2) The RNGB must be supplied with a copy of the current chart and any subsequent updates or changes. At their discretion, the RNGB may require a copy of the signed 8260 forms. The POI should review the status of the special authority annually and advise the RNGB of any changes (i.e., aircraft type, company's existence, etc.) The PMI and PAI should apply the same review to any aircraft changes that they did for the initial authority. A record of such review should be kept in the part 121 or 135 file.

3) The RNGB will advise POIs of changes or updates to the procedures and distribute such information in accordance with Order 8260.60.

O. Additional Information. LOA C381, Special Instrument Procedures, Regional Authorization, allows FSDO inspectors and the RNGB to authorize multiple part 91 pilots and operators to use special instrument procedures. This LOA is only applicable to part 91 operators, and is not required to be used in lieu of individual LOA C081 authorizations. The geographical RNGB will determine which procedures are applicable for LOA C381. All other special terminal instrument procedures issued to part 91 operators, including those procedures that require additional pilot training or specific equipment and/or aircraft performance requirements, must be authorized using LOA C081 for each operator on a case-by-case basis.

OPSPEC C091—OPERATIONAL REQUIREMENTS AIRPLANE DESIGN GROUP VI (ICAO GROUP F). (OPTIONAL.)

A. Applicability. OpSpec C091 must be issued to U.S. certificate holders who conduct takeoff and landing operations using Airplane Design Group VI (ADG-VI), International Civil Aviation Organization (ICAO) Group F, within or outside the United States on runways as narrow as 150 feet (45 meters) wide.

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B. Operational Requirements. OpSpec C091 specifies the runway width, Obstacle Free Zone (OFZ), and other airport requirements for these aircraft. ADG-VI are airplanes with a wingspan from 214 feet (65 meters) up to 262 feet (80 meters). It closely parallels ICAO Group F criteria. However, where the ICAO Code designation is also dependent on main gear track width, the Federal Aviation Administration (FAA) criteria is dependent on the wingspan of the aircraft and tail height. The current edition of Advisory Circular (AC) 150/5300-13, Airport Design, establishes airport requirements for the different airplane design groups, including runway width requirements, taxiway width requirements, OFZ dimensions, and other airport considerations. Historically, the FAA has authorized deviations from these established standards on an air carrier-by-air carrier basis after evaluating the specific air carrier's operational procedures and flightcrew training program and standards. Operational limitations were typically part of the air carrier's operational authorization to operate as per the specific deviation granted to the air carrier.

NOTE: In order to allow ADG-VI aircraft operations on existing infrastructure, U.S. Airplane Design Group V (ADG-V) airports accepting scheduled service of ADG-VI aircraft are required to undergo a special modification of standards (MoS). The MoS applies to those portions of the airport that do not comply with ADG-VI standards.

C. U.S. Certificate Holders and Principal Operations Inspector (POI) Actions. Prior to initiating service to any ADG-V/ICAO Group E airport with an aircraft designed for ADG-VI/ICAO Group F, the certificate holder must supply the POI with the following:

- Evidence that the requirements of OpSpec C091 are met for the proposed runway(s) of operations at those airports, including potential alternates.
- For destination airports, U.S. airport MoS approval for that make and model (e.g., A-380 or B-747-8).
- For alternate airports, the process the operator used to evaluate the airport to ensure it could accommodate the aircraft.

1) It is the air carrier's responsibility to confirm that they can comply with the requirements of OpSpec C091 and to supply the POI sufficient documentation to verify their compliance. The air carrier is responsible for any necessary coordination and letters of understanding with applicable air traffic control (ATC) facilities and/or airport operators to meet the requirements of OpSpec C091 (e.g., taxi routes to be used and procedures to follow applicable to the specific certificate holder).

2) Flightcrew and dispatch training and qualification program.

3) The POI should provide the air carrier, ATC facility, or airport operator support, as necessary, to comply with the requirements of OpSpec C091. PIs may find a list of airports with MoS, for the A-380 and B-747-8 at http://www.faa.gov/airports/engineering/nla_mos/.

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NOTE: The air carrier's compliance with the requirements of OpSpec C091 eliminates the air carrier from having to demonstrate its capability to operate to the lower criteria specified in OpSpec C091 prior to being issued OpSpec C091 for that aircraft and airport combination.

D. ADG-VI/ICAO Group F Aircraft. ADG-VI/Group F specifies that the required runway width be at least 200 feet (60 meters) while ADG-V/Group E specifies that the runway width be at least 150 feet (45 meters). Currently, the A-380 and the B-747-8 are the only commercial aircraft in regular airline service that fit into the ADG-VI/ICAO Group F criteria and are therefore subject to the C091 requirements to takeoff and land on ADG-V/ICAO Group E runways.

E. B-747-8 Limitations. The following limitations apply to B-747-8 operations:

1) Runways for takeoffs and landings shall be at least 150 feet (45 meters) wide;

2) Operators must comply with all limitations and procedures specified in the applicable B-747-8 Airplane Flight Manual (AFM) for lightweight and aft center of gravity (CG) takeoffs.

NOTE: In accordance with FAA Airports Engineering Brief #74A, Use of 150-Foot (45-M) Wide Runways and Blast Pads for Boeing 747-8 Operations, the 35-foot standard stabilized runway shoulder width for ADG-V does not need to increase to the ADG-VI standard of 40 feet.

F. A-380 Limitations. The following limitations apply to A-380 operations:

1) The overall runway plus shoulder width is of 280 feet (85 meters) for ADG-VI and 250 feet (75 meters) for ICAO Group F. In order to reduce the jet blast impact to 150 feet (45 meters) runway surface, the FAA recommends stabilized shoulders beyond the runway edge. The FAA 150 foot runway width evaluation for the A-380, along with the recommendations for these operations contained in ICAO Annex 14, Aerodromes, and A-380 AFM have led to the following runway width authorization for A-380 operation in the United States:

2) Runways for takeoffs and landings shall be at least 150 feet (45 meters) wide with stabilized runway shoulders on both sides of the runway extending an additional 50 feet (15 meters) outward from the runway edge.

3) Runways as narrow as 150 feet (45 meters) wide without stabilized shoulders may be used for takeoff and landings, provided applicable flight manual procedures for takeoffs on 150 foot wide runways without stabilized runway shoulders are followed and procedures are implemented for the full length of the runway to be inspected for foreign object damage (FOD) after the takeoff prior to successive aircraft operations.

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NOTE: Only the airport operator conducts runway inspections for FOD. Hence, the air carrier should make sure, or have some documentation, that the airport operator will do it. The document is the Federally required Airport Certification Manual under 14 CFR part 139.

4) The hold short lines or hold position must be expanded outward from the 280 foot point by 1 foot for every 100 feet the runway threshold elevation is above sea level. (For example, a threshold elevation of 5,000 feet mean sea level (MSL) requires an additional 50 feet. Thus, the hold short lines or hold position can be no closer than 330 feet (280 feet + 50 feet) from the runway centerline (RCL).

NOTE: This is to address the hold position of aircraft when an A-380 is on final approach and is as required per the current edition of AC 150/5300-13. Specifically, so that if the A-380 has to go-around (balked landing) then the lateral area on both sides of the runway is clear of obstacles so that if the A-380 deviates left or right during the go-around maneuver (balked landing) its wing tips will not strike anything.

OPSPEC C300—14 CFR PART 97 NDB, NDB/DME, VOR, AND VOR/DME INSTRUMENT APPROACH PROCEDURES USING SUBSTITUTE MEANS OF NAVIGATION.

A. C300 Nonstandard Authorization. The nonstandard template OpSpec C300 authorizes qualified operators to substitute specific Area Navigation (RNAV) equipment for non-directional radio beacon (NDB), NDB/distance measuring equipment (DME), very high frequency omni-directional range station (VOR), and VOR/DME instrument approaches.

1) The OpSpec/MSpec/LOA C300 authorization covered by this subparagraph applies to operators conducting operations under 14 CFR parts 121 and 135. The airplane's make/model/series, the manufacturer and model, and the software part/version of the RNAV navigation systems authorized for this type of navigation must be listed in Table 1 along with any limitations and provisions. (See sample table in Figure 3-66F, Sample Table 1—Aircraft and Navigation Systems Eligible for Instrument Approach Procedures Using Substitute Means of Navigation.)

Figure 3-66F. Sample Table 1—Aircraft and Navigation Systems Eligible for Instrument Approach Procedures Using Substitute Means of Navigation

Aircraft M/M/S	RNAV System(s) and Software			Limitations and Provisions
	Manufacturer	Model	Software Part/Version	
B-717-200	Honeywell	Pegasus	PS4081642-909	NDB, NDB/DME IAP N/A

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2) Before a principal operations inspector (POI) can issue a nonstandard OpSpec/MSpec/LOA C300, the Flight Technologies and Procedures Division (AFS-400) and the Air Transportation Division (AFS-200) must concur with the POI's recommendation to issue the OpSpec/MSpec/LOA.

3) The POI must use the request process as illustrated in Figure 3-66G, Instrument Approach Procedures Using Substitute Means of Navigation Application Flowchart, when the operator submits an application package.

a) The POI submits the application package to the regional NextGen program branch manager.

b) The regional NextGen program branch manager forwards the application to AFS-400 for review.

c) AFS-400 will review the application in consultation with AFS-200 and forward a written concurrence to the regional NextGen program branch manager.

d) The regional NextGen program branch manager will forward the written concurrence to the POI.

e) The POI will issue OpSpec/MSpec/LOA C300 to the operator.

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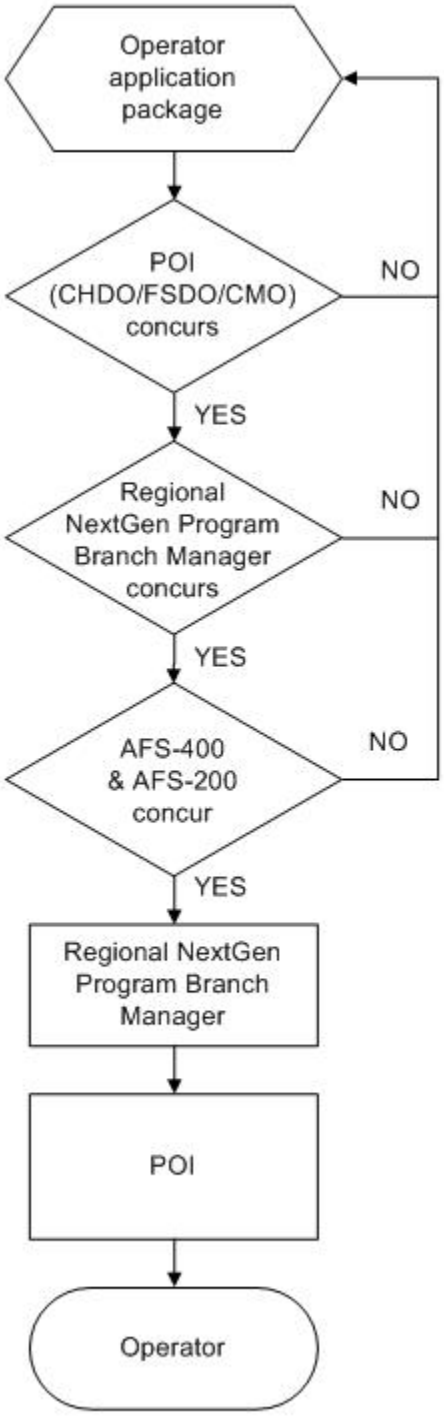
Figure 3-66G. Instrument Approach Procedures Using Substitute Means of Navigation Application Flowchart



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B. Aircraft Qualification. Use the guidelines in OpSpec C300 for aircraft qualification.

C. Operating Considerations. This authorization to conduct NDB, NDB/DME, VOR, and VOR/DME instrument approach procedures (IAP) using substitute means of navigation applies when the underlying Navigational Aid (NAVAID) (NDB, VOR, or DME) is out of service, and/or compatible aircraft avionics are either not installed (automatic direction finder (ADF) or DME) or not operational (VOR, ADF, or DME).

1) Navigation Data and Flyability Validation. The operator must establish a process to ensure that each IAP intended to be flown under this authority has been checked to confirm flyability with aircraft RNAV systems. The structure of this process is left to the operator's discretion as long as compliance with OpSpec C300 is met. The operator's process must also ensure that any lateral path changes that occur during the 28-day update cycle are examined to confirm the flyability of procedures and that the flyability and validation are documented.

2) Dispatching to Airports with Out-of-Service NAVAIDs. Operators planning to dispatch to an airport with an out-of-service NAVAID may need to coordinate with air traffic control (ATC). In order to receive a clearance for certain procedures, this coordination should include, but is not limited to, the operators' intent to use their RNAV system as a substitute means of navigation guidance and their capability and operational authorization.

D. Training. The flightcrew must complete the operator's approved training program, to include training specific to the RNAV manufacturer/model/software and software version, and IAPs using substitute means of navigation. Guidance in OpSpec C300 must be addressed in the training program.

OPSPEC/MSPEC/LOA C358—SPECIAL RESTRICTIONS FOR FOREIGN RNAV TERMINAL INSTRUMENT PROCEDURES WITH RNP LINES OF MINIMUMS.

NOTE: To obtain the nonstandard authorization C358, the operator must use the nonstandard request process. See Volume 3, Chapter 18, Section 2, paragraphs 3-712 to 3-713, for the nonstandard request process. For operators conducting operations under 14 CFR part 121 or 135, the formal request must be requested through the Air Transportation Division (AFS-200). For operators conducting operations under 14 CFR part 125, including part 125 Letter of Deviation Authority (LODA) holders, or under 14 CFR part 91 subpart K (part 91K), the same nonstandard request process must be used and submitted through the General Aviation Division (AFS-800). The airplane qualification package should be sent simultaneously to the Flight Technologies and Procedures Division (AFS-400) for evaluation. AFS-400 will coordinate with the appropriate policy division for final approval of this nonstandard authorization for all operator requests.

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A. Nonstandard Authorization. The nonstandard template C358 authorizes a qualified operator to conduct certain "RNP-like" foreign Area Navigation (RNAV) Terminal Instrument Procedures (TERPS) with required navigation procedures (RNP) lines of minimums. These "RNP-like" foreign RNAV approaches are not designed to the same criteria as U.S. 14 CFR part 97 RNAV RNP special aircraft and aircrew required (SAAAR) procedures. Only the selectable procedures in Table 1 of the C358 template may be authorized. The International Civil Aviation Organization (ICAO) uses the term Authorization Required (AR) rather than SAAAR. AR may appear on "RNP-like" foreign RNAV procedures with RNP lines of minimums regardless of the design criteria.

NOTE: "RNP-like" foreign RNAV procedures with RNP minimums that meet part 97 RNAV RNP SAAAR procedure design criteria are not available for selection in the C358 template, Table 1, and require authorization via the authorization of template C384.

1) C358 authorization is granted through the nonstandard authorization request process (see Volume 3, Chapter 18, Section 2).

2) C358 authorization is applicable to operators conducting operations under 14 CFR parts 91, 91K, 121, 125 (including those with a LODA 125M), and 135.

3) Procedures with RNP lines of minimums. These "RNP-like" foreign RNAV procedures have RNP lines of minimums of 0.3 or less, and/or a radius to a fix (RF) leg required, and/or the missed approach requiring an RNP less than 1.0. RNP less than 0.3 specified in the line of minimums (RNP line of minimums refers to the minimum altitude for the approach and has an RNP requirement associated with it; e.g., there may be minimums of 250 feet for RNP 0.11 and a separate line of minimum of 350 feet for RNP 0.20).

4) U.S. RNAV RNP SAAAR procedures are authorized (nonstandard template C384) using the guidance in Advisory Circular (AC) 90-101, Approval Guidance for RNP Procedures with SAAAR, current edition. The foreign "RNP-like" RNAV procedures in Table 1 are authorized using the portions of AC 90-101 that apply to the particular RNP procedure design criteria for each approach.

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Figure 3-66A. Sample Table 1—Special Restrictions for "RNP-like" Foreign RNAV Terminal Instrument Procedures with RNP Lines of Minimums

(Only those procedures allowed for authorization will be available as selectables in the C358 template.)

Airport	Procedure Identification	Procedure Requirements
QUITO, Ecuador (SEQU-UIO) / RNAV (RNP) Rwy 17 / VNAV path required, RF leg required, RNP 0.15, Missed approach RNP < 1.0		
QUITO, Ecuador (SEQU-UIO) / RNAV (RNP) Rwy 35 / VNAV path required, RF leg required, RNP 0.15, Missed approach RNP < 1.0		

B. Airplane Qualification. The airplane qualification must meet the guidelines established in AC 90-101, appendix 2, with the following exceptions:

1) Principal operations inspectors (POI) should send the formal nonstandard request to the appropriate headquarters (HQ) division stating that the airplane qualification and operating procedures have been sent to the Flight Technologies and Procedures Division (AFS-400) for evaluation. POIs should simultaneously submit the airplane qualification and operating procedures package to AFS-400, as described in the AC 90-101, appendix 7 checklist.

2) The vertical accuracy requirement as written in AC 90-101, appendix 2, paragraph 2c is not required for this authorization. Vertical guidance in these foreign "RNP-like" procedure(s) is based on barometric vertical navigation (baro-VNAV). Eligible aircraft are those with an Aircraft Flight Manual (AFM) or Aircraft Flight Manual Supplement (AFMS) that explicitly states that the vertical navigation (VNAV) system is approved for approach operations in accordance with the current edition of AC 20-129, Airworthiness Approval of Vertical Navigation (VNAV) Systems for use in the U.S. National Airspace System and Alaska, or those with written documentation (e.g., Flight Standardization Board (FSB) report or other official documentation) verifying eligibility.

3) Airspace Containment (AC 90-101, appendix 2, paragraph 2d). The airspace containment requirement as written in AC 90-101 is not required for this authorization. Airplanes that are qualified to conduct RNAV operations in accordance with applicable directives and which have the proper RNAV capability (e.g., Global Positioning System (GPS), RF leg capability) for the procedure(s) listed may be authorized.

C. Operating Considerations. The operator must establish operating procedures that meet the applicable guidelines of AC 90-101, appendix 4. Operating procedures must incorporate all operational mitigations based on equipment authorization. For example, if RF leg is authorized, an operational mitigation is required if the equipment engages in "track hold" mode when a go-around is selected. (Track hold would not follow the lateral navigation (LNAV) path when a go-around is initiated in or shortly after an RF leg.) Submit the operating procedures

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package to AFS-400 as described in the AC 90-101 checklist in appendix 7. The operating procedures must meet the guidelines established in AC 90-101, appendix 4, with the following exceptions.

1) Vertical track deviation monitoring limit of 75 feet (AC 90-101, appendix 4, paragraph 3g.). The track deviation monitoring limit of 75 feet vertically, as written in AC 90-101, is not required for this authorization. Eligible airplanes, in accordance with baro-VNAV requirements, must be equipped with and operationally using either a flight director (FD) or autopilot capable of following the Vertical Path (VPATH).

2) Verification of the most current airport altimeter is set prior to the final approach fix (FAF) but no earlier than the initial approach fix (IAF) (AC 90-101, appendix 4, paragraph 3k). The altimeter setting requirement as written in AC 90-101 is not required for this authorization. Although the listed procedure(s) require(s) the current altimeter setting for the airport of intended landing, the flightcrew is not required to verify the setting between the IAF and the FAF. Normal flight deck procedures must meet this requirement.

D. Training. The flightcrew must complete the operator's approved RNP instrument approach procedure (IAP) training program for these procedures and qualify for RNP instrument approach operations by one of the operator's check airmen/check pilot, as applicable, or by an FAA inspector. The guidance of AC 90-101, appendix 5, must be addressed in the training program.

1) For operators authorized RNP SAAAR instrument approaches for the aircraft equipment listed in Table 2 of the C358 authorization, only the specific differences from RNP SAAAR procedures that apply to the "RNP-like" foreign RNAV instrument procedures listed in Table 1 of the C358 authorization, must be trained.

2) Flightcrew members of operators that are not authorized for RNP SAAAR for the aircraft equipment listed in Table 2 of the C358 authorization, the applicable subjects of AC 90-101, appendix 5 must be trained:

a) Guidance of AC 90-101, appendix 5, must be followed except where a task analysis has shown that the crew knowledge and skills for RNP SAAAR do not apply to the "RNP-like" foreign RNAV instrument procedure(s) authorized in Table 1.

b) Unique RNP approach criteria that apply to the "RNP-like" foreign RNAV instrument procedure(s) authorized in Table 1.

E. Listing Airplanes and Navigation Systems Approved for "RNP-Like" Foreign RNAV TERPS. The airplane(s) and navigation systems approved for "RNP-like" foreign RNAV TERPS with RNP lines of minimums must be listed in Table 2 of the C358 authorization as follows:

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1) The approved navigation systems and the specific software version must be listed.

2) The table must identify the authorized use of a coupled autopilot or an FD which is provided as a selectable in the automated Operations Safety System (OPSS) in processing the authorization.

3) The lowest RNP authorized must be listed.

Figure 3-66B. Sample Table 2—Airplanes and Navigation Systems Eligible for "RNP-like" Foreign RNAV Terminal Instrument Procedures with RNP Lines of Minimums

Airplane M/M/S	Navigation System M/M/Software/ Version	Limitations and Restrictions	Autopilot Coupled or Flight Director Required	Lowest RNP
B-737-490	Smiths FMCS/FMC 2907A4 or 2907C1 with U10.5A.	Not authorized to exceed temperature limits of the approach. Not authorized RNP parallel approach operations (RPA). Not authorized RNP parallel approach runway transitions (RPAT).	Either FD or Autopilot only	RNP-0.15 RNP-0.11

F. Execution of an "RNP-Like" Foreign RNAV Instrument Procedure. Execution of an "RNP-like" foreign RNAV instrument procedure requires the current, local altimeter setting for the airport of intended landing. Remote altimeter settings are not allowed.

G. VNAV Path Requirements. An airplane(s) with an airworthiness approval for baro-VNAV approach operations in accordance with AC 20-129 must be equipped with and operationally use either an FD or autopilot capable of following the VPATH.

H. Approval Requirements. Unlike RNP SAAAR C384 authorization, there is no interim approval required for this nonstandard authorization in C358. The operator must submit the following information on a continuous basis every 30 days to the POI for his or her evaluation of the continuing use of the authorization (AC 90-101, appendix 6, paragraph 1):

1) Total number of the "RNP-like" foreign RNAV approach procedures conducted;

2) Number of satisfactory approaches by aircraft/system (satisfactory if completed as planned without any navigation or guidance system anomalies); and

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3) Unsatisfactory approaches must be included in the report and must include, but are not limited to, the following:

a) UNABLE REQ NAV PERF, NAV ACCUR DOWNGRAD, or other RNP messages during any approach;

b) Excessive lateral or vertical deviation;

c) Terrain Awareness and Warning Systems (TAWS) warning;

d) Autopilot system disconnect;

e) Navigation data errors; and

f) Pilot report of any anomaly.

OPSPEC/MSPEC C359. DECOMMISSIONED.

LOA C381—SPECIAL INSTRUMENT PROCEDURES, REGIONAL AUTHORIZATION.

A. Applicability. Letter of authorization (LOA) C381 allows Flight Standards District Office (FSDO) inspectors and the regional Flight Standards division (RFSD) Regional NextGen Branch (RNGB) to authorize multiple Title 14 of the Code of Federal Regulations (14 CFR) part 91 pilots and operators to use special non-14 CFR part 97 instrument procedures. RNGBs are not required to use LOA C381. The appropriate geographical RNGB will determine which procedures are applicable for LOA C381. LOA C381 should only be used to maintain a list of multiple users (with written authorizations as described below) of special instrument procedures that do not require specific aircraft equipment, performance, pilot training, or any other complex requirements. All other special terminal instrument procedures must be authorized using LOA C081. The RNGB must contact the Technical Programs Branch (AFS-260) to create an operator in WebOPSS and for RNGB digital signature authority. For LOA C381 applicable to 14 CFR part 129 foreign air carriers, see Volume 12, Chapter 2, Section 5.

NOTE: Currently there is no method to authorize a nonpart 129 foreign pilot/operator to fly special instrument procedures or Area Navigation (RNAV) Visual Flight Procedures (RVFP) due to tracking, notification, and coordination requirements.

B. Background. Section 91.175(a) states, “Instrument approaches to civil airports. Unless otherwise authorized by the FAA, when it is necessary to use an instrument approach to a civil airport, each person operating an aircraft must use a standard instrument approach procedure prescribed in part 97 of this chapter for that airport. This paragraph does not apply to United States military aircraft.”

1) A special terminal instrument procedure (approach or departure) serving a private use airport or heliport is not promulgated under part 97, and therefore requires Federal Aviation Administration (FAA) authorization to conduct these procedures in instrument conditions in

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accordance with § 91.175(a). OpSpec/management specification (MSpec)/LOA C081 normally authorizes special procedures under 14 CFR parts 91, 91K, 121, 125, and 135. OpSpec H122 authorizes 14 CFR parts 91, 91K, 121/135, and 135 helicopter operators. To ensure that all individual users are authorized correctly for these procedures, all pilots/operators need to be authorized via LOAs to support pilot notification when a procedure is amended or canceled. All part 91 users can be authorized via LOA C081 by their appropriate geographic FSDO, but this can create a greatly increased workload requiring a large number of FAA resources and man hours at air parks with dozens to hundreds of users.

2) LOA C381 was designed specifically to simplify the authorization process while still authorizing all individual users correctly, to address multiple part 91 operators flying one or more procedures. The RNGB authorizes LOA C381 in Web-based Operations Safety System (WebOPSS), and the last page of the LOA is the signature page for the pilot and the FAA inspector, either a FSDO principal operations inspector (POI) or RNGB All Weather Operations (AWO).

NOTE: While LOA C381 allows an RNGB inspector or FSDO inspector to sign FAA Form 8260-7B and LOA C381 signature page, this is primarily for the sake of flexibility. The geographic FSDO has the primary responsibility to authorize pilots via these signature pages, particularly at air parks which may be a substantial distance from the regional FSDO. The RNGB and the geographic FSDO should work together, particularly during site visits where multiple pilots are anticipated for authorization, but LOA C381 must also be flexible enough to allow either an RNGB inspector or a FSDO inspector to authorize a pilot without inspectors from both offices being present. With the concurrence of the geographic FSDO, an RNGB inspector may authorize users if necessary due to scheduling or staffing issues (e.g., if a FSDO inspector cannot be present). In these instances, the RNGB will ensure that the FSDO receives the required paperwork for their records.

3) LOA C381 (including the signature page) and appropriate 8260 series forms (see subparagraph 5) below) serve as the pilot/operator authorization. One or more approaches in the region can be added to Table 1, and each authorized user for each approach can be added to Table 2 and authorized for individual (or multiple) procedures by referencing Table 1. Although a complete LOA C381 is required for the RNGB and the appropriate FSDO to ensure proper pilot authorizations, the LOA issued to the pilot must only contain, at a minimum, the approach authorized in Table 1, the pilot's name and information in Table 2, and the completed signature page. It is not necessary to send a new copy of LOA C381 with a complete list of all approaches and all pilots to every authorized pilot for every LOA C381 revision. An individual pilot needs to be reissued LOA C381 only when there is a change to a procedure that pilot is authorized to fly, or there is a change in that pilot's authorization.

4) There are several special terminal instrument procedures serving private-use, multiple user, general aviation airports (such as air parks) throughout the United States. Many of these procedures have been around for more than 10 years. Previously, FAA Form 8260-7 defined the procedure and was signed off by the Flight Technologies and Procedures Division (AFS-400) to authorize the procedure. FAA Form 8260-7 has since been updated to FAA

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Form 8260-7A (which defines the procedure) and FAA Form 8260-7B (which defines any additional operator requirements). Several procedures are still defined by an approved FAA Form 8260-7, and will remain this way until the procedure is amended or canceled.

5) To authorize a user via LOA C381, the pilot completes and signs the bottom half of the last page of the LOA C381 and FAA Form 8260-7B, page 2. An FAA inspector, either an AWO or a FSDO inspector, signs the top half and FAA Form 8260-7B, page 2. The FSDO keeps the signed originals, and gives a copy to the pilot and to the RNGB. The pilot copy is their proof of authorization. The RNGB adds the pilot to Table 2 of LOA C381 and reauthorizes LOA C381 in WebOPSS. The RNGB is responsible for updating and authorizing the LOA C381 in WebOPSS, including adding pilots and procedures to the tables. The LOA C381 issued to the pilot/operator must contain at least the authorized procedure(s) in Table 1, the authorized pilot with applicable information in Table 2, and the signed original signature page. It is not necessary for all procedures in the region to be listed in Table 1, or all pilots authorized to be listed in Table 2, but the applicable procedure(s) and pilot are required.

6) It is important to note that LOA C381 in WebOPSS only serves as blanket authorization and a tracking method, and is signed in WebOPSS by the RNGB AWO. LOA C381 does not have to be reissued to each listed pilot each time a change is made, but it does need to be reauthorized when one or more pilots is added, removed, or amended in the LOA. The only time a pilot needs to be reauthorized is when that pilot is authorized for a new procedure, or when an authorized procedure is amended.

C. Authorization Forms and Records.

1) As it applies to a pilot/operator, the following signed forms serve as their authorization:

a) Series 8260 Forms: FAA Form 8260-7A (FAA Form 8260-7 for older procedures) containing the specifications of the IAP, FAA Form 8260-7B for issuing the instrument procedure, and FAA Form 8260-15A (FAA Form 8260-15B for graphic Obstacle Departure Procedure (ODP) or Standard Instrument Departure (SID)).

b) LOA C381, signed by both the pilot and an FAA inspector, and including the authorized procedure(s) in Table 1 and the authorized pilot in Table 2.

2) The appropriate geographic FSDO relevant to the pilot maintains signed original of the forms listed in subparagraph 1) above, and sends a copy to the appropriate geographic RNGB relevant to the location of the procedure.

3) The appropriate geographic RNGB relevant to the location of the procedure maintains a copy of the signed forms listed in subparagraph 1) above.

D. Authorization Responsibilities. Due to multiple operators using these special instrument procedures, the following measures outlined below are required to ensure regulatory compliance and limit potential risk.

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1) For each procedure, the Airport Manager or their designee shall:

a) Maintain a list of pilots authorized for each procedure, including contact information.

b) For a new procedure or a procedure amendment, where it may be beneficial, arrange a meeting or site visit for the appropriate geographical FSDO and RNGB to authorize multiple users, and notify all pilots seeking authorization.

c) Notify all pilots/operators requesting to fly any special terminal instrument procedure that they must contact either their appropriate geographical FSDO or RNGB in the region responsible for the procedure for authorization.

d) Using FAA Form 8260-7A (or FAA Form 8260-7 for older procedures) and FAA Form 8260-15A/B, have an aeronautical chart produced suitable for cockpit use.

e) Distribute the appropriate special terminal instrument procedure charts only to pilots/operators that are properly authorized by Flight Standards (AFS). This authorization is verified by presenting the signed FAA Form 8260-7B and the signed LOA C381.

2) The RNGB shall:

a) Establish an Executive Operator in WebOpss to authorize LOA C381, which will contain the list of all pilots/operators authorized to conduct the listed procedures.

b) Verify and enter all pilot/operator information in WcbOPSS, and issue LOA C381 to reflect the procedures as listed in Table 1 of the LOA. See Figure 3-67K for an example.

Figure 3-67K. Sample Table 1 – Airports and Special Terminal Instrument Procedures

Ref. No.	Airport Identifier (ICAO)	Special Terminal Instrument Procedures
1	82IS; Landings Condominium Huntley; IL	VOR-A, AMDT 6 Takeoff Minimums and Obstacle Departure Procedure, ORIG
2	LL22; Brookeridge Air Park; Downers Grove, IL	VOR/DME or GPS-A, AMDT 1

c) Prepare a pilot briefing sheet for each special terminal instrument procedure.

d) Forward a copy of the pilot briefing sheet, FAA Forms 8260-7/8260-7A/ 8260-7B/8260-15A/15B, and any other required documentation to the POI for each procedure.

e) With the concurrence of the geographic FSDO in accordance with paragraph 3-714B2), the RNGB will authorize users via the process outlined in subparagraph 3) below, if necessary, due to scheduling or staffing issues (e.g., if a FSDO inspector cannot be present). In these instances, the RNGB will ensure that the FSDO receives the required paperwork for their records.

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f) Save either a hard copy or an electronic copy of each signed pilot authorization and signed FAA Form 8260-7B.

3) The FSDO inspector shall:

a) Verify the pilot's identity and credentials (pilot certificate/instrument rating/aviation medical).

b) Review FAA Form 8260-7B for required signatures and any associated documents to ensure accuracy.

c) Emphasize to pilots/operators that the special terminal instrument procedures conform to current requirements and that only authorized pilots/operators are permitted to utilize these procedures.

d) Ensure the pilot/operator understands that no additional training is required to conduct these procedures. If additional training is required, that procedure must be authorized via individual OpSpec/MSpec/LOA in accordance with current 8900.1 guidance.

e) Sign an original and make at least two copies of the signed LOA C381 and signed FAA Form 8260-7B and distribute as follows:

1. Original – FSDO.

2. Copy – Pilot/Operator.

3. Copy – RNGB.

NOTE: The pilot/operator is required to have a copy of the applicable FAA Form 8260-7B in order to have an approach chart and ODP issued for their use.

f) Notify the RNGB of any change in assigned POI.

g) Ensure the pilot/operator understands the original issued IAP charts are authorized for their use only. Photocopying this IAP chart is not authorized.

4) The pilot/operator shall:

a) Maintain current point of contact (POC) information with the appropriate Airport Manager.

b) Prior to being issued LOA C381 and FAA Form 8260-7B, present the following documents to the FAA in person:

1. FAA pilot certificate,

2. FAA medical certificate, and

3. U.S. passport or other government issued photo identification.

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c) Ensure their signature is on FAA Form 8260-7B.

d) Present the signed FAA Form 8260-7B to the appropriate airport manager in order to obtain special terminal instrument procedure chart(s).

e) Sign the LOA and confirm FSDO and RNGB signatures.

f) Have LOA in physical possession, or readily accessible, when exercising the privileges of the LOA.

NOTE: Each owner/operator/pilot in command (PIC) is responsible for currency and proficiency of instrument flight rules (IFR) and an airworthy aircraft.

g) Return the LOA and the issued special charts when the LOA is no longer required.

OPSPEC/MSPEC/LOA C384—REQUIRED NAVIGATION PERFORMANCE PROCEDURES WITH AUTHORIZATION REQUIRED.

A. OpSpec/MSpec/LOA C384 Nonstandard Authorization. The nonstandard template C384 authorizes qualified operators to conduct 14 CFR part 97 Area Navigation (RNAV) Required Navigation Performance (RNP) instrument approach procedures (IAP) with Authorization Required (AR). This template also authorizes foreign RNP IAPs with AR.

1) OpSpec/MSpec/LOA C384 authorization covered by this paragraph applies to operators conducting operations under 14 CFR parts 91 (including part 91 subpart K (part 91K)), 121, 121/135, 125 (including A125 Letter of Deviation Authority (LODA) holders), and 135.

2) Complete operational approval guidance material for RNP IAPs with AR is found in the current edition of Advisory Circular (AC) 90-101, Approval Guidance for RNP Procedures with AR. The AC also includes application preparation and processing guidance.

3) Before a principal operations inspector (POI) may issue nonstandard OpSpec/MSpec/LOA C384, the Flight Technologies and Procedures Division (AFS-400) and either the Air Transportation Division (AFS-200) or the General Aviation and Commercial Division (AFS-800), as appropriate, must concur with the POI's recommendation to issue the OpSpec/MSpec/LOA.

4) Figure 3-67E, RNP AR Application Flowchart, illustrates the preferred flow for reviewing RNP AR applications within the FAA. Volume 3, Chapter 1, Section 1 describes the recommended general process to be used by Flight Standards Service (AFS) inspectors in the course of evaluating an operator's request for operational approval. Nothing in this C384-specific guidance is intended to contradict the recommended general process.

a) The POI would typically be the first FAA official to receive and review the application. The POI would provide feedback to the operator, as needed, to produce an application that meets the requirements of AC 90-101. The POI would then submit his or her

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recommendation for approval to the regional Next Generation (NextGen) Branch (e.g., AEA-220).

NOTE: Volume 3, Chapter 1, Section 1 instructs the inspector to upload an electronic version of the RNP AR application to the NextGen application tracking SharePoint site associated with his or her region. The inspector should notify the regional All Weather Operations (AWO) specialist (within the NextGen Branch) and the Performance Based Flight System Branch (AFS-470) when the application has been uploaded. This will allow the AWO specialist and AFS-470 personnel to concurrently review the application and save time in the overall process. The POI, AWO specialist, and AFS-470 representatives should collaborate on the application review and thereby avoid duplication of effort in resolving any issues with the application.

b) The AWO specialist will review the application and, if necessary, seek additional information or clarification from the operator through the POI. Upon completion of the AWO specialist's review, the regional NextGen Branch manager should forward his or her recommendation, and that of the POI, to AFS-400.

c) AFS-400 will review the application in consultation with AFS-200 or AFS-800, as appropriate. Upon completion of this review, the coordinating offices will jointly provide written concurrence with the POI and AWO specialist recommendations to approve the application. The headquarters (HQ) concurrence memo will be sent to the POI through the regional NextGen Branch manager.

NOTE: If AFS-200, AFS-400, or AFS-800 does not concur with the recommendations to approve the application, they will provide a memo stating the reasons for this position.

d) The POI will issue the OpSpec/MSpec/LOA C384 to the operator in accordance with the limitations and/or provisions stipulated in the HQ concurrence memo. The HQ memo will, at a minimum, stipulate the specific aircraft make, model, and series (M/M/S), the lowest RNP value authorized, the related flight management system (FMS) software version, and whether the operator is authorized to fly Radius to Fix (RF) legs and/or approaches requiring less than RNP 1.0 nautical mile (NM) on the Missed Approach Segment (MAS) (i.e., "additional aircraft capabilities").

5) A listing of foreign RNP AR procedures approved for U.S. operators is maintained on the AFS-470 Web site. In addition, each approved foreign RNP AR procedure is added to the C384 template as a selectable item in Table 2. Operators may have any of those approved foreign procedures added to OpSpec/MSpec/LOA C384, Table 2 at the time C384 is issued, or at a later date, by requesting such action of their POI. No additional application process, or HQ approval, is required. The AFS-470 Web site also includes any limitations or restrictions associated with the foreign RNP AR procedures. Should the inspector have any questions regarding the suitability of an operator for any foreign RNP AR approach procedure, he or she should contact AFS-470.

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NOTE: The AFS-470 Web site may be found at http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs400/afs470/rnp.

6) If an operator wants a new (i.e., not currently approved) foreign RNP AR approach to be added to the approved list, they must send a separate application package to the POI. That application package must include a letter of request, the applicable state's Aeronautical Information Publication (AIP) (in English), and the applicable procedure charts. The POI should forward the package, along with his or her recommendations, to AFS-400 via the regional NextGen Branch. AFS-400 will evaluate the foreign RNP AR procedure and determine whether it is suitable for U.S. operators' use.

NOTE: The response to this specific request will likely be provided via separate means following completion of the procedure review process described in Figure 3-67E and, if approved, would result in the foreign RNP AR procedure being added to the C384 template and the foreign procedures list on the AFS-470 Web site.

B. OpSpec/MSpec/LOA C384 Tables 1 and 2. The POI should complete Table 1 and, if applicable, Table 2 of OpSpec/MSpec/LOA C384 in accordance with the following guidelines.

1) Table 1 should reflect the complete M/M/S of the aircraft qualified for RNP AR operations, as provided in the HQ concurrence memo. Table 1 should also fully identify the navigation system (FMS) make and model, as well as software version(s). The HQ memo will also stipulate this information.

2) Table 1 should list any limitations specifically addressed in the HQ memo, as well as any limitations identified by the POI. Table 1 should indicate the lowest permissible RNP value for both flight director (FD)-only and autopilot operations, as provided in the HQ concurrence memo. The inspector should also select, in Table 1, those additional aircraft capabilities specifically identified in the HQ memo. See Figure 3-66C, Sample C384 Table 1—Aircraft and Navigation Systems Eligible for RNP Procedures with AR, for a sample OpSpec/MSpec/LOA C384, Table 1.

NOTE: The POI must ordinarily obtain HQ concurrence before making changes to the contents of Table 1, unless specifically authorized in the HQ RNP AR concurrence memo. For example, the inspector would need HQ concurrence prior to adding aircraft or amending the FMS software version unless the associated manufacturer documentation indicates the change/revision has no effect on RNP AR operations. Alternatively, the inspector would not need HQ concurrence prior to amending the "lowest RNP" value if the HQ concurrence memo authorized a lower RNP value at the end of a specified period or upon the operator's completion of a number of RNP AR approaches.

3) Table 2 is used to name the specific foreign RNP AR approaches and any associated limitations for which the individual operator is authorized to fly. All foreign RNP AR procedures approved for U.S. operators will be available for selection within the C384 template.

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The operator should identify for the POI which foreign RNP AR procedures they want listed in Table 2 of their C384. See Figure 3-66D, Sample C384 Table 2—Foreign Approaches Authorized for RNP AR Operations, for a sample OpSpec/MSpec/LOA C384, Table 2.

Figure 3-66C. Sample C384 Table 1 – Aircraft and Navigation Systems Eligible for RNP Procedures with AR

Aircraft M/M/S	Navigation System M/M/Software Version	Limitations	Lowest RNP	Additional Aircraft Capabilities
B-737-700/800	GE Aerospace FMC (2), p/n 171497-05-01, U 10.8A	None	With flight director: RNP .15 With autopilot: RNP .11	1) RF legs. 2) Missed approach requiring less than RNP 1.0.

Figure 3-66D. Sample C384 Table 2 – Foreign Approaches Authorized for RNP AR Operations

Approach Name/Identifier	Special Limitations
Tegucigalpa, Honduras (MHTG) RNAV RNP 02	Flightcrews must coordinate missed approach holding instructions with ATC prior to commencing the approach.

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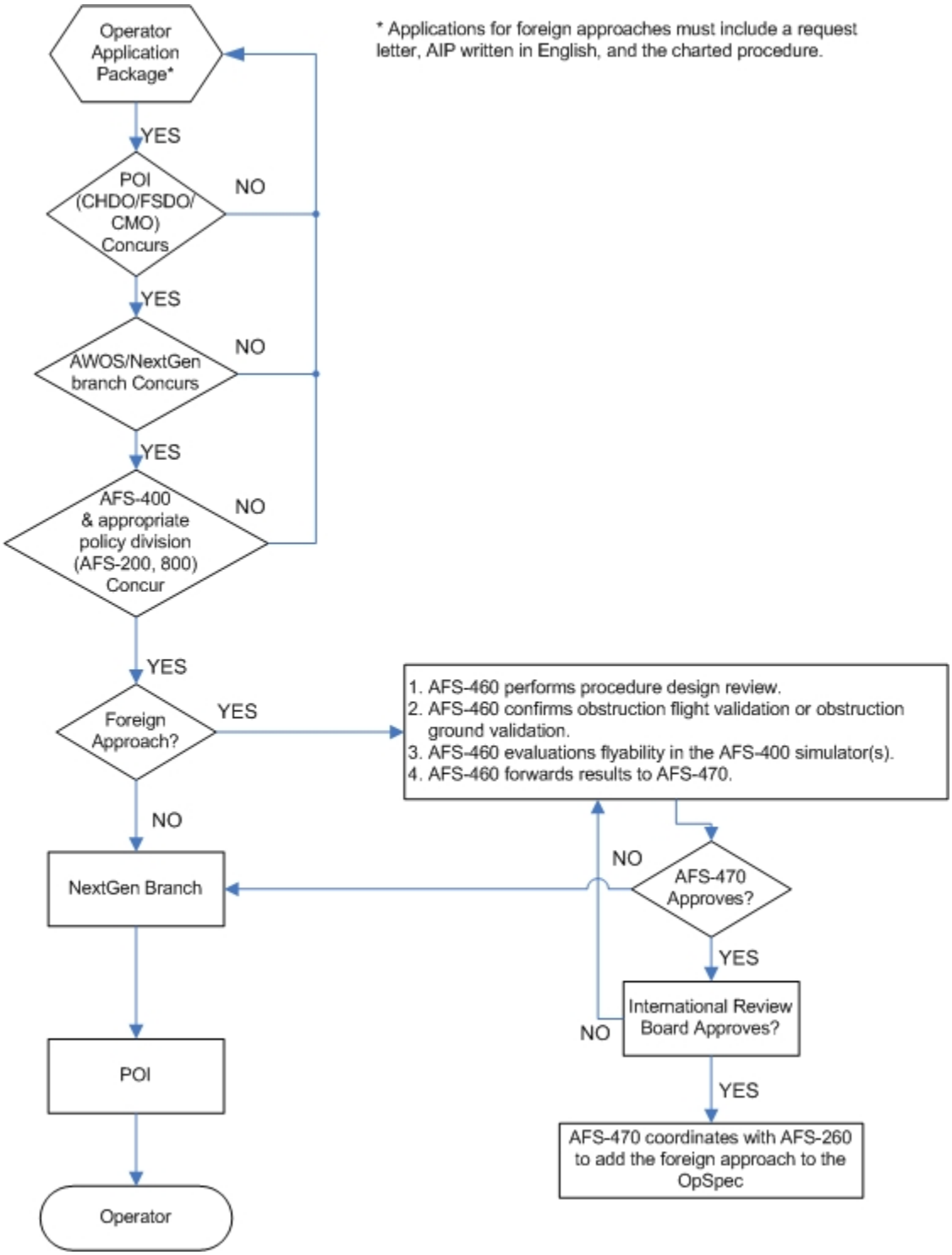
Figure 3-67E. RNP AR Application Flowchart



RESERVED. Paragraphs 3-872 through 3-920.

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VOLUME 3 GENERAL TECHNICAL ADMINISTRATION

CHAPTER 18 OPERATIONS SPECIFICATIONS

Section 8 Amendment, Surrender, and Suspension of OpSpecs

3-1026 APPLICABILITY. Title 14 of the Code of Federal Regulations (14 CFR) part 119, § 119.51, specifies that operations specifications (OpSpecs) can be amended as a result of a certificate holder or operator's request or because the Federal Aviation Administration (FAA) determines that safety in air transportation or air commerce (in the case of a commercial operator) is affected and the change is in the public interest. In addition, a certificate holder or operator's OpSpecs may be amended by the FAA due to a change in the certificate holder or operator's operating environment. This section contains direction and guidance to be used by principal inspectors (PI) for the amendment, surrender, and suspension of OpSpecs for 14 CFR parts 121, 125, and 135 certificate holders (see Volume 2, Chapter 5 for information on the processing of 14 CFR part 129 foreign air carrier OpSpecs).

3-1027 AMENDMENT PROCESS USING AUTOMATED OPERATIONS SAFETY SYSTEM (OPSS). Regardless of who initiates the amendment of a certificate holder or operator's OpSpecs, the automation process involves the same basic procedures. The amendment of the OpSpecs may involve the PI doing any of the following: entering new data for the OpSpecs amendment, changing the OpSpec A004 checklist, or changing only an OpSpec paragraph. PIs should use the procedures outlined in the current OPSS User's Manual.

3-1028 AMENDMENT OF OPSPECS. When amending OpSpecs, the PIs should take into account the extent and complexity of the amendment. If the amendment is uncomplicated and involves only one or two paragraphs, then it may be practical to print only the affected paragraphs. If the amendment is extensive, such as when a certificate holder or operator upgrades from part 135 operations to part 121 operations, then the PIs must generate a complete set of OpSpecs in the part 121 database. The PIs should review the draft set of OpSpecs with the certificate holder or operator and, if necessary, make any corrections and resolve any conflicts. After the final corrections are made, the PIs should print and issue two sets of the amended OpSpecs to the applicant; one set for the applicant's review and files, and one set for receipt and return. An amendment may be initiated either at the certificate holder or operator's request or by FAA initiation. The procedures for these two methods of initiating an amendment are as follows:

A. Amendment of OpSpecs at Operator's Request. An operator may, in accordance with part 119, § 119.51, initiate an application to amend its OpSpecs by submitting a letter or electronic proposal within the OPSS to the appropriate FAA office. The certificate holder or operator's request should include: a formal request for the desired changes, an explanation of the reasons for those changes, and any supporting information. In accordance with § 119.51, the certificate holder or operator must file the application for amendment at least 15 days before the proposed effective date of the amendment.

1) Incomplete Application. If the application is incomplete, the FAA should inform the applicant that the application is not acceptable in its present form but will be considered upon the receipt of additional, specified supporting documents and/or information.

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2) Unacceptable Application. The FAA may determine that the application is not acceptable because: the certificate holder or operator's request does not provide for an adequate level of safety in air transportation or air commerce; it would not be in the best interest of the public; or it is in conflict with FAA policy or 14 CFR. In such a case, the applicant should be informed, in writing, that the application is unacceptable and include a statement explaining why it is not acceptable. The certificate holder or operator will have certain rights of appeal which are discussed in paragraph 3-1030.

B. FAA-Initiated Amendment of OpSpecs. If the FAA determines that an amendment to the certificate holder or operator's OpSpecs is justified, the FAA should amend the OpSpecs in accordance with the procedures discussed in Volume 3, Chapter 18, Section 2. In the case of a change in a certificate holder or operator's operating environment or when the FAA has specific safety concerns, the following procedures apply:

1) Change in the Certificate Holder or Operator's Operating Environment. In some cases, the FAA may decide to amend a certificate holder or operator's OpSpecs due to a change in the operator's operational environment. For example, the FAA may create a new OpSpec paragraph to ensure uniform compliance with a certain aspect of 14 CFR. In such cases, the principal operations inspector (POI) may initiate and amend an operator's OpSpecs due to the change, without the operator having to apply for the change. Once the operator has demonstrated compliance with all appropriate parts of 14 CFR and operational and airworthiness requirements, the OpSpecs may be issued in accordance with the procedures discussed in Volume 3, Chapter 18, Section 2.

2) Safety Concerns. Section 119.51 provides the authority for the FAA to unilaterally amend a certificate holder or operator's OpSpecs when the FAA has determined that safety in air transportation and the public interest necessitates such an amendment. When amending a certificate holder or operator's OpSpecs under these regulations, the FAA is required to notify the certificate holder or operator in writing and then allow a minimum of seven days for comments regarding the proposal. The seven-day period provides the certificate holder or operator with an opportunity to submit written information, views, and arguments on the proposal. After reviewing the comments, the FAA either rescinds or adopts the amendment. If the FAA decides to amend the OpSpecs, the final amended OpSpecs should have an effective date of not less than 30 days after receipt by the operator. The operator has certain appeal rights which are discussed in paragraph 3-1030. Examples of the types of FAA-initiated amendments due to safety concerns are as follows:

a) The FAA will propose to amend a certificate holder or operator's OpSpecs when it is determined that the certificate holder or operator's operating environment or its operational capability is no longer consistent with the operating authorizations, conditions, and limitations contained in its OpSpecs. Examples of such cases are when the certificate holder or operator:

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- Terminates operations with a specific make/model/series of aircraft that is authorized in its OpSpecs.
- Has a series of accidents or incidents involving a particular type of operation (such as low visibility takeoffs and/or landings at a time when the OpSpecs authorize lower than standard weather minimums).
- Terminates a particular type or kind of operation or area of operation (such as when the operator no longer conducts flag or North Atlantic High Level Airspace (NAT HLA) operations).

b) The FAA also amends a certificate holder or operator's OpSpecs when the standard automated OpSpecs have been revised on a national basis and Washington Headquarters (HQ) has requested that the PIs amend all of their operator's OpSpecs. In this case, the OpSpecs should be amended in accordance with guidelines and procedures that have been established by Washington HQ.

3-1029 EMERGENCY AMENDMENT OF OPSPECS. Section 119.51 provides that the FAA may amend a certificate holder or operator's OpSpecs without a stay and also that the amendment will become effective immediately upon receipt by the operator. This case applies only when an emergency exists which requires immediate action with respect to safety in air transportation and when the other procedures to amend OpSpecs found in § 119.51 are impractical or contrary to the public interest. One example of when an emergency amendment to a certificate holder or operator's OpSpecs would be justified would be when the certificate holder or operator is knowingly operating a make/model/series of aircraft that is authorized in OpSpec paragraph A003 of its OpSpecs, but is doing so either with unqualified crewmembers or with the aircraft not in an airworthy condition (OpSpec D085). Another example would be when the operator is continuing to operate flights into an airport or area that has been shown to be unsafe due to inadequate or unavailable facilities either because of a natural disaster or civil strife.

A. Contents of Emergency Notice of OpSpecs Amendment. In accordance with § 119.51(e), if an emergency amendment is made to a certificate holder or operator's OpSpecs, the amendment must contain the finding of the emergency action and the reasons for the action. The emergency notice must also contain a statement that, within 30 days, the Regional Flight Standards Division (RFSD) manager will consider any facts presented by the operator which show that the emergency order is unwarranted or that the deficiencies in question have been corrected.

B. Further Guidance. An emergency amendment to a certificate holder or operator's OpSpecs does not constitute a certificate action within the meaning of Title 49 of the United States Code (U.S.C.) § 44709 (formerly § 609 of the Federal Aviation Act (FA Act)) but is a certificate action within the meaning of 49 U.S.C. § 46105 (formerly § 1005 of the FA Act) and 14 CFR part 13, § 13.20. An emergency amendment to a certificate holder or operator's OpSpecs requires close coordination with the POI, the RFSD, and the office of Regional Counsel.

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3-1030 CERTIFICATE HOLDER OR OPERATOR APPEAL RIGHTS. In all situations involving OpSpec amendments or FAA-initiated, non-emergency amendments, a certificate holder or operator has certain appeal rights. These appeal rights are provided in § 119.51, and are exercised according to the way in which the amendment was initiated, as follows:

A. Operator-Requested Amendments. If the FAA has determined that a certificate holder or operator's request for an amendment to its OpSpecs is unacceptable, the operator may, within 30 days after receipt of the certificate-holding district office's (CHDO) notice of disapproval, petition the Director of Flight Standards Service (AFS-1) to reconsider the CHDO's refusal to amend the OpSpecs (see subparagraph 3-1028A). During the course of the reconsideration time period, no amendments to the OpSpec paragraph(s) will be made. A petition made by a certificate holder or operator more than 30 days after receiving the notice of disapproval will not be considered by FAA. If AFS-1 determines that an amendment to a certificate holder or operator's OpSpecs is justified, the appropriate RFSD office will be notified and instructed to amend the OpSpecs either as requested by the certificate holder or operator or as amended by FAA. If AFS-1 determines, after considering the certificate holder or operator's petition, that an amendment is not appropriate, the operator and the RFSD will be notified accordingly. In the case of disapproval, 14 CFR does not provide any additional appeal rights for the operator.

B. FAA-Initiated Amendments. When FAA determines that an amendment to a certificate holder or operator's OpSpecs is necessary (see subparagraph 3-1028B), a notice of the proposed amendment must be provided, in writing, to the operator. The notice provides for not less than a seven-day period within which the operator may submit to the CHDO any written data, views, and arguments concerning the proposed amendment. If, after considering any objections the operator may have, the CHDO determines that the proposed amendment should be made, the CHDO will notify the operator, and send the amended OpSpec. The OpSpec will have an effective date of not less than 30 days after the date that the certificate holder or operator received the notice. The operator may, within the 30-day period, appeal the proposed amendment to AFS-1. If the operator elects to petition AFS-1 for reconsideration of the proposed amendment, the effective date of the amendment is stayed until a decision has been made by AFS-1 as to the final disposition of the proposed amendment. If AFS-1 determines that the proposed amendment to the certificate holder or operator's OpSpecs is justified, the appropriate RFSD office will be notified to amend the OpSpecs. If AFS-1 determines, after considering the operator's petition, that the proposed amendment is not appropriate, the operator and the RFSD will be notified that there will be no amendment.

NOTE: If AFS-1 denies the appeal, 14 CFR does not provide any additional appeal rights for the operator.

C. Emergency Amendments. As stated in paragraph 3-1029, an emergency order amending a certificate holder or operator's OpSpecs must contain a statement that the operator has 30 days to reply in writing to the order or to request a hearing in accordance with subpart D of part 13. The emergency amendment to the OpSpecs remains effective until the matter is finally adjudicated.

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3-1031 SURRENDER OF OPSPECS. Upon a change in its operating environment, a certificate holder or operator should exchange the appropriate paragraphs of its OpSpecs for the amended paragraphs that reflect the new operating environment. The PIs are responsible for updating the OPSS of the certificate holder or operator's certificate status and date of a change in the operating environment, as applicable.

A. Criteria. The criteria to hold a particular OpSpec authorization is no less than that necessary for its original issuance. For example, if a certificate holder or operator was issued an authorization to conduct operations in NAT HLA, but no longer has aircraft equipped to conduct that kind of operation, the certificate holder or operator must surrender the NAT HLA authorization.

1) If a certificate holder or operator ceases all operations and is no longer equipped, or able to conduct any kind of operation, the CHDO shall request that the certificate holder or operator voluntarily surrender all of the OpSpecs. Depending upon the circumstances, the CHDO may also request that the certificate holder or operator voluntarily surrender the certificate (see Volume 3, Chapter 18, Section 8 for information on the surrender of certificates).

2) Seasonal operators who are equipped to resume operations are not required to surrender OpSpecs during the inactive season.

B. Refusal to Surrender. If an operator does not meet the requirement to hold an OpSpec paragraph, but refuses to surrender the paragraph, the POI shall amend the OpSpec as discussed in paragraph 3-1030 of this section. If safety is affected in air commerce, then an emergency amendment is appropriate.

C. Voluntary Surrender. If a certificate holder or operator voluntarily surrenders a part of its OpSpecs, an amended OpSpec must be issued to reflect the certificate holder or operator's new operating environment. If an operator surrenders all of its OpSpecs, the OpSpecs shall be archived in OPSS as described in the OPSS User's Guide.

3-1032 SUSPENSION OF OPSPECS. The suspension of a certificate holder or operator's OpSpecs generally occurs after legal enforcement action. Volume 14 and the current edition of FAA Order 2150.3, FAA Compliance and Enforcement Program, contain the information, policies, guidelines, and procedures to be followed by PIs when taking legal enforcement action against a certificate holder or operator and when taking actions that would result in the suspension of the certificate holder or operator's OpSpecs. The PIs are responsible for updating the OPSS of the certificate holder or operator's certificate status and date of a change in the operating environment, as applicable.

RESERVED. Paragraphs 3-1033 through 3-1050.

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VOLUME 3 GENERAL TECHNICAL ADMINISTRATION

CHAPTER 18 OPERATIONS SPECIFICATIONS

Section 10 Parts A, B, and D Operations Specifications for Part 145 Repair Stations

3-1058 DISCUSSION. This section discusses each standard template available for issuance by the automated Operations Safety System (OPSS) for Title 14 of the Code of Federal Regulations (14 CFR) part 145 repair stations. These templates are more commonly referred to as paragraphs.

> NOTE: All 300-series (300–399) operations specifications (OpSpecs)/management specifications (MSpecs)/training specifications (TSpec)/letters of authorization (LOA) (Parts A, B, C, D, E, and H) require approval by the appropriate headquarters (HQ) policy division. Part 145 repair station and all airworthiness nonstandard requests must be approved by the Aircraft Maintenance Division (AFS-300). Any additional provisions and/or authority added to an OpSpec/MSpec/TSpec paragraph or LOA through the use of nonstandard text entered in the nonstandard text block (sometimes referred to as "Text 99") must also be approved by the appropriate HQ policy division. For detailed guidance on the process for obtaining HQ approval for nonstandard authorizations, principal inspectors (PI) must read the guidance contained in Volume 3, Chapter 18, Section 2.

OPSPEC A001, ISSUANCE AND APPLICABILITY. For part 145 repair stations, A001 lists the:

- Location;
- Mailing address (if different from the fixed location);
- Other "doing business as" (DBA) names, if authorized;
- Select subparagraph d if the repair station is a repair station located within the United States and its territories, doing work on foreign aircraft or articles under a Bilateral Aviation Safety Agreement (BASA) and associated Maintenance Annex (MA), or if the repair station specified on these OpSpecs and located within the European community performs maintenance and/or alterations of aircraft and/or aeronautical products to be installed on U.S.-registered aircraft under the terms and conditions of a BASA and associated MA; and
- Any delegated authorities.

OPSPEC A002, DEFINITIONS AND ABBREVIATIONS. A002 includes definitions of words or phrases used in other paragraphs. These definitions are not found in the regulations and should enhance understanding between the Federal Aviation Administration (FAA) and the aviation industry. Washington HQ-developed definitions must not be changed by Regional Offices (RO) or district offices. Washington HQ will add definitions when it becomes apparent that they are needed. Addition of a definition by a certificate-holding district office (CHDO) makes the whole paragraph nonstandard and must be processed as a nonstandard OpSpec request. See Volume 3, Chapter 18, Section 2, paragraph 3-712.

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OPSPEC A003, RATINGS AND LIMITATIONS. A003 is a mandatory paragraph issued to 14 CFR part 145 repair stations and lists the authorized class ratings, limited ratings, and limited specialized services ratings held by the certificate holder.

A. Limited Rating. The FAA has revised this paragraph to allow the selection of a capability list when a limited rating has been issued. When either the "Manufacturer" or "Make/Model" cell is selected, it displays a drop-down menu with two choices: "Capability List, as Amended" or "NA." When the accepted "Capability List, as Amended" cell is selected, it will automatically fill both cells. The phrase from the accepted "Capability List, as Amended" indicates that the certificate holder will be using a current capability list that is acceptable to the FAA and includes any additions made to the list using the self-evaluation process described in its manual. The principal inspector (PI) will use "NA" if the ratings meet the criteria of part 145, § 145.61(b)(7), (9), (10), or (12).

B. A060 Reference. If A003 is issued for a European Aviation Safety Agency (EASA) Member State with which the United States has a Bilateral Agreement (BA) with a Maintenance Implementation Procedure (MIP), an entry should be made in the nonstandard paragraph referencing the issuance of OpSpec A060, which lists the EASA rating and scope of work. The entry should also contain the EASA certificate number from EASA Form 3-145 and its current date.

OPSPEC/MSPEC A004, SUMMARY OF SPECIAL AUTHORIZATIONS AND LIMITATIONS. This paragraph summarizes special (optional) authorizations and/or limitations applicable to the certificate holder. The automated Operations Safety System (OPSS) application extracts the specific paragraphs that authorize a specific activity; it provides a summary of the authorized activity and reference number of the specific paragraph.

OPSPEC/MSPEC A005, EXEMPTIONS. In order for an operator to conduct operations under the provisions of any exemption, the exemption must be listed in A005. The current exemption number and expiration date must be selected for insertion into A005. List the exemption numbers in numerical order. Enter a brief description of the exemption or, if appropriate, the exempted regulations in the space labeled "Conditions and Limitations" (adjacent to each exemption). If certain conditions or limitations related to the exemption are specified in another paragraph of the OpSpec, the reference number of the other paragraph must also be entered in this space. For example, if operation of a repair station without a hangar door is permitted, insert the limitations, if any, in the "Remarks/References" section.

OPSPEC/MSPEC A007, DESIGNATED PERSONS. List the authorized person(s) by name, title, and the paragraph of the OpSpec that he or she is authorized to sign.

NOTE: Individuals' titles listed in A007 should match the title in the enhanced Vital Information Database (eVID).

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OPSPEC/MSPEC A025, ELECTRONIC/DIGITAL RECORDKEEPING SYSTEM, ELECTRONIC/DIGITAL SIGNATURE, AND ELECTRONIC MEDIA. This is an optional paragraph for 14 CFR part 145 repair stations. A025 identifies the electronic/digital recordkeeping system acceptable to the administrator. It also identifies the certificate holder and their electronic signature procedures.

OPSPEC A060, EUROPEAN AVIATION SAFETY AGENCY RATINGS FOR REPAIR STATIONS LOCATED OUTSIDE THE UNITED STATES. This paragraph authorizes the certificate holder the ratings and scope of work that are listed on the European Aviation Safety Agency (EASA) Part 145 Approved Maintenance Organization's (AMO) aviation authority (AA) certificate and approval schedule (EASA Form 3).

OPSPEC A101, ADDITIONAL FIXED LOCATIONS. This paragraph identifies additional locations (facilities) within the Flight Standards District Office (FSDO) that collectively form a certificated 14 CFR part 145 repair station's primary fixed location without having to certificate each facility as a stand-alone or satellite repair station.

A. Additional Locations. All additional locations of the certificated repair station must be under the full control of the primary facility listed in OpSpec A001. Individual facilities are not required to be completely equipped with tools, equipment, and parts, but must have them available when they perform the work.

B. Repair Station Manual (RSM). The RSM must contain detailed procedures for the transport of equipment and parts between facilities. The RSM should also outline procedures to ensure that adequate personnel are available to support the additional fixed locations/facilities while articles are undergoing maintenance. Further, using additional fixed locations does not constitute work away from the repair station.

C. Bilateral Agreement (BA) Including Provisions for Maintenance. When a repair station is located within the European Union (EU) and is under the BA with the United States, the repair station may operate in additional fixed locations (multiple facilities) under one FAA air agency certificate as long as there is an EASA approval allowing such operation and with the cooperation of the local aviation authority (AA).

NOTE: Additional fixed locations can only be located in the EU Member States that are subject to the terms of the BA.

OPSPEC/MSPEC/LOA A449, ANTIDRUG AND ALCOHOL MISUSE PREVENTION PROGRAM. New and existing 14 CFR part 145 certificate holders may obtain an OpSpec A449 if they opt to have drug and alcohol programs because they perform safety-intensive functions for an air carrier. Only one OpSpec is required for both the drug and alcohol programs.

A. Verification. OpSpec A449 serves as a verification to the operators (14 CFR parts 91, 121, 135, and 136) that the repair station performing the maintenance is under an antidrug and alcohol misuse prevention program.

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B. Emergency Repairs. Those certificate holders who operate under part 135, § 135.1(a)(5) or § 135.1(c)(1) or (2) who do not hold a 14 CFR part 119 certificate, and who operate under the provisions of part 91, § 91.147, are permitted to use a person who is otherwise authorized to perform aircraft maintenance or preventative maintenance duties and who is not subject to an antidrug and alcohol misuse prevention program to perform the following:

- Aircraft maintenance or preventative maintenance on the operator's aircraft if the operator would otherwise be required to transport the aircraft more than 50 nautical miles (NM) further than the repair point closest to the operator's principal place of operation to obtain these services, or
- Emergency repairs on the operator's aircraft if the aircraft cannot be safely operated to a location where an employee subject to FAA-approved programs can perform the repairs.

NOTE: If the above circumstances do not exist, the repair station must adhere to the regulations found in § 91.147 and part 136.

C. Testing Program 14 CFR Implementation. Title 14 CFR part 120 requires specified aviation employers to implement drug and alcohol testing programs. Originally, a part 145 repair station submitted an antidrug and alcohol misuse prevention program to the Drug Abatement Division (AAM-800) for approval. In 2004, the regulations were changed to allow part 145 repair stations to obtain OpSpec A449 to certify compliance with the regulations. Upon obtaining OpSpec A449, each part 145 repair station is required to implement its testing program under these regulations. The regulations require that each part 119 certificate holder, with the authority to operate under parts 121 and/or 135 or to conduct a sightseeing operation defined under § 91.147, ensure that any individual who performs safety-sensitive functions (directly or by contract) is subject to testing under the FAA's drug and alcohol testing regulations.

1) The operator may choose one of two ways to comply with the regulations:

- Include individuals performing safety-sensitive functions for a part 145 repair station under the operator's own drug and alcohol testing program, or
- Ensure that the part 145 repair stations, including the individual performing safety-sensitive functions, are under an FAA-mandated drug and alcohol testing program.

2) When a part 145 repair station chooses to implement its own proprietary drug and alcohol testing program, it may choose one of two ways:

- A stand-alone drug program for one facility/repair station, which is recorded in OpSpec A449 (using the A1 example); or
- Register a combined drug and alcohol testing program directly with AAM-800, which is recorded in OpSpec A449 (using the A2 example). "Combined" means a repair station with multiple locations or certificates.

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D. Applicability. As identified earlier, OpSpec A449 is applicable for part 121, 121/135, or 135 certificate holders, and LOA A049 is applicable for part 91 operators conducting sightseeing operations under § 91.147. OpSpec A449 is also applicable to certified part 145 repair station maintenance facilities that perform safety-sensitive functions for the above-identified operations and that choose to implement their own FAA-mandated drug and alcohol testing program.

1) Certificate holders, program managers, or operators are responsible for providing the information required by part 120 to the principal inspector (PI) for the issuance of OpSpec A449, as applicable. When any changes occur, certificate holders and operators are responsible for providing the Flight Standards Service (AFS) with current information to update and amend OpSpec A449.

2) The questions and answers in Table 3-6B, Operations Specification A449 Questions and Answers, should help.

Table 3-6B. Operations Specification A449 Questions and Answers

Question	Answer	Explanation
Is a 14 CFR part 145 certificated repair station required to comply with FAA drug and alcohol regulations?	No	But a 14 CFR part 119 certificate holder, with the authority to operate under 14 CFR parts 121 and/or 135, or to conduct a sightseeing operation defined under 14 CFR part 91, § 91.147, is prohibited from using any contractor or contract employee to perform safety-sensitive work, unless that individual is subject to testing under a domestic and/or FAA drug and alcohol program.
Should I, as a principal maintenance inspector (PMI), ensure that a part 145 certificate holder is in compliance with the drug and alcohol testing program regulations?	No	Refer any questions that you or a company might have about program compliance or implementation by a part 145 certificate holder to the Drug Abatement Division (AAM-800) at 202-267-8442, or at drugabatement@faa.gov.
What oversight responsibility does the principal operations inspector (POI) or PMI have regarding a certificate holder's requirement to ensure that contractors who perform safety-sensitive work are subject to the drug and alcohol testing program?	None	All Flight Standards Service (AFS) inspectors' primary responsibilities relating to the drug and alcohol testing regulations are to issue and make changes to an air carrier's OpSpec A449 or to issue LOA A049 for § 91.147. For any questions, please contact an AAM-800 manager at 202-267-8442 or at drugabatement@faa.gov.

E. Recordkeeping. When certificating a new part 145 repair station or when providing oversight of an existing part 145 repair station that provides safety-sensitive functions for parts 121, 121/135, and 135 certificate holders, or part 91 operators conducting sightseeing operations under § 91.147, the PI records or validates the location of the repair station's antidrug and alcohol misuse prevention program records in OpSpec A449 as described below.

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NOTE: Selection and recording of A1, A2, or A3 in A449 Table 1 is not dependent upon whether a consortium provides implementation or administrative services for the program.

1) Implementation of Proprietary Program. If the part 145 repair station certificate holder has elected to implement its own antidrug and alcohol misuse prevention program, record or validate where their antidrug and alcohol misuse prevention program records are maintained and available for inspection by FAA drug abatement compliance and enforcement inspectors by filling out OpSpec A449, as shown in Figure 3-67A, Example A449, Table 1 for a Proprietary Program.

Figure 3-67A. Example A449, Table 1 for a Proprietary Program

Location & Telephone of Antidrug and Alcohol Misuse Prevention Program Records	
Telephone Number:	A1 202-575-8732
Address:	699 Strander Dr.
Address:	N/A
City:	Tukwila
State:	WA
Zip Code:	98899

EXAMPLE: RS101 is a repair station that provides safety-sensitive functions to a major airline operating in its area. RS101 chooses to implement its own drug and alcohol testing program to cover its safety-sensitive employees. RS101 contacts its PI and requests that an OpSpec A449 paragraph be included in its OpSpecs.

2) FAA-Registered Proprietary Program. If a part 145 repair station certificate holder has registered its antidrug and alcohol misuse prevention program directly with AAM-800, record or validate its antidrug and alcohol misuse prevention program records by filling out OpSpec A449 paragraph as shown in Figure 3-67B, Example A449, Table 1 for a Registered Proprietary Program.

NOTE: An A2 registered program is one that has at least two part 145 repair station certificates associated with the program's FAA registration number. Program members and the FAA registration number are found on Form AAM 810-002-F3, Drug and Alcohol Testing Program Registration Format, which is submitted by and issued to the company that applied. The number is always "CONN" followed by four additional characters, and should be included in parentheses after the text "A2" in the table. This should be accomplished on all new issuances of this paragraph and any changes to existing paragraph A449.

EXAMPLE: A2 (CONN123X).

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Figure 3-67B. Example A449, Table 1 for a Registered Proprietary Program

Location & Telephone of Antidrug and Alcohol Misuse Prevention Program Records	
Telephone Number:	A2 (CONN123X)
Address:	
Address:	
City:	
State:	
Zip Code:	

EXAMPLE: RS102 is a corporation or repair station. It has a central location in Kansas City, as well as several outlying repair stations in Denver, Atlanta, and Miami. RS102 chooses to implement its own drug and alcohol testing program, which will include all of its locations. RS102 contacts AAM-800 to submit a contractor registration, which includes a listing of all the repair stations and locations its program will cover.

3) Included in the Air Carrier's Program. If the part 145 repair station certificate holder is included as part of the air carrier's (§ 91.147, part 121, or part 135) drug and alcohol testing program, record or validate its antidrug and alcohol misuse prevention program records by filling out OpSpec paragraph A449 as shown in Figure 3-67C, Example A449, Table 1 for a Program Included in Air Carrier's Program.

NOTE: There may be more than one part 145 repair station included as part of an air carrier's program. Record "A3," followed in parentheses by the air carrier's four-letter identifier. This should be accomplished on all new issuances of this paragraph and any changes to existing paragraph A449.

EXAMPLE: A3 (ABCA).

Figure 3-67C. Example A449, Table 1 for a Program Included in Air Carrier's Program

Location & Telephone of Antidrug and Alcohol Misuse Prevention Program Records	
Telephone Number:	A3 (ABCA)
Address:	
Address:	
City:	
State:	
Zip Code:	

EXAMPLE: An air carrier operating under part 121 also maintains a part 145 repair station (RS103) and the RS103 works solely for that air carrier. The part 121 air carrier chooses to implement its drug and alcohol testing program and

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includes its RS103 employees. RS103 does not implement its own testing program. If RS103 chooses to contract out to a third-party air carrier, the third-party air carrier is required to ensure that the employees working for RS103 are subject to an FAA-mandated drug and alcohol testing program. To do this, the third-party air carrier must obtain this verification with the part 121 air carrier, which includes the RS103 employees under its testing program.

NOTE: It is AAM-800's responsibility to ensure that the third-party air carrier has obtained assurance from the part 121 air carrier that the RS103 employees performing safety-sensitive functions are subject to testing.

OPSPEC B050, GEOGRAPHIC AUTHORIZATIONS FOR REPAIR STATIONS LOCATED OUTSIDE THE UNITED STATES. OpSpec B050 authorizes an FAA-certificated repair station with an airframe rating, located outside of the United States, to maintain U.S.-registered aircraft at a location outside the country where the repair station certificate is held. It lists the location, customer, aircraft make and model, contract, date, 14 CFR part, and maintenance document used. See Volume 2, Chapter 11, Sections 1 and 3.

OPSPEC D100, WORK TO BE PERFORMED AT A PLACE OTHER THAN THE REPAIR STATION'S FIXED LOCATION (14 CFR part 145, § 145.203(b)). This paragraph is issued to authorize a 14 CFR part 145 repair station to perform work on a recurring basis at a location other than the fixed location(s) listed in OpSpecs A001 and A101, if issued. The repair station may accomplish this by temporarily transporting material, equipment, and personnel to perform specific maintenance functions at other locations.

NOTE: If the repair station only anticipates the need to work at another location for special circumstances, and not as part of day-to-day operations, the repair station must submit a request to the FAA for determination on a case-by-case basis. OpSpec D100 should not be issued. In order to receive a D100 authorization, the repair station must show the FAA that it is necessary to perform work at another location on a recurring basis.

Table 1

Work Authorized	Repair Stations Manual References	Quality Control Manual References

A. Work Authorized. The work authorized in D100, Table 1 could be the repair station's entire rating or portions thereof. The FAA should work with the repair station to evaluate and determine what level of need exists for this authorization.

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B. Repair Station Manual (RSM). The RSM must set forth procedures that govern how the repair station will perform work on a recurring basis at a place other than the repair station. OpSpec D100, Table 1 must list the section(s) in the RSM and, if applicable, the Quality Control Manual (QCM) where these procedures can be found.

C. Continuous Operations. Issuance of OpSpec D100 does not authorize continuous operations at a location away from the repair station.

NOTE: D100 is not to be issued for a line maintenance authorization. Line maintenance is authorized under D107.

OPSPEC D107—LINE MAINTENANCE AUTHORIZATION. This paragraph permits a 14 CFR part 145 certificate holder to perform line maintenance for certificate holders that conduct operations under 14 CFR parts 121 and 135, and for foreign air carriers or foreign persons operating a U.S.-registered aircraft operating under 14 CFR part 129. The certificate holder, under the provisions of a Bilateral Aviation Safety Agreement (BASA), is authorized to perform line maintenance functions that apply to certificate holders conducting air carrier operations for foreign air carriers or foreign persons operating non-U.S.-registered aircraft in common carriage under part 129, and listed in OpSpec D107, Table 1.

NOTE: OpSpec D107 will only be issued when the repair station is performing line maintenance at an airport other than the airport at which their fixed base of operations is located.

A. Required Rating. The part 145 certificate holder must be appropriately rated to perform the maintenance. At a minimum, the repair station must have a limited airframe or airframe class rating to perform maintenance associated with this authorization.

B. Limited Airframe Rating. A repair station with a limited airframe rating must state in the “Limitations” cell of OpSpec A003 “(limited to line maintenance only).” The actual limitations will be listed in OpSpec D107. Regardless of the type of airframe rating of the repair station, OpSpec A003 must be issued to perform line maintenance. The certificate holder must also have the facilities, equipment, trained personnel, and technical data to perform such line maintenance.

C. OpSpec D107, Table 1. OpSpec D107, Table 1 lists the locations where the repair station may perform line maintenance. The table consists of six sections:

1) Section 1 identifies the name of the air carrier.

2) Section 2 identifies the air carrier four-letter designator.

3) Section 3 identifies the aircraft make/model.

4) Section 4 identifies the International Civil Aviation Organization (ICAO) airport identifier and the name of the airport.

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5) Section 5 identifies the physical address where line maintenance is being performed, listing:

- Street,
- City,
- State, and
- ZIP code.

6) Section 6 identifies any line maintenance limitation(s).

D. Performing Operations. Once line maintenance is authorized, the repair station can perform operations on a continuous basis at the line maintenance locations listed in D107, Table 1.

RESERVED. Paragraphs 3-1059 through 3-1060.

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VOLUME 3 GENERAL TECHNICAL ADMINISTRATION

CHAPTER 29 PROVING AND VALIDATION TESTS

Section 8 Validation Test Requirements

3-2436 GENERAL. This section contains guidance for managers and inspectors to use when conducting validation tests. This guidance supplements the general guidance of Volume 3, Chapter 29, Sections 1 through 7.

A. Regulatory Background. Various regulations, such as Title 14 of the Code of Federal Regulations (14 CFR) part 91, § 91.1041; part 121, §§ 121.93 and 121.113; and part 135, §§ 135.73 and 135.145, require applicants to show the capability to conduct specific line operations safely and in compliance with regulatory requirements. Validation testing is one process by which an applicant demonstrates this capability to the Federal Aviation Administration (FAA).

1) Validation Flights. The most common method the FAA uses to validate an applicant's capability is to observe the applicant conduct flight operations. For example, the FAA requires validation flights before granting initial or additional Extended Operations (ETOPS) authority; before initially issuing Operations Specification (OpSpec)/Management Specification (MSpec) Paragraph B036, Multiple Long Range Navigation System (M-LRNS), or B054, Single Long Range Navigation System (S-LRNS), for the initial Class II navigation authorization. A validation flight must be conducted in accordance with the Proving/Validation Flight Protocols set forth in Volume 3, Chapter 29, Section 5.

2) Validation Testing Without a Validation Flight. A validation flight may be required when adding a new aircraft/navigation system combination to OpSpec/MSpec B036 of an applicant's authorizations. For example, conversion from an inertial navigation system (INS) to a Global Positioning System (GPS) (or vice versa) as a primary means of navigation may not require a validation flight.

NOTE: Field offices must consult the regional Next Generation Air Transportation System (NextGen) (AXX-220) Special Areas of Operation (SAO) specialist (formerly known as a navigation specialist) before an inspector may approve validation by means other than a flight. Tables 3-110 through 3-115 provide guidance on when a flight is required during validation testing.

3) Areas of Emphasis. When the FAA conducts validation testing, with or without an actual flight, the test team must still conduct an in-depth review of the applicable portions of the applicant's proposed procedures. Examples include, but are not limited to, the following:

- Operational control,
- Flight planning,
- Safe operating practices,
- Aircraft equipment requirements,
- Abnormal procedures,

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- Critical performance requirements,
- Training programs,
- Manuals including minimum equipment list (MEL),
- Facilities, and
- Maintenance programs.

B. Combined Proving and Validation Flights. An applicant conducts proving flights to demonstrate its capability to operate a specific type of aircraft. An applicant conducts validation tests to demonstrate its capability to operate over specific routes while using applicable navigational equipment or to operate within the specified limitations in critical areas. Though proving and validation tests satisfy different regulatory requirements, it is acceptable for applicants to conduct both tests simultaneously.

3-2437 SITUATIONS REQUIRING VALIDATION TESTS OR FLIGHTS. This paragraph contains guidance for inspectors and certification project managers (CPM) concerning those situations where validation flights or tests are required for compliance with § 91.1041, 14 CFR part 119, § 119.59, and §§ 121.93, 121.113, 135.73, and 135.145.

A. Operations Outside U.S. Airspace. When an applicant plans to operate to a destination outside of U.S. airspace, the test team must verify that the applicant has the required economic authority, knowledge of applicable International Civil Aviation Organization (ICAO) standards and state operating rules, and has completed adequate planning for the proposed operation. Normally, validation for this purpose alone does not require a flight.

NOTE: See Volume 3, Chapter 29, Section 3, Proving Test Requirements, paragraph 3-2338 for a further explanation of economic authority.

B. Class II Navigation Authorizations. Situations requiring validation testing, including tabletops and validation flights, in association with the approval of Class II navigation (see paragraph 3-2438) are:

- Initial approval for Class II navigation authorization (single or multiple long-range navigation system (LRNS)), in oceanic areas such as non-North Atlantic High Level Airspace (NAT HLA) in the Atlantic or Pacific;
- Initial approval for NAT HLA; and
- Initial approval for areas of magnetic unreliability (AMU), Extended Operations (ETOPS) and North Polar Operations.

NOTE: The principal operations inspector (POI) must consult a regional NextGen (AXX-220) SAO specialist (formerly known as a navigation specialist) in regard to:

- The number of validation test flight(s);
- Required Communication, Navigation, and Surveillance (CNS) equipment;
- Specific training for crewmembers, dispatchers, flight-followers, and flight locators; and
- Inclusion of appropriate procedures in the operator's manuals.

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C. Special Performance Authorizations. The FAA requires validation tests when an applicant proposes to conduct operations that require confirmation of the applicant's ability to operate an aircraft type within specified performance limitations. The FAA bases these limitations on the following situations:

- Terminal area and en route operations in areas of mountainous terrain requiring high elevation airport operations, driftdown, or other specialized contingency procedures;
- Part 121 operations in the North Atlantic Operations (NAT/OPS) area when all points on routes are within 60 minutes of an adequate airport (OpSpec B041);
- Part 121 ETOPS over routes containing a point farther than 60 minutes' flying time from an adequate airport (deviation from § 121.161) (OpSpec B342);
- Part 135 ETOPS over routes containing a point farther than 180 minutes' flying time from an adequate airport (OpSpec B342);
- Powerback operations (reverse thrust taxi) (OpSpec C065);
- Unimproved runway operations (OpSpec C050, C067); or
- Helicopter or seaplane operations in highly congested urban areas (refer to OpSpec H114 for helicopter operations).

NOTE: See Volume 4, Chapter 6, Section 2, Process a Certificate Holder's Application for Part 121/135 Extended Operations Authorization, for guidance regarding ETOPS validation flights.

D. Special Operational Authorizations. The FAA requires the following validation tests when an applicant proposes to conduct in-flight or ground maneuvers that require special operational authorizations (see paragraph 3-2440):

- Category II (CAT II) Approach and landing systems (OpSpec/MSpec C059);
- Category III (CAT III) Approach and landing systems (OpSpec/MSpec C060);
- Use of automatic landing systems for landing operations (OpSpec/MSpec C061);
- Use of manually flown flight control guidance systems approved for landing operations (heads-up or heads-down flight control systems) (OpSpec/MSpec C062);
- Use of Airborne Radar Approach (ARA) systems (OpSpec H102);
- Use of Area Navigation (RNAV) systems for RNAV routes, instrument departure procedures, and standard terminal arrivals (refer to the current edition of Advisory Circular (AC) 90-100, U.S. Terminal and En Route Area Navigation (RNAV) Operations) (OpSpec/MSpec C063); or
- Use of RNAV Required Navigation Performance (RNP) systems for approach and landing operations, Approval Guidance for RNP Procedures with Authorization Required (AR), (refer to the current edition of AC 90-101, Approval Guidance for RNP Procedures with AR), and OpSpec/MSpec C084.

NOTE: CPMs involved in validations covered in subparagraphs 3-2437C and D should consult with the Air Transportation Division (AFS-200).

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3-2438 CLASS II NAVIGATION AUTHORIZATIONS. Upon initial certification, applicants receive OpSpec/MSpec paragraphs that authorize Class I navigation. Before adding a geographic area to OpSpec/MSpec paragraph B050 in which Class II navigation is required, test teams must validate the applicant's capability to conduct these operations safely (see Volume 4, Chapter 1, Section 4, Class II Navigation, for a definition of Class II navigation).

A. Initial Approval. When an applicant has no prior authorization to conduct Class II navigation, a validation flight is required before the team may issue OpSpec/MSpec B036, B054, or add appropriate geographic areas to OpSpec/MSpec B050. These areas include:

- Remote and extensive land areas not served by reliable ICAO surface-based Navigational Aids (NAVAID), and
- Extensive overwater areas beyond the service volume of surface-based navigation facilities.

B. Authorization for LRNS. A validation flight may be required when an applicant is adding a new LRNS/aircraft combination to OpSpec/MSpec B036 or B054.

1) LRNS include:

- INS platforms;
- Flight management computers (FMC);
- Global Navigation Satellite System (GNSS), when approved;
- Any combination of the preceding systems; or
- Special navigation procedures and/or techniques.

NOTE: For further guidance on any navigation system not listed here, contact your regional NextGen (AXX-220) SAO specialist (formerly known as a navigation specialist).

2) A satisfactory validation test allows for the addition of a new aircraft/navigation system combination to OpSpec/MSpec B036 or B054. Test teams may validate the new combination using tabletops, provided the applicant can demonstrate that the new combination of an aircraft/navigation system and its operation require no significantly different procedures, (i.e., from those procedures that the applicant is currently authorized, or where the applicant can show satisfactory current experience).

3) Test teams can determine the current level of flightcrew training and qualification by conducting oral tests of knowledge and procedures, and by evaluating training records (see paragraph 3-2442). The following examples are situations where inspectors may authorize validation testing in lieu of validation flights:

NOTE: Before authorizing validation testing in lieu of a validation flight for SAO, the test team must consult a regional NextGen (AXX-220) SAO specialist (formerly known as a navigation specialist).

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- An applicant with a satisfactory history of conducting Class II navigation by using a CL 601/Delco Carousel IV INS combination proposes to add the Delco IV INS to a previously authorized G-III that the applicant operates in Class I airspace.
- An applicant for an additional Class II route authorization under part 135 can show a previous history of successful operation of that aircraft and equipment combination in extended Class II operations. Part 91 experience does not constitute authority for part 135 navigation authorizations.

C. Additional Geographic Areas. The FAA will normally authorize operation in additional geographic areas (other than SAOs) to an applicant who requests such authorization without a validation flight. The test team must verify that the applicant has the required economic authority, knowledge of applicable ICAO standards and state operating rules, and has completed adequate planning for the proposed operation.

D. SAO. For purposes of validation, the FAA designates certain areas as special operating airspace. (See Table 3-110, Special Authorization Table—Special Areas of Operation.)

NOTE: SAO validations are normally conducted on round-trip flights or as recommended by the regional NextGen (AXX-220) SAO specialist (formerly known as a navigation specialist).

1) AMUs (OpSpec/MSpec B040). Applicants must conduct validation flights through these areas (due to the nature of the procedures involved) as a condition of initial issuance of OpSpec/MSpec B040. Test teams may approve validation by means of testing in lieu of flights when an applicant that already holds OpSpec/MSpec B040 proposes to operate new combinations of aircraft and navigation systems in these areas.

NOTE: Due to the geographic overlap of the AMU and the Canadian Minimum Navigation Performance Specification (C-MNPS) airspace, inspectors must contact an FAA regional NextGen (AXX-220) SAO specialist (formerly known as a navigation specialist) regarding geographic and operational limitations in these areas.

2) NAT HLA and C-MNPS Airspace (OpSpec/MSpec B039). Due to the navigational tolerances and the procedures required, applicants must conduct validation flights through these areas round-trip before receiving initial authorization to conduct revenue operations in these areas.

3) Central East Pacific (CEP) Composite Airspace (OpSpec/MSpec B037) and North Pacific (NOPAC) Airspace (OpSpec/MSpec B038). During validation for approval of CEP, and NOPAC areas, test teams should focus on flight planning, contingencies, and CNS requirements. No requirement exists for an applicant already holding OpSpec/MSpec B036 who has a demonstrated satisfactory operating history in NAT HLA to conduct a validation flight as a condition for the issuance of a CEP or NOPAC operating authorization. A requirement may exist for a validation flight of an applicant requesting an authorization to operate a new

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combination of aircraft and navigation systems before adding this new combination authorization to that applicant's OpSpec/MSpec B036.

NOTE: The principal inspector (PI) in consultation with the regional NextGen (AXX-220) SAO specialist (formerly known as a navigation specialist) and a dispatch safety inspector (DSI), must determine if any of the proposed operations in CEP or NOPAC areas require ETOPS authorization, (e.g., Part 135 operator's one-engine-inoperative (OEI) requirement to remain within 180 minutes of an adequate airport in accordance with § 135.364).

4) North Polar (OpSpec/MSpec B055) and Antarctic Airspace (OpSpec/MSpec B050). Applicants proposing to conduct terminal area operations within these areas must conduct validation flights. No requirement exists for validation flights for those applicants conducting overflights if previously authorized in OpSpec/MSpec B036 and B040. During validation for approval of overflights of these areas, test teams should include in-flight planning, contingencies, CNS requirements, "fuel freeze" procedures, cold weather altimetry, applicant's reaction and passenger recovery plan, and emergency airfield procedures.

5) Caribbean Sea, Gulf of Mexico (GOMEX), and the West Atlantic Route System (WATRS) West of the NAT HLA Boundary. For operations into these areas, the FAA normally requires two independent high frequency (HF) transceivers (dual long-range communication systems (LRCS)); however, under specific conditions and limitations, the FAA may issue applicants OpSpec B045 in order to operate in this area with one HF transceiver (single LRCS). In addition, for operations into these areas where the FAA normally requires two LRNS (OpSpec B036), for aircraft equipped with only a single LRNS, the FAA may issue OpSpec/MSpec B054 in order to operate with only one LRNS.

NOTE: RNP-10 with a single LRNS meeting the navigation criteria can be authorized in GOMEX.

6) Politically Sensitive Areas of Operation (OpSpec/MSpec B450). When an inspector requires information concerning an applicant's request to conduct operations into sensitive international areas, the inspector should follow the guidance in Volume 4, Chapter 1, Section 5, Special Navigation Areas of Operation.

E. Special or Unique Navigation Procedures. The FAA normally requires validation flights when an applicant proposes to use navigation procedures that it did not previously demonstrate. These procedures include:

- Pilotage,
- Free gyro or grid procedures (by qualified individuals), or
- Any combination of the preceding procedures (by qualified individuals).

NOTE: Class II navigation will not be authorized using dead reckoning (DR) procedures. For example, no Class II DR legs are authorized in GOMEX and WATRS areas.

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3-2439 PLANNING THE VALIDATION TESTS. An applicant that must conduct a validation test must develop and submit a test plan. The applicant must tailor the plan and test objectives to the situation. The FAA test team will verify and validate the applicant's test plan against the requirements for the requested SAO in consultation with the regional NextGen (AXX-220) SAO specialist (formerly known as a navigation specialist). The FAA test team and the applicant should use the following guidelines in planning validation tests.

A. Form and Content of the Test Plan. The variety of operational situations and requirements that determine the makeup of validation tests makes it impossible to specify the form and content for each validation test plan. The FAA has developed regulations, ACs, specific instructions in this order, and other official sources to assist the applicant and FAA inspectors in determining the necessity of validation testing and the planning of validation tests. Volume 3, Chapter 29, Section 5 contains information on the demonstration phase of proving and validation testing. This information applies to all validation testing, including tabletop exercises and validation flights.

B. FAA Test Team and Applicant Coordination. The applicant and test team must agree on the form and content of the test plan and they must establish mutual understandings of test objectives, the degree of demonstration required, and the evaluation criteria. The FAA test team must follow the guidelines contained in Volume 3, Chapter 29, Section 5. The test team should note in particular the validation test protocols and discussion items during the pre-meeting with the applicant.

C. Operational Demonstrations. Most validation tests will require some form of operational demonstration. When operational demonstrations are required, the validation test plan must include a schedule for those demonstrations. See Volume 3, Chapter 29, Section 5.

D. Determining Number of Flight-Hours. Regulations do not specify a required number of hours for a validation flight. On a case-by-case basis, the FAA determines the number of flight hours for a validation flight.

E. Revisions to Applicant Documents and Training Program. Most Special Authorizations (SA) require revisions to the applicant's checklists, MELs, applicable operations manuals, General Maintenance Manual (GMM), and training programs. The applicant should submit these revisions with the validation test plan for FAA review and approval or acceptance, as appropriate.

F. Amendment to OpSpecs/MSpecs. All SAs require an amendment to the OpSpecs/MSpecs. The applicant should apply for the amendment when it submits the validation plan. The revisions/amendments to the OpSpecs/MSpecs that require identifying the navigation and/or communications systems installed in each aircraft type shall specifically identify the number of independent systems installed, the type of system, and critical components of that system, to comply with airspace requirements.

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3-2440 AREAS EVALUATED ON VALIDATION TESTS OR FLIGHTS. The types of activities and items the FAA must inspect and evaluate on validation tests or flights vary with the type of authorization the applicant requests. Examples of activities and items requiring inspection and evaluation include:

- Crew training (flight attendant (F/A) training, if applicable);
- Dispatcher, flight-follower, and flight locator training and responsibilities;
- Operations manual information and crew procedures;
- Checklists and MEL/Configuration Deviation List (CDL);
- Maintenance manual information and maintenance program;
- Equipment certifications and installation approvals;
- Reliability and accuracy of applicable operational and maintenance records;
- Operational flight control and company communication capabilities;
- Flightcrew competency in use of equipment, procedures, and techniques; and
- Coordination procedures between the flightcrew, maintenance personnel, and other ground personnel.

3-2441 CARRIAGE OF REVENUE PASSENGERS ON VALIDATION FLIGHTS. Title 14 CFR does not forbid the carriage of revenue passengers on validation flights. With the concurrence of the respective regional Flight Standards division (RFSD), the test team may authorize the applicant to carry revenue passengers aboard the validation flight when the proposed operation is similar to those in the applicant's previous experience. This paragraph contains guidelines for teams to use in making this determination. In the interest of standardized treatment, RFSDs must coordinate with AFS-200 or the General Aviation and Commercial Division (AFS-800) (as applicable) when authorizing teams to deviate from these guidelines.

A. Non-Permissible Situations. The following are examples of situations in which the FAA does not permit revenue passengers:

- When the applicant is seeking initial approval to conduct Class II navigation;
- When the applicant is seeking approval to conduct Class II navigation by an LRNS or special navigation procedures when the FAA did not give the applicant prior approval for that means of navigation;
- When the applicant has not previously operated a specific aircraft type in operations that require a special performance authorization; or
- When the applicant is seeking initial approval to conduct ETOPS.

B. Special Operational Authorization. For operations requiring a special operational authorization for approach and landing operations (paragraph 3-2437C), the FAA normally permits the carriage of revenue passengers, provided higher minimums or visual flight rules (VFR) operations are specified during the validation tests.

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C. Additional Considerations. Consider the following factors in all cases:

- The applicant's previous experience with the proposed kind of operation, specific aircraft, and equipment combinations;
- The FAA test team's previous experience with the proposed kind of operation, specific aircraft, and equipment combinations;
- The in-service history and performance considerations of any new airplane, component, or other critical equipment combinations; and
- The degree of backup system redundancy and sole dependency of any particular system or component.

3-2442 VALIDATION TABLETOP EXERCISES. Validation testing should include validation flights and ground exercises, such as simulators and tabletop simulations. The validation test team may be able to determine some of the applicant's capabilities with well-structured tabletop simulations in place of a flight. If the applicant intends to use tabletop simulations, it should include their use in the validation test plan. See Volume 3, Chapter 29, Section 5 for further guidance on tabletop exercises.

3-2443 SA INFORMATION TABLES. Tables 3-110 through 3-115 are general information references for proving and/or validation tests. Do not consider or use the tables as all-inclusive sources of information. For additional guidance and requirements, contact the regional NextGen (AXX-220) SAO specialist (formerly known as a navigation specialist).

NOTE: The OpSpec authorizations cited in these tables are not applicable to every type of operation. Use the OpSpec guidance in Volume 3, Chapter 18, Operations Specifications.

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Table 3-110. Special Authorization Information Table—Special Areas of Operation
***Special Areas of Operation (SAO) Specialist (formerly known as navigation specialist)**

Special Areas of Operation: (Tables are not all inclusive)	Validation Test (Table Top Demo)	Validation Flights Required	Pax/Cargo Authorized Onboard	OpSpec/MSpec Authorizations	Comments
1. Extensive Over-Water or Land Areas with Inadequate Navigational Aids (NAVAIDs) to conduct Class I Navigation	Yes	Yes, if not authorized for Class II Navigation	Cargo Only	Class II- B036 or B054	Consult a Regional *SAO Specialist
2. Areas of Magnetic Unreliability (AMU)	Yes	Yes	Cargo Only	B040	Consult a Regional *SAO Specialist
3. North Atlantic High Level Airspace (NAT HLA)	Yes	Yes	Cargo Only	B039	Consult a Regional *SAO Specialist
4. Canadian Minimum Navigation Performance Specification (C-MNPS) Airspace (Excluding AMU)	Yes	Optional	Cargo Only	B059 (Part 135 only)	Consult a Regional *SAO Specialist
5. Central East Pacific (CEP) Composite Airspace	Yes	Yes, if initial Class II	Cargo Only	B037	Consult a Regional *SAO Specialist
6. North Pacific (NOPAC) Airspace	Yes	Yes, if initial Class II	Cargo Only	B038	Consult a Regional *SAO Specialist
7. North Polar Airspace and Antarctic Areas of Operations (Excluding AMU)	Yes	Yes, if no AMU authorization	Cargo Only	B055	Consult a Regional *SAO Specialist
8. Low-Level Helicopter Offshore Areas with Inadequate NAVAIDs to Conduct Class I Navigation	No	Yes	Cargo Only	B034, B036	Simulator Option
9. Restricted Areas Requiring Special Navigation Procedures	Yes	Optional	Cargo Only	B067, Non-Standard	Consult a Regional *SAO Specialist

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Table 3-111. Special Authorization Information Table—Long-Range Navigation Systems
***Special Areas of Operation (SAO) specialist (formerly known as navigation specialist)**

Long Range Navigation Systems: (Tables are not all inclusive)	Approved International Procedures	International Training	Validation Test (Table Top Demo)	OpSpec/MSpec Authorizations	Comments
1. Area Navigation Systems Certificated in Accordance with the Current Edition of AC 90-45	Yes	Yes	Optional	B034	Consult a Regional *SAO Specialist
2. Inertial navigation systems (INS)/inertial reference systems (IRS)/inertial reference unit (IRU)	Yes	Yes	Yes	B034, B035 or B036/B054	Consult a Regional *SAO Specialist
3. Global Positioning Satellite Navigational Systems En Route GPS/GLONASS/GALILEO	Yes	Yes	Yes	B034, B035 or B036/B054	Consult a Regional *SAO Specialist
4. Flight Management Computer (FMC)	Yes	Yes	Optional	B034, B035 or B036/B054	Consult a Regional *SAO Specialist

Table 3-112. Special Authorization Information Table—Special Navigation Procedures and/or Techniques
***Special Areas of Operation (SAO) specialist (formerly known as navigation specialist)**

Special Navigation Procedures And/Or Techniques: (Tables are not all inclusive)	Validation Test (Table Top Demo)	Validation Flights Required	Pax/Cargo Authorized Onboard	OpSpec/MSpec Authorizations	Comments
1. Free Gyro and Grid Procedures	Yes	Yes	Cargo Only	B036	Consult a Regional *SAO Specialist

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Table 3-113. Special Authorization Information Table—Special Performance Authorizations
***Special Areas of Operation (SAO) specialist (formerly known as navigation specialist)**

Special Performance Authorizations: (Tables are not all inclusive)	Validation Test (Table Top Demo)	Simulator (Option)	Validation Flights Required	Pax/Cargo Authorized Onboard	OpSpec/MSpec Authorizations	Comments
1. Extended Operations (ETOPS)	Yes	Partial	Yes	Pax and/or Cargo	B342 or B344 as applicable	Consult AFS-200
2. Special Airport Operations Examples include: • High Elevation Airports • Terrain considerations • Limited NAVAIDs	Partial	Yes	No	Cargo Only	C050, C067	Consult a Regional *SAO Specialist
3. Powerback Operations	Partial	No	Yes	Pax and/or Cargo	C065	Consult a Specialist
4. Destination Airport Analysis Program (DAAP) (60/80 Reduced Landing Distance Authorization)	Yes	No	No	Cargo Only if validated in guidance	A057, C082	Consult a Regional *SAO Specialist
5. Reduced Vertical Separation Minimum (RVSM)	Yes	No	No	Pax and/or Cargo	B046	Consult a Regional *SAO Specialist

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Table 3-114. Special Authorization Information Table—Special Operational Authorizations

Special Operational Authorizations: (Tables are not all inclusive)	Validation Test (Table Top Demo)	Simulator (Option)	Validation Flights Required	Pax/Cargo Authorized Onboard	OpSpec/MSpec Authorizations
1. Category I Approach (CAT I), CAT II, or CAT III Approach and Landing Operations	No	Partial	No—I Yes—II & III	Cargo Only	C053, C059, C060, C074, etc.
2. No Destination Weather Operations for Eligible 91K/135 Operations	Yes	No	No	N/A	TBD
3. Use of Automatic Landing Systems for Landing Operations	No	Yes	No	N/A	C061
4. Use of Manually Flown Flight Control Guidance System for Approach and Landing Operations	No	Yes	No	N/A	C062
5. Instrument landing system (ILS), precision runway monitor (PRM)	No	Yes	No	N/A	C052
6. Required Navigation Performance (RNP)	No	Yes	No, unless initial Class II	N/A, unless initial Class II	B036
7. Use of Area Navigation Systems for Approach and Landing Operations (RNAV)	No	Yes	No	N/A	C052, C063, C073

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Table 3-115. Special Authorization Information Table—Unique Authorizations for Part 91K/135 Operations

Unique Authorizations For Part 91K/135 Operations: (Tables are not all inclusive)	Validation Test (Table Top Demo)	Simulator (Option)	Validation Flights Required	Pax/Cargo Authorized Onboard	OpSpec/MSpec Authorizations
1. Any change or addition in operating authority, such as: • VFR to instrument flight rules (IFR) • To/from Cargo, passenger, Combi Operations • Domestic to International or vice versa • Air Ambulance	Partial	No	Yes	Cargo Only	As Applicable
2. Any change or addition in operating authority: Domestic to International or vice versa	Partial	No	No, unless flown to/from a location where special means of navigation or special circumstances exist (i.e., Class II)	Cargo Only	As Applicable
3. Addition of a rotorcraft to an all airplane certificate or vice versa	Partial	No	Yes	Cargo Only	As Applicable
4. Any new technologies or systems presented to AFS-200/400/800 that would require validation/proving testing	TBD	TBD	TBD	TBD	TBD (CPDLC A056) (ADS-B A353/A354)

RESERVED. Paragraphs 3-2444 through 3-2460.

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VOLUME 3 GENERAL TECHNICAL ADMINISTRATION

CHAPTER 32 MANUALS, PROCEDURES, AND CHECKLISTS FOR 14 CFR PARTS 91K, 121, 125, AND 135

Section 4 General Operations Manuals for Parts 121 and 135

3-3201 GENERAL. This section contains information, direction, and guidance that principal operations inspectors (POI) should use in the evaluation of an operator's General Operations Manual (GOM). The operator's GOM is a segment of the operator's general manual system. Title 14 of the Code of Federal Regulations (14 CFR) part 121, § 121.133 and 14 CFR part 135, § 135.21 require that each operator prepare and keep current a manual. The Federal Aviation Administration (FAA) requires that the GOM contain guidance for flight, ground, and management personnel during the conduct of the operator's operations.

3-3202 CONTENT OF GOMs. Sections 121.135 and 135.23 specify topics that an operator's GOM must address. The operator's GOM must contain the duties and responsibilities for each category of employee. This manual must also provide sufficient policy, direction, and guidance to its employees for the safe and efficient performance of their duties. In addition, an operator's GOM must address the policies, systems, and procedures necessary to comply with operations specification (OpSpec) provisions and safe operating practices. This section contains discussions of selected topics that POIs should look for when evaluating an operator's GOM, and which the operator's initial and final compliance statements may require (see Volume 2, Chapter 4, Section 1, paragraph 2-348 for part 135 certification compliance statement information).

NOTE: The requirement to develop a GOM does not apply to a part 135 single-pilot operator or a part 135 operator issued an exemption to § 135.21 by OpSpec A005 (see Volume 2, Chapter 4, Section 6, paragraph 2-460).

3-3202 OPERATOR MANAGEMENT STRUCTURE. When evaluating an operator's GOM, POIs must ensure that the GOM includes the operator's management structure and that it meets the following guidelines:

A. Management Structure. The GOM must contain a description of the operator's management structure as it pertains to flight operation activities. Organizational entities, areas of responsibility, and titles of key management positions must all be identified. The POI must ensure that the Director of Operations (DO) is responsible for, and has the authority to direct, all operational functions. Furthermore, the FAA requires POIs to ensure that the chief pilot, as well as all operational and support personnel (i.e., training managers and dispatchers), and those persons in the certificate holder's operations organization who are in a position to exercise control over operations ultimately report to and are accountable to the DO. Additionally, procedures should be in place that ensure proper coordination between flight operations management and aircraft maintenance management concerning aircraft airworthiness status and maintenance release. Organizational charts and diagrams may be useful in showing the relationship between operational units within the company.

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B. Names of Management Personnel. The GOM must list the names of the individuals filling required management positions. An acceptable way for the operator to meet this requirement is to include a copy of its OpSpecs in the manual. The FAA may approve management structures and titles different from those specified by 14 CFR part 119, §§ 119.65 (for part 121) and 119.69 (for part 135) by granting a deviation to these regulations (see Volume 3, Chapter 18, Section 3, OpSpecs A005 and A006 for further guidance). When the FAA grants such a deviation, list it in OpSpec A005 along with the names and titles of the approved management positions listed in OpSpec A006.

3-3204 AUTHORIZED OPERATIONS. When evaluating an operator's GOM, POIs must ensure that the operator's GOM meets the following authorization guidelines:

A. Clear Descriptions of Authorized Operations. Per § 121.33, the GOM must contain clear descriptions of the types and kinds of operations that the operator should conduct. The GOM must prohibit those operations that a flightcrew could possibly conduct but which the OpSpecs specifically prohibit the operator from conducting. The GOM must contain information on the authorized areas of en route operation in which the operator may conduct flights, including the types of aircraft authorized, crewmember complements, and any special en route and instrument approach procedure (IAP) authorizations or requirements. One way an operator may describe the types and kinds of authorized and prohibited operations is to include a copy of the operator's OpSpecs in the GOM. Since the OpSpecs address a variety of situations and are not easily understandable as they apply to specific operational circumstances, POIs should encourage operators to extract the applicable information and incorporate it in the GOM. Also, the operator should include clearly written direction and guidance on how to comply with authorizations and limitations. It is acceptable for operators to contract a charting and publishing service (such as Jeppesen Sanderson, Inc.) to prepare manual material concerning these authorizations and limitations. In these cases, consider the charting and publishing service's product to be a part of the operator's GOM. POIs must review this portion of the operator's GOM as well as all other portions.

B. Flight Operations Policies, Methods, and Procedures. Either the GOM, a section of the GOM such as a Flight Operations Policy Manual (FOPM), or a Company Flight Manual (CFM) (see Volume 3, Chapter 32, Section 1 for a definition of CFM) may contain flight operations policies, methods, and procedures. When an operator operates a variety of aircraft, it may be preferable to publish the flight operations policies, methods, and procedures that are common to all aircraft in the GOM instead of each CFM. Crewmembers are required to comply with the flight operations policies, methods, and procedures, regardless of whether they are in the GOM or the CFM. Therefore, flight operations policies, methods, and procedures should be written in directive language and provide specific operational criteria. An example of a flight operations policy statement that does not provide a clear directive or specific operational criteria is the following: "Use caution when arriving or departing a terminal area when thunderstorms are present." An example of a flight operations policy statement that is clearly a directive and provides specific operational criteria is: "Takeoffs and landings shall not be attempted when thunderstorms are within 3 miles of the airport or the path of takeoff or arrival."

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3-3205 WEIGHT AND BALANCE (W&B) PROCEDURES. When evaluating an operator's GOM, POIs will ensure that an operator includes their W&B procedures in the operator's GOM and that they meet the following guidelines:

A. Placement of W&B Procedures. Each type of airplane the operator uses may require a separate W&B procedure. In such cases, it may be appropriate for the operator to place the W&B procedure flightcrews need in the CFM and the procedures other flight operations personnel need in sections of the GOM. If the operator develops a single W&B procedure for all aircraft operated, it may be appropriate for the operator to place the procedure that flightcrews and other flight operations personnel need in the GOM. Operators may develop their own W&B procedures or use the procedures that aircraft manufacturers furnish. POIs should recommend the current editions of the following documents to the operator:

- FAA-H-8083-1, Aircraft Weight and Balance Handbook;
- Advisory Circular (AC) 43.13-2, Acceptable Methods, Techniques, and Practices—Aircraft Alterations; and
- AC 120-27, Aircraft Weight and Balance Control.

B. Approval of W&B Procedures. OpSpecs A011, A096, A097, A098, A099, and E096 grant the approval of W&B procedures. The POI will have primary responsibility for authorizing the operations that approve actual, average, or segmented passenger and baggage weights outlined in OpSpecs A011, A096, A097, A098, and A099, and the principal maintenance inspector (PMI) will issue OpSpec E096, which permits the use of actual or average aircraft fleet weights.

C. Carry-On Baggage/No-Carry-On Baggage Programs. Volume 3, Chapter 18, Section 3 provides the guidance necessary for approving OpSpec A011, authorizing the use of a carry-on baggage program or a no-carry-on baggage program for operations conducted under 14 CFR parts 91 subpart K (part 91K), 121, 125, and 135.

D. Additional Guidance for Issuing OpSpecs. Volume 3, Chapter 18, Section 3 provides additional guidance for issuing these OpSpecs. AC 120-27 provides additional information that will assist the POI in approving an operator's W&B control program. An operator may reference the OpSpecs in the GOM; however, the operator may not use the reference instead of a detailed description of the procedures flight operations, ground handling, and flightcrew personnel need. POIs must ensure that the information and guidance in the operator's GOM is consistent with that in the General Maintenance Manual (GMM). The W&B procedures described in the operator's manuals should normally address the following topics:

1) Procedures for complying with W&B limitations for each type of aircraft;

2) For part 135 operators that operate multiengine aircraft, procedures for ensuring that the empty weight and center of gravity (CG) of each multiengine aircraft is determined by actually weighing the aircraft within the preceding 36 months;

3) Procedures for determining the weight of passengers, crew, cargo, and baggage;

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4) Procedures for making the CG calculations, including loading schedules or other approved methods, if applicable;

5) Procedures for the completion and disposition of load manifests and W&B records; and

6) Procedures for loading the aircraft.

3-3206 OPERATIONAL CONTROL. When evaluating an operator's GOM, POIs must ensure that an operator's operational control procedures are included. The GOM must include descriptions of the procedures, duties, and responsibilities of flightcrew, operational control, and management personnel. Furthermore, the GOM must contain staffing requirements for operational control personnel during the periods of time that flights are operational. When a training and qualification document does not contain training and operational control requirements for operational control personnel, the GOM must list the requirements. The POI must ensure that the operator's GOM meets the following requirements:

A. Part 121 Domestic and Flag Operations. The description of the operational control system that part 121 operators use for conducting domestic and flag operations must be comprehensive. The GOM must contain flight dispatch procedures as well as flight-watch procedures. The GOM must also contain a detailed outline of the interrelation of flight dispatch, crew scheduling, and airworthiness control. The GOM must address the communication facilities for operational control purposes, procedures with air traffic control (ATC), and methods for handling delayed flights. The GOM must also cover procedures used during adverse weather conditions and for discontinuing flight in unsafe conditions. If the operator conducts unscheduled flights under supplemental regulations, the operator must outline the procedures used (see Volume 3, Chapter 25, Section 2 for more detailed information on flight dispatch systems).

B. Part 121 Supplemental Operations. The description of the operational control system that part 121 operators who conduct only supplemental operations use must contain the flight release and flight-watch procedures that flightcrew, operational control, and management personnel use. The operator must outline the interrelation of flightcrews, persons authorized to release flights, and airworthiness control personnel. The GOM must also cover the communication facilities and the procedures for using these facilities. GOMs must contain procedures for adverse weather conditions and for discontinuing flight in unsafe conditions. Section 121.125(d) requires that the OpSpecs specify the flight-following system and the location of the flight-following centers. OpSpec A008 is allocated to authorize this type of operational control system. If the GOM contains a comprehensive description of the system, only reference that GOM section in OpSpec A008 (see Volume 3, Chapter 25 for more detailed information on flight-following systems).

C. Part 135 Operations. As a minimum, the description of the operational control system used by part 135 operators must contain a list of the names and titles of the personnel who the operator authorizes to exercise operational control. If the operator does not establish a flight-watch system, the GOM must contain directions to flightcrews for filing an FAA flight plan for each flight conducted. If the operator establishes a flight-watch system, the GOM must contain an outline of the procedures that provide the operator with at least the information

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included in a visual flight rules (VFR) flight plan for each flight operated. The GOM must also contain an outline of the procedures that provide the operator with information on the location, date, and estimated time for reestablishing radio or telephone contact when conducting flights in areas where such communications cannot be maintained with the operator. The flight-locating system must also be provided for timely notification to an FAA facility and search and rescue facility when an aircraft is overdue or missing. The GOM will also contain a description of the procedures for retaining flight location information until a flight is complete. If a part 135 operator uses a flight control system that is more sophisticated than the basic requirements of the regulation, the GOM will contain a description of the system and procedures actually used (see Volume 3, Chapter 25 for more detailed information on part 135 flight control systems).

NOTE: For additional guidance, see Volume 3, Chapter 25, Section 1 and Volume 6, Chapter 2, Section 22.

3-3207 FLIGHT PLANNING. When evaluating an operator's GOM, POIs will ensure that an operator includes their flight planning procedures. The direction and guidance for flight planning must be comprehensive and address the responsibilities of both flight control and flightcrew personnel. The GOM must contain a discussion of weather minimums, special airports, and other special requirements such as driftdown, rerelease, and diversion contingencies. Some operators may elect to place the flight planning procedures in the CFM and the operational control procedures in a dispatch or flight control user manual.

3-3208 NOTICES TO AIRMEN (NOTAM) AND PILOT WEATHER REPORTS (PIREP). When evaluating an operator's GOM, POIs will ensure that the operator includes procedures for the acquisition of NOTAMs and PIREPs and for the distribution of these NOTAMs and PIREPs to applicable personnel. The GOM should also contain a description of the procedures for obtaining applicable NOTAMs that are only distributed to a local area.

3-3209 RESTRICTED OR SUSPENDED OPERATIONS. The regulations require operators knowing of conditions that preclude safe operations (including hazardous airport and runway conditions) to restrict or suspend operations until those conditions change. POIs must evaluate an operator's GOM to ensure that it contains a description of the procedures for employees to follow should they become aware of such conditions.

3-3210 INTERNATIONAL OPERATIONS. For an operator that conducts international operations, POIs must evaluate the operator's GOM to ensure that it includes pertinent and necessary flight control information. In the GOM, the operator should place particular emphasis on fuel and performance requirements, communications, weather reports and forecasts, flight planning, and any specialized means of navigation. POIs should refer operators to the current editions of the following ACs concerning international operations:

- AC 91-70, Oceanic and International Operations.
- AC 120-33, Operational Approval of Airborne Long-Range Navigation Systems for Flight within the North Atlantic Minimum Navigation Performance Specifications Airspace.

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3-3211 OBSERVER'S SEATS. POIs should ensure that the operator's GOM includes the requirement that the operator must provide an observer's seat (jump seat or passenger seat) to FAA inspectors and other specified personnel. Usually, operators assign the authority to control the use of these observer's seats to a flight control department. Gate agents and passenger handling personnel must also be aware of these requirements. Crewmembers must also be aware of the procedures to be used for observer seat assignments. The GOM must include information to comply with §§ 121.547, 121.548, 121.581, and 135.75, such as the following:

A. Priorities of FAA inspectors, National Transportation Safety Board (NTSB) personnel, Secret Service agents, crewmembers, manufacturer's technical representatives, and other personnel. The FAA has second priority after Secret Service when they are protecting someone on the flight;

B. Methods for ensuring that no more than one person is assigned to a jump seat at any particular time; and

C. Procedures for disseminating jump seat assignments to other stations.

3-3212 LINE STATION OPERATIONS. Line station operations are those activities the operator's personnel performs (or other personnel for the operator) to originate, turn around, or terminate flights the operator conducts. For an operator that conducts line station operations, POIs must evaluate the operator's GOM to ensure that it includes the necessary information on the various topics that follow:

A. Line station operations should include the use of the following types of facilities and equipment:

1) Ramp areas, including markings, signs, signaling devices, lighting, and blast fences;

2) Ramp facilities and equipment, such as passenger and cargo boarding and deplaning equipment (towing, refueling, catering, and ground power equipment);

3) Crewmember meeting areas, facilities for crewmember flight planning (preparation for flight), and postflight activities; and

4) Ground station personnel work areas and facilities, communications equipment, and administrative support.

B. Inspectors must ensure that an operator's GOM contains the policies, procedures, and guidance the personnel needs to support the operator's flight operations at line stations. This manual material must include those situations in which the operator maintains line stations, as well as situations in which the operator contracts for or purchases line station support. This type of material is usually within various user manuals, such as ground station operations and maintenance manuals, passenger service manuals, facilities and equipment manuals, fueling manuals, and other special types of manuals. An operator may format and organize this type of manual material in a manner that is most consistent and usable for the operator's kind and type of operation. Regardless of the format and organization, however, consider this type of manual

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information to be GOM material. The following are examples of the types of information that manual material concerning line stations operations should address:

1) Duties and Responsibilities. The GOM or GMM, as appropriate, must contain an outline of the duties and responsibilities of line station supervisory personnel. The types of positions that the GOM or GMM should address include the following: ground station operations personnel, passenger handling agents, cargo and baggage handling personnel, and aircraft servicing personnel (when not addressed in the GMM). When an operator contracts for, or purchases line station support, the GOM or GMM, as appropriate, must detail the procedures the personnel use providing the support.

2) Passenger Handling and Protection. The GOM must contain procedures and guidance for ensuring the safety of passengers during line station operations. The following are examples of passenger handling and protection subjects that the GOM must address:

a) Procedures for passenger boarding and deplaning;

b) Procedures for use of jetways, passenger boarding stairs, air stairs, and other types of passenger boarding equipment;

c) Procedures to ensure the safety of passengers on the ramp, including restricting ground equipment and vehicle operation on ramps and directing passengers to and from aircraft, around equipment, and to painted pathway lines on the ramp;

d) Procedures and guidance for protecting passengers from jet intake and blast, rotating and static propellers and rotors, ice on the ramp and boarding equipment, and tripping hazards;

e) Procedures for prohibiting smoking in no-smoking areas;

f) Procedures for assisting and ensuring the safety of handicapped persons;

g) Procedures for handling intoxicated, hostile, or unruly persons;

h) Procedures for handling and controlling carry-on baggage;

i) Procedures for exit seating; and

j) Procedures for identifying and handling hazardous materials (hazmat).

3) Aircraft Servicing and Ramp Operations. The GOM and GMM must contain detailed safety procedures and guidance on servicing and maintaining aircraft during line station operations. These manuals should also contain instructions on the maintenance and use of ramp areas. The following are examples of procedures for aircraft servicing and ramp operations that the GOM should address:

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a) Procedures for the safety and protection of personnel working on the ramp;

b) Procedures and/or guidance for the maintenance and catering of aircraft, with or without passengers onboard;

c) Procedures for fueling aircraft with or without passengers onboard, including any requirements for crewmembers to be onboard during fueling, or prohibitions against positioning fuel trucks next to open exits with passengers onboard;

d) Procedures for operating ground equipment, including the capabilities and limitations of the equipment, and the training and qualification of persons using the equipment;

e) Procedures and guidance for properly locating and stowing ground equipment;

f) Procedures for the operation of aircraft cargo doors, baggage and cargo loading, closing and checking the security of doors;

g) Procedures for foreign object damage (FOD) control and periodically inspecting ramp areas;

h) Procedures for adverse weather conditions such as thunderstorms, high winds, or low visibility; and

i) Procedures for the inspection and removal of frost, ice, snow, or standing water.

4) Hot and Cold Weather Operations. POIs should evaluate an operator's GOM to ensure that it (as well as the GMM) contains detailed procedures and guidance on hot and cold weather operations, including the following:

a) Procedures for the inspection of ramps for accumulation of frost, ice, snow, or standing water;

b) Precautions for the operation of vehicles and equipment;

c) Restrictions and cautions on aircraft movements; and

d) Restrictions and cautions for the protection of passengers and ramp personnel.

5) Deicing Procedures. The operator should clearly delineate aircraft ground deicing procedures. While such procedures are usually in the GMM, the operator's GOM must contain the following types of information concerning deicing for crewmembers, ground operations, and management personnel:

a) Assignment of responsibility for ensuring that aircraft is clear of frost, ice, and snow accumulation;

b) Conditions that require aircraft ground deicing;

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c) Procedures to ensure the effectiveness of deicing, including the frequency of applications, proper fluid mixtures, and tactile or close visual checks of selected portions of critical surfaces;

d) Parts of the aircraft to deice, including a description of the critical surfaces of the aircraft the operator uses;

e) Locations on the ramps or airports where deicing will be conducted;

f) Engine auxiliary power unit (APU) and ground equipment operation during deicing;

g) Passenger and ramp personnel protection during deicing;

h) Procedures contract personnel use when the operator contracts for deicing services;

i) If applicable, a complete description of the elements of the operator's ground deicing/anti-icing program and the procedures required to operate under that program; and

j) If applicable, a complete description of the ground deicing/anti-icing operational procedures that the operator uses to comply with §§ 121.629 and 135.227.

6) Aircraft Movement in the Ramp Area. POIs must ensure that the operator carefully coordinates their procedures and guidance for the movement of aircraft in the ramp area between the operator's GOM and GMM (or appropriate user manuals). The definitions of signaling devices, signs, and ramp markings (such as taxi lines, stop lines, boundary and clearance lines) must be the same, and both crewmembers and ground handling personnel must mutually understand them. The GOM (or an applicable user manual) must provide specific procedures for engine start, pretaxi pushback, powerback (if approved), taxi-out, taxi-in, and parking while in the ramp area. Communication procedures for ground handling personnel and crewmembers must be thoroughly coordinated. POIs must ensure that the interphone terminology and hand signals ground handling personnel and crewmembers use have the same meaning. The need for common terminology and hand signals is also important for crewmembers and passenger handling agents. The GOM and GMM (or appropriate user manuals) should provide illustrations of standard hand signals and their meanings. The appropriate manuals must describe the training and qualification requirements of personnel authorized to move aircraft on the ramp or on the airport. For example, when an operator is approved to powerback, the GOM must contain specific procedures for those operations for each authorized airport and gate. Crewmembers and ground handling personnel must thoroughly coordinate powerback communications and hand signals.

7) Line Station Emergency Procedures. POIs must ensure that the operator's GOM and GMM contain procedures used by crewmembers or ground personnel in case of emergency situations during line station operations. Line station emergency procedures must contain the specific duties and actions of appropriate personnel. This type of manual material must also include notification procedures and requirements. The notification procedures and requirements should contain specifications as to who to notify, who will make the notification,

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how to make the notification, and when to make it for the various types of emergency situations that could occur at line stations. Usually this type of manual material should also include a quick reference telephone listing for obtaining firefighting and medical assistance, and for notifying appropriate company management, law enforcement officials, and FAA and NTSB officials. Line station emergency procedures should be published in a distinct section of the GOM or GMM so that they are easily accessible. For large, complex operators, line station emergency procedures are usually published as a manual under separate cover to ensure rapid accessibility. Operators should publish a line station emergency procedures manual for each station because of the uniqueness of each line station. POIs should encourage this as a preferred practice. Line station emergency procedures should cover the following types of situations:

a) Aircraft accidents and incidents (POIs should encourage operators to develop guidance for ground personnel providing passenger lists to aid in handling passengers and accounting for all passengers immediately after a survivable type accident. Handling passengers includes actions such as providing suitable transportation for injured passengers to locations where medical assistance can be obtained).

b) Bomb threats, hijack procedures, and other types of security incidents.

c) Fuel spills and hazmat mishaps.

d) Procedures for postflight handling of passenger injury, illness, or incidents involving passenger altercations and interference with crewmembers.

e) Employee/passenger accidents and injuries.

f) Adverse weather conditions, such as tornadoes and hurricanes or other adverse conditions such as earthquakes (if such conditions are likely to occur at the operator's line stations).

g) Emergency evacuation of aircraft while parked. (This should include procedures for both the flightcrew and Flight Attendants (F/A) to activate the aircraft emergency lighting systems during an emergency evacuation, regardless of the perceived ease with which an evacuation can be accomplished, and passenger egress procedures for crewmembers and other operations personnel. These procedures should include the requirement that whenever passengers are onboard the aircraft before airplane movement on the surface, at least one floor-level exit must be usable for the egress of passengers through normal or emergency means.

1. Aircraft Rescue and Fire Fighting (ARFF) emergency notification procedures while parked; and POIs will encourage their assigned operators to develop explicit ARFF emergency notification procedures for crewmembers and other operations personnel to employ in the event of an emergency occurrence on their aircraft while they are parked.

2. ARFF notification procedures apply to situations where ARFF equipment is both on and off airports. These procedures should include information concerning:

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- Whom to notify (such as airport fire department, airport control tower, or alternate facility if control tower is closed).
- The means of notification (such as jetway telephone, including ARFF telephone numbers, and aircraft radio communication system, including ARFF radio frequencies).
- The persons by job title whom the operator determines will implement notification procedures in the event of an emergency occurrence on the operator's aircraft.

h) For passenger-carrying operations, if the operator's ARFF procedures require its crewmembers to implement these procedures, then the operator should include the following guidance: In the event of an aircraft fire or other emergency scenario involving aircraft evacuation, the first actions of crewmembers and/or other personnel qualified in accordance with § 121.391(a) should be to initiate the evacuation of the aircraft occupants. Once the crew determines the evacuation of all aircraft occupants, the crewmembers can then initiate the ARFF emergency notification procedures.

8) Contract Services. POIs must ensure that the GOM and GMM, as appropriate, contain policy and guidance concerning the interrelationship between the operator's personnel and the personnel of organizations who provide contract services at line stations. Contractor personnel are required to be trained on operator-specific procedures. The appropriate manual must contain the specifications for the following: the types of training given to contractor personnel, who is responsible for providing the training, and who is responsible for keeping records of the training. Although the contractor may be delegated this responsibility, the operator has final responsibility.

9) Trip Records. POIs must ensure that the operator's GOM contains policies, procedures, and guidance concerning the preparation and disposition of trip records at line stations. Trip records include documents such as dispatch and flight releases, flight plans, weather, NOTAMs, oceanic plotting charts, load manifests, and W&B documents. The manual material must specify who is responsible for preparing the trip records, the coordination activities that must be accomplished during the trip record preparation process, and the intermediate and final disposition of the trip records. The POI must ensure that the policies, procedures, and guidance in this manual material consistently contain accurate information for crewmembers and flight operational control personnel.

10) Local Conditions at Line Stations. Personnel at line stations have immediate access to and knowledge of various conditions and activities that could affect flight operations at those line stations. Examples of local conditions and activities include the following: weather conditions, runway and taxiway conditions, airport construction activities, and new obstacles observed in the airport takeoff flightpaths. As such, inspectors must ensure that an operator's GOM contains instructions and procedures so that line station personnel can provide the operator with local condition reports. This manual material must contain clear instructions about the circumstances in which line station personnel are authorized to suspend or delay flight operations.

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3-3213 PASSENGER BRIEFING PROCEDURES. POIs must ensure that the operator's GOM or flight manual, as appropriate, specifies the procedures to be used for pretakeoff, en route, and post-landing briefings of passengers. Operators who use F/As may publish F/A user manuals as sections in their GOMs. The GOM or F/A user manual must contain the briefings to be given. Passenger briefing cards must be used to supplement the oral briefings. These passenger briefing cards must depict all of the required items that the oral briefings addressed. The current edition of AC 121-24, Passenger Safety Information Briefing and Briefing Cards, contains guidance on passenger safety information and briefing cards.

3-3214 RAPID REFUELING OF HELICOPTERS. Inspectors should consider the following requirements when evaluating an operator's procedures for the rapid refueling of helicopters with and without passengers onboard.

A. Refueling Procedures. Operators may need to conduct operations such as the refueling of a helicopter with the engine running, rotors turning, or with passengers onboard. Before conducting such operations, the operator must develop procedures acceptable to the POI and publish these in the operator's GOM. The operator must train and qualify all applicable personnel in these procedures before conducting such operations.

1) Only turbine engine helicopters using fuels that have a flash point equal to or greater than JET A or JET A-1 fuels should be fueled while an engine is operating.

2) Helicopters being refueled while an engine is operating should have all sources of ignition of potential fuel spills located above the fuel inlet port(s) and above the vents or tank openings. Sources of ignition include, but are not limited to, engines, exhausts, APUs, and combustion-type cabin heater exhausts.

3) The operator should only permit helicopter fueling while engines are operating under the following conditions:

a) An FAA-certificated helicopter pilot should be at the aircraft controls during the entire fuel servicing process.

b) Passengers should be offloaded to a safe location prior to rapid refueling operations. When the pilot in command (PIC) deems it necessary for passengers to remain onboard for safety reasons, the provisions of subparagraph 3-3214B should apply.

c) Passengers should not load or offload during rapid refueling.

d) Only designated personnel, properly trained in rapid refueling operations, should operate the equipment. Written procedures should include the safe handling of the fuel and equipment.

e) All doors, windows, and access points allowing entry to the interior of the helicopter that are adjacent to, or in the immediate vicinity of, the fuel inlet ports should be closed and should remain closed during refueling operations.

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f) Before placing fuel into the helicopter, the helicopter should be bonded to the fuel source to equalize static electricity between the fuel source and the aircraft.

NOTE: Grounding of the aircraft and/or fuel truck is no longer recommended because it does not prevent sparks at the fuel source, and the grounding cable may not be sufficient to discharge the electrical current.

g) Fuel should be dispensed into an open port from approved deadman-type nozzles, with a flow rate not to exceed 10 gallons per minute (38 liters per minute), or it should be dispensed through close port pressure fueling ports.

h) An appropriate type fire extinguisher of an appropriate size for the refueling operation must be within easy reach of the refueling personnel at all times during rapid refueling operations.

B. Evacuation Procedures. An operator's refueling policies and procedures should include any special considerations for the evacuation of passengers in case of emergencies. Inspectors should consider the following requirements when evaluating an operator's procedures for evacuation of passengers during helicopter rapid refueling.

1) If passengers remain onboard the aircraft during fuel servicing, at least one qualified person trained in emergency evacuation procedures should be in the aircraft at or near a door at which there is a passenger loading walkway, integral stairs that lead downward, or a passenger loading stair or stand.

2) A clear area for emergency evacuation of the aircraft should be maintained adjacent to not less than one additional exit.

3) If fueling operations take place with passengers onboard away from the terminal building and stairways are not provided, such as during inclement weather (diversions), the operator should notify the ARFF services to assume a standby position in the vicinity of the fueling activity with at least one vehicle.

4) The aircraft operator should establish specific procedures covering emergency evacuation under such conditions for each type of aircraft they operate.

5) All "no smoking" signs should be displayed in the cabin(s), and the no-smoking rule should be enforced. For aircraft without closed refueling systems, the operator should use "no smoking" placards or temporary signs as opposed to lighted "no smoking" signs.

3-3215 CODE-SHARE SAFETY PROGRAM GUIDELINES.

A. On February 29, 2000, the Department of Transportation (DOT), the Office of the Secretary of Transportation (OST), and the FAA jointly issued Code-share Safety Program Guidelines (current version located at http://www.faa.gov/air_traffic/international_aviation/media/code_share_guidelines.pdf), which describe one method for U.S. air carriers to address the level of safety of the U.S. code-share

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passenger services provided by their foreign air carrier partners through periodic onsite safety audits.

B. The Code-Share Safety Program Guidelines describe the elements of a code-share audit program and the process for review and acceptance of a U.S. air carrier's audit program by the FAA and the OST. Upon completion of the review and a determination by both the FAA and the OST that the audit program is acceptable, the DOT will issue a letter to the U.S. air carrier stating that the audit program is acceptable. It is OST and FAA policy that the U.S. air carrier should then incorporate the accepted audit program into the manual required by § 121.133.

NOTE: The International Programs and Policy Division (AFS-50) will conduct an FAA review and acceptance of audit programs.

C. Each POI will determine that an accepted audit program of his or her air carrier has been incorporated into the manual required by § 121.133 and that the date of its incorporation is recorded in the Program Tracking and Reporting Subsystem (PTRS) using activity code 1302.

D. Following the date of incorporation of the audit program into the carrier's manual, each POI will determine that the accepted audit program is reviewed for currency at least once during each 12 calendar-month period thereafter. If the audit program is current, the POI should enter the review complete date in the PTRS. If the audit program is not current, the POI should provide the necessary followup actions to ensure currency and enter the date of the revision to the manual required by § 121.133 making it current.

3-3216 AIRCRAFT GROUND TOWING PROCEDURES.

A. Towbar and Towbarless Towing. When towing aircraft, the operator must use the proper towbar and/or tow vehicle. The wrong type of towbar, or makeshift equipment, can cause damage to the aircraft. Persons performing towing operations must be thoroughly familiar with the procedures that apply to the type of aircraft to be moved and the type of tow vehicle. Recommend the current editions of the following ACs to the operator:

- AC 00-65, Towbar and Towbarless Movement of Aircraft;
- AC 150/5210-5, Painting, Marking, and Lighting of Vehicles Used on an Airport; and
- AC 150/5210-20, Ground Vehicle Operations on Airports.

B. Towbarless. The weight of an aircraft is a major consideration during towing because handling characteristics of the towbarless tractor change proportionally with the change in aircraft weight. Heavier aircraft put more stress on this vehicle and after movement begins, heavy aircraft can "push" the tug with a greater force than lighter aircraft because of weight, momentum, and the fuel load of the aircraft. Tow operators must recognize and understand these characteristics. Heavier weights and too much speed create the potential for disaster. Therefore, operators should reduce towing speeds according to the weight of the aircraft. The braking distance required to stop a large aircraft will be greater than the distance required to stop a small aircraft.

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C. Towing Vehicle Inspections. Tow vehicle operators must ensure that all towing equipment is serviceable and functioning properly before starting any towing operation. Before connecting the towbar to the aircraft, the tow vehicle operator should inspect the tow vehicle for defects or extraneous material that may interfere with safe operation. An operator must inspect each tow vehicle at least once each shift to verify that the cab and exterior of the vehicle are clear of all extraneous materials and the vehicle is in safe working condition. Additionally, the operator should check all radio communications before dispatching a tow vehicle. When tow vehicle operators find mechanical defects affecting safety on tow vehicles, the air carrier should take the equipment out of service and send it to vehicle maintenance for repairs.

D. Towing Operations. Using trained personnel, following established procedures, and properly planning for weather, local conditions such as inclined ramps, emergencies, and other limitations should prevent mishaps. For maximum safety, towing personnel must not place themselves in the direct path of aircraft wheels nor ride on any external portion of an aircraft or tow vehicle. Towing personnel should use a checklist and ensure placards are serviceable and located inside the tow vehicle cab to identify any restrictions that apply to the tow vehicle. Towing personnel should observe any other placards that might be of a temporary nature prior to all movements. When connecting a towbar to any tow vehicle, personnel must stand clear until the backing tow vehicle is in close proximity to the towbar. When connecting a tow vehicle, personnel must be extremely vigilant to any sudden movement of the tow vehicle or aircraft.

E. Personnel Training. Operators should ensure that aircraft ground handling personnel are thoroughly familiar with all published towing procedures pertaining to the type of aircraft being towed, as well as understand the restrictions and/or limitations on any vehicle authorized to move an aircraft. Newly assigned aircraft maintenance specialists/ground vehicle operator personnel must pass a proficiency test on the types of aircraft towed and types of tow vehicles after completing supervised on-the-job training (OJT). Wing and tail walkers may not have to be familiar with all published towing procedures or receive annual proficiency training if their duties are restricted to these positions during towing operations. The tow team leader should clearly define duties and responsibilities and the use of a checklist covering all items pertaining to the safe movement of the type aircraft being towed, and he or she must brief all team members prior to the aircraft being moved. The operator's procedures manual should cover this information. All operators of tow vehicles in the airport operations area must be trained and possess a valid driving permit, usually issued by the airport authority, before being granted access in movement and safety areas when performing towing operations. This requires recurrent training that typically consists of airport signage, limitations, and air traffic and/or ground control communications procedures. Tow vehicle operators must complete the training prior to the initial performance of such duties and at least once every 12 consecutive calendar-months. If the employee can demonstrate the ability to write, explain the intent of a selected reading, and read back simulated communications with little or no hesitation and/or misunderstanding, he or she will have satisfactorily met the intent of the English language requirement.

F. Aircraft Movement. Prior to movement of any aircraft, the operator should comply with the requirements of part 91, § 91.209(a)(2) which states: "No person may park or move an aircraft in, or in dangerous proximity to, a night flight operations area of an airport unless the aircraft—(i) Is clearly illuminated;" (which means that the location of the wingtips and tail of the aircraft must be visible by alternate means of illumination the same as if the aircraft position

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lights were turned on) or "(ii) Has lighted position lights." The aircraft position lights may be powered by the aircraft battery, APU, or an external power source such as the tow vehicle. Also, the tow operators should ensure that all landing gear struts and tires are properly inflated and that brake pressure is built up when applicable.

G. Flight Deck/Cockpit Observer. A trained person should be in the pilot's seat to operate the aircraft's brakes if needed. If the hydraulic pressure that provides braking drops below safe operating limits, the operator should terminate the towing operation. Additionally, the observer serves as backup to any communications failures between tow driver and control tower/ramp control.

H. Tow Vehicle Operator. The tow vehicle driver is responsible for operating the vehicle in a safe manner. The vehicle operator must obey emergency stop instructions given by any team member. The vehicle operator must be at the controls of the towing vehicle at all times during aircraft movement. The tow vehicle must be connected in a manner that will allow the vehicle driver to face the direction of travel while seated. The vehicle operator must stop the vehicle upon losing communication with the cockpit observer, control tower, and/or ramp control.

I. Wing Walker. The operator should station a wing walker at each wingtip to ensure adequate clearance of any obstruction in the path of the aircraft. The wing walker is responsible for properly signaling the tow vehicle operator as soon as it appears the aircraft is in danger of colliding with an obstruction. In such cases, the vehicle operator should stop towing until he or she personally checks the clearance. Wing walkers are not required for helicopters being towed with rotor blades in the parallel position. Wing walkers do not require annual proficiency testing and need not be fully trained in all towing procedures as long as this is their only task. Thorough pre-tow briefings by the tow team lead will satisfy the training requirement.

J. Tail Walker. The operator should use a tail walker during towing operations when turning the aircraft sharply or back into position. The tow operator should avoid the backing of aircraft as much as possible. Tail walkers do not require annual proficiency testing and need not be fully qualified in all towing procedures as long as this is their only task. Thorough pre-tow briefings by the tow team lead will satisfy the training requirement.

NOTE: When towing small aircraft, the operator can eliminate the tail walker at the discretion of the tow team lead.

K. Personnel Riding or Walking. Under no circumstances should personnel walk between the nosewheel of an aircraft and its towing vehicle, nor should they ride on the outside of a moving aircraft, on the towbar, or on the outside of the vehicle unless in an authorized seat. No person should attempt to board or leave a moving aircraft or towing vehicle.

L. Night Crew Signals. Operators should issue two luminous wands to towing team members who require wands. Other tow team members should use wands, as required, to warn any aircraft traffic that may approach. Additionally, before any aircraft is moved, the operator should ensure that aircraft position lights are operational.

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M. Control Tower Clearance. Before proceeding to tow an aircraft on or across an established taxiway or runway, the tow vehicle operator must obtain clearance from the control tower. At no time should any aircraft be towed on or across runways or taxiways without advance approval of the control tower. The primary means of communication will be the aircraft radio. An alternate method (when conditions restrict aircraft battery operation) is through an escort vehicle in direct radio contact with the control tower. The radio-equipped escort vehicle will accompany the aircraft throughout the towing operation.

N. Towing Speed. Towing speed should not exceed that of walking team members, with a maximum of 7 miles per hour (mph).

O. Brakes. To prevent serious mishaps, the operator should charge aircraft brake systems before each towing operation and stop towing immediately if brake pressure drops below safe operating limits. The tow vehicle operator should not tow aircraft with faulty brakes, except to repair facilities, and then only with personnel standing by ready with chocks for emergency use.

P. Towbars. Before moving any aircraft, the operator should inspect the towing vehicle, towbar, towbar connections, and other associated equipment for defects, using only authorized equipment in good condition in towing operations.

Q. Chocks. The operator should make chocks immediately available in case of emergency throughout towing operations. The operator should place them properly before disconnecting the towing vehicle. When an operator tows or parks aircraft with snow, ice, or frost present anywhere on the parking ramp or towing surface, he or she should use sand bags and chocks. The operator should use heavier tow vehicles with chains to improve starting and stopping traction during tow operations on ice or snow-covered towing surfaces. The operator should not place or hang chocks or other support equipment on any part of the aircraft exterior during towing or repositioning.

R. Starts and Stops. When moving aircraft, tow vehicle operators should not stop and start suddenly. Operators should never apply aircraft brakes when an aircraft is being towed, except in emergencies and upon instructions given by any team member. Before disconnecting the towing vehicle from the aircraft, the operator should stow chocks properly in place and set the aircraft's brakes.

S. Equipment, Stands, and Similar Materials. The operator should ensure removal and proper storage of all equipment, work stands, loose aircraft parts, and other materials from the vicinity of an aircraft.

T. Entrance Doors, Ladders, and Downlocks. To avoid possible worker injury and aircraft damage during towing operations, the operator should close entrance doors, retract or remove ladders, and install landing gear downlocks (if required). The only allowable deviations from these requirements are those allowed by specific aircraft manufacturer instructions.

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U. Struts and Tires. Prior to towing any aircraft, towing team members should check nose and main landing gear struts and tires for proper inflation. Unless the applicable manufacturer instructions require a gauge check, a visual check of tires and struts is adequate for towing purposes.

V. Towing Aircraft without Access to Cockpit. When moving an aircraft with no cockpit observer (if applicable, such as small aircraft) the operator should make sure chocks are immediately available throughout towing operations in case of an emergency.

W. Engine Operation. As a general rule, the operator should not tow aircraft with engines operating. The following exception applies to aircraft towing operations with engines running: pushing aircraft away from terminal gates used by airlines for dispatch. Ensure that the operator has developed procedures for personnel so that they keep away from rotating propellers and the danger zones of jet engines.

3-3217 ACCIDENT NOTIFICATION REQUIREMENTS. Title 49 of the Code of Federal Regulations (49 CFR) part 830 requires operators to notify, immediately and in the most expeditious manner, the nearest NTSB Bureau or Aviation Safety (AVS) field office of accidents, serious incidents, and overdue aircraft. The operator must develop procedures that accomplish this.

- The manual should include a copy of 49 CFR part 830.
- Also included should be the names and telephone numbers of the appropriate operator personnel who must be notified.

RESERVED. Paragraphs 3-3218 through 3-3230.

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VOLUME 3 GENERAL TECHNICAL ADMINISTRATION

CHAPTER 34 CHANGES TO AIR CARRIER CERTIFICATE OR OPERATING AUTHORITY

Section 3 Amendment, Surrender, Suspension, Revocation, and Replacement of Air Operating or Air Agency Certificates

3-3631 GENERAL. This section contains information, direction, and guidance for principal inspectors (PI) and other involved inspectors to use for accomplishing the amendment, surrender, suspension, revocation, and replacement of Air Operating or Air Agency Certificates.

NOTE: The term "operator" is used in this section to refer to the holder of an Air Carrier Certificate, Operating Certificate, or Air Agency Certificate.

3-3632 BACKGROUND.

A. Regulations. The basis for these various certificate actions is found in Title 49 of the United States Code (49 U.S.C.) § 44709 (formerly section 609 of the Federal Aviation Act of 1958 (FA Act)) and in Title 14 of the Code of Federal Regulations (14 CFR) part 13, § 13.19; part 119, §§ 119.41, 119.61(a), and 119.63(b); part 133, § 133.13; part 137, § 137.17; part 141, § 141.13; part 142, § 142.11; part 145, § 145.57; and part 147, § 147.7. Either the Federal Aviation Administration (FAA) or the operator may initiate these certificate actions. These actions can proceed with a full agreement between the PI and the operator, or they may be contested.

B. Certificate Actions. Inspectors should have an understanding of the distinctions between the various certificate actions that can occur. A certificate is a document that contains the name of the operator, a broad statement of the operator's operating authority, and an effective date. An operator may not conduct operations without possession of a valid certificate.

1) Amendment of a Certificate. The amendment of a certificate is a change to the information on the face of the document, usually as the result of a name change or administrative change. Certificates rarely require an amendment because the details of operating authorizations are contained in the operations specifications (OpSpecs) or equivalent (i.e., authorizations).

2) Surrender of a Certificate. The surrender of a certificate occurs when an operator voluntarily gives up operating authority.

3) Suspension of a Certificate. The suspension of a certificate is the temporary, involuntary removal of an operator's operating authority by the FAA using due process of law. Suspension usually results in the restoration, revocation, or surrender of the operator's operating authority.

4) Revocation of a Certificate. The revocation of a certificate is the permanent, involuntary removal of an operator's operating authority by the FAA using due process of law.

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5) Replacement of a Certificate. The replacement of a certificate is the reissuance of a new certificate to an operator when the operator's original certificate has either been lost or destroyed.

3-3633 AMENDMENT OF A CERTIFICATE: OPERATOR-INITIATED AMENDMENT.

A. Change to Certificate Number.

1) Name Change. A change of the certificate holder's legal name without a change of ownership does not require a new certificate number. However, PIs and aviation safety inspectors (ASI) must ensure the certificate holder is not using the name change to circumvent initial certification requirements.

2) Change in Ownership. Except for repair stations, changes in ownership will require a change in certificate number. For information related to repair stations, see Volume 2, Chapter 11, Section 2.

a) Changes in Ownership that are the Result of a Merger or Acquisition of Operational Assets. Where part 121 and part 135 air carriers are concerned, changes in ownership that are the result of a merger or acquisition of operational assets are governed by policy contained in Volume 3, Chapter 34, Section 1.

b) Changes in Ownership that Do Not Change the Capability or Characteristics of the Operation. A change in corporate ownership that involves minimal personnel changes, but does not change the capability or characteristics of the operation, and does not make extensive changes in management personnel required by 14 CFR, generally requires minimum FAA action. However, the certificate, OpSpecs, and manuals will need to be amended to show the new name and new certificate number of the certificate holder.

c) Changes in Ownership that Involve Major Changes to Operating Authority. Changes in ownership that involve major changes to operating authority may also require additional certification. Policy governing major changes to air carrier operating authority is contained in Volume 3, Chapter 34, Section 2.

3) Partial Change of Certificate Number. There may be rare cases where the Aviation Data Systems Branch (AFS-620) elects not to change the entire certificate number. Instead, AFS-620 may leave the designator element intact, but change the numeric and alpha suffix code (e.g., a change from certificate number TWRA118A to TWRA119B). With partial certificate number changes, PIs and ASIs must still update the certificate and the appropriate certificate holder documents to reflect the correct numeric and alpha suffix code. (See Volume 2, Chapter 1, Section 3 for more information on certificate number construction.)

4) Prepare the New Certificate. When the PI or ASI is ready to prepare the new certificate, contact AFS-620 via the established correspondence mailbox and provide an explanation of the change, along with copies of the assisted documentation.

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B. Department of Transportation (DOT) Notification. Any operator required to have economic authority from the DOT must notify the DOT when there is a change in name or ownership. An air taxi operator must submit an amended Office of the Secretary of Transportation (OST) Form 4507, Air Taxi Operator Registration and Amendments Under Part 298 of the Regulations of the Department of Transportation, and file a new OST Form 6410, U.S. Air Carriers – Certificate of Insurance. These documents shall be filed no later than 30 days after the change. The PI or ASI is not required to wait for DOT approval and may simultaneously issue a name change to the certificate and OpSpecs upon notification and verification of the DOT filing. (See Volume 2, Chapter 2, Section 2 for additional information relating to DOT economic authority.)

3-3634 SURRENDER OF A CERTIFICATE. A PI may request, but may not compel, operators to voluntarily surrender certificates. An operator may voluntarily surrender a certificate at any time. To do so, the operator should send the certificate to the PI with a written request that the certificate be canceled and a statement of why the certificate is being surrendered. The request must be signed by the operator, agent for service, or a court-appointed individual authorized to act for the operator. This procedure also applies to certificates that have been lost or destroyed. The PI shall enter a brief statement of the circumstances surrounding the voluntary surrender of the certificate in the "Comments" section of the operator's enhanced Vital Information Database (eVID). A certificate that has been surrendered should be retained at the certificate-holding district office (CHDO) along with a copy of the operator's OpSpecs or equivalent (i.e., authorization) for a period of 5 years, and then destroyed.

A. Reinstatement of Voluntarily Surrendered Certificate. A voluntarily surrendered certificate may not be reinstated. If the operator subsequently decides to reinstate operations, the operator must apply and qualify for a new certificate.

B. Surrendering a Certificate in Lieu of an Enforcement Action. Operators may propose surrendering a certificate in lieu of enforcement action. The PI should not agree to such an action without the concurrence of the regional Flight Standards division (RFSD) and Regional Counsel. Should such an agreement be reached, the operator's letter of request must contain a statement that the certificate is being surrendered on the basis that enforcement action will not be taken. When a certificate is surrendered, the PI shall enter a brief statement of the circumstances surrounding the voluntary surrender of the certificate in the "Comments" section of the operator's eVID file.

3-3635 SUSPENSION OF A CERTIFICATE. When a certificate is suspended, the Regional Counsel office will issue the operator a letter of suspension containing instructions with which the operator must comply. In general, the Regional Counsel will request that the operator's certificate be forwarded to the Regional Office (RO), where it will be held until the end of the suspension period. Information concerning the disposition of a suspended certificate can be found in the current edition of FAA Order 2150.3, FAA Compliance and Enforcement Program. When a certificate has been suspended, the operator's eVID file should be amended to reflect the suspended status.

3-3636 REVOCATION OF A CERTIFICATE. Operators must forward revoked certificates to the address contained in the order revoking the certificate. Additionally, the operator's

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eVID file should be amended to show that the certificate has been revoked and should contain a statement of the reasons for the action in the "Comments" section. Should revocation be appropriate, the PI should contact the operator and request that the operator voluntarily surrender the certificate. Should the operator refuse to surrender its certificate, the PI shall proceed in accordance with the instructions in subparagraph 3-3638A on emergency revocation.

3-3637 REPLACEMENT OF A LOST OR DESTROYED CERTIFICATE. A lost or destroyed certificate may be replaced by the CHDO using the same information that was on the original certificate. The replacement certificate should have the word "Duplicate" annotated on the front of the certificate. A copy of the duplicate certificate should be retained in the CHDO's files. In the case of a destroyed certificate, the operator should send any remains of the certificate to the PI with a written request that the certificate be replaced and a statement of why the certificate is being requested. The operator, or an agent for service authorized to act for the operator, must sign the request.

3-3638 ADVERSE ACTIONS. According to § 13.19(b), the FAA may find it necessary to amend, suspend, or revoke a certificate without the operator's concurrence. The PI should initiate an adverse action of this nature only after an unsuccessful attempt has been made to negotiate with the operator concerning the voluntary amendment or surrender of the certificate. When an adverse action is necessary, the RFSD manager and the Regional Counsel will confer and decide whether an order should be issued for the amendment, suspension, or revocation of the operator's certificate. The PI must prepare the enforcement package in accordance with Order 2150.3. The order to amend, suspend, or revoke a certificate should be a mutual decision between the PI, the RFSD manager, and the Regional Counsel.

A. Emergency Revocation. Section 13.19 provides for the operator to have a hearing before the order that amends, suspends, or revokes the certificate can take effect. Should an emergency exist, however, the order that amends, suspends, or revokes the certificate may be made effective immediately.

B. Appeals. The operator may appeal an order amending, suspending, or revoking its certificate to the National Transportation Safety Board (NTSB). Should the operator elect to appeal a certificate action to the NTSB, the effective date of the order is stayed until the NTSB acts on the appeal, unless it is an emergency order.

3-3639 TRANSPORTATION SECURITY ADMINISTRATION (TSA) NOTIFICATION. Any time an operator's certificate is amended, suspended, surrendered, or revoked, the CHDO will notify their TSA principal security inspector (PSI) at Charters-AirCargo-S@tsa.dhs.gov. Indicate the operator's name, certificate number, type of change in the certificate, and the effective date of the change. It is important to make this notification in order for the PSI to secure all security-sensitive documents from the operator.

RESERVED. Paragraphs 3-3640 through 3-3655.

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VOLUME 4 AIRCRAFT EQUIPMENT AND OPERATIONAL AUTHORIZATIONS

CHAPTER 1 AIR NAVIGATION, COMMUNICATIONS, AND SURVEILLANCE

Section 1 General Navigation Concepts, Policies, and Guidance

4-1 GENERAL. This section provides an explanation of navigational concepts, direction, and guidance used by Federal Aviation Administration (FAA) inspectors to evaluate requests for authorization to conduct en route operations. It also discusses methods and requirements necessary to approve or deny requests for proposed operations using aircraft and/or navigation systems new to that operator and proposed operations into new areas of en route operation using previously approved aircraft and navigational systems.

A. Evaluation of Aircraft Navigation Equipment. Due to the complex nature of air navigation, navigational requirements of domestic and international operations, and the wide variation in air traffic control (ATC) separation standards used in these operations, inspectors must evaluate each proposed operation while considering the following factors and assessing the underlying infrastructure to ensure that it is compatible with the aircraft navigation equipment:

1) The aircraft.

2) The navigational system(s).

3) The communication system(s).

4) The method or means of ATC surveillance used.

5) The flightcrew's training, skills, and recency of experience.

6) The area of proposed operation, including:

- Terrain;
- Driftdown;
- Additional passenger oxygen requirements;
- Suitable diversion/emergency airports;
- Special airports;
- Appropriate Traffic Alert and Collision Avoidance System (TCAS) requirements, if applicable; and
- Any other unique performance requirements.

7) The operator's experience with different aircraft and navigation, communication, and surveillance systems in the area of proposed operations.

8) The operator's experience with the same aircraft and navigation, communication, and surveillance systems in different areas of operations.

9) Separation standards in the area of proposed operations.

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10) The availability of alternate navigation capabilities.

11) Special Areas of Operation (SAO) (Reduced Vertical Separation Minima (RVSM), areas of magnetic unreliability (AMU), Required Navigation Performance (RNP), North Atlantic High Level Airspace (NAT HLA), etc.).

B. Evaluating Operations. This chapter provides guidance for evaluating operations using navigational systems that have established operational characteristics and limitations within particular areas of en route operations. When an operator requests approval to use a means of navigation not addressed by this guidance, the request must be forwarded through the regional Flight Standards division (RFSD) to the Air Transportation Division (AFS-200), Aircraft Maintenance Division (AFS-300), or General Aviation and Commercial Division (AFS-800), as applicable. AFS-200, in coordination with the Flight Technologies and Procedures Division (AFS-400), will develop the necessary navigational concepts and provide national policies and guidance for evaluating such proposals.

C. The Objective of Air Navigation. In aviation, the following objectives of air navigation and navigational systems are necessary:

1) The first objective is to avoid all obstacles while en route and to arrive safely and efficiently at the intended destination.

2) The second objective is to efficiently fly an intended route with enough precision to permit ATC to safely separate aircraft.

D. General Concepts. Early in aviation, only a few aircraft operated within any given area at the same time. The most demanding navigational requirements were to avoid obstacles and arrive at the intended destination with enough fuel remaining to safely complete a landing. As aviation evolved, the volume of air traffic grew and a corresponding need to prevent collisions increased. Today, the most significant and demanding en route navigational requirement in aviation is the need to safely separate aircraft. There are several factors that must be understood concerning the separation of aircraft by ATC.

1) When ATC does not have a means of surveillance, such as radar or Automatic Dependent Surveillance (ADS) to verify air traffic positions, ATC must rely entirely on pilot position reports relayed from an aircraft to determine its actual geographic position and altitude. In this situation, a flightcrew's precision in navigating the aircraft and their providing accurate position reports are critical to ATC's ability to provide safe separation.

2) When ATC does have a means of surveillance to verify the aircraft's position, precise navigation and position reports, when required, are a means of providing safe separation. Flight safety in instrument flight rules (IFR) operations depends directly on the operator's ability to achieve and maintain certain levels of navigational performance. ATC radar or ADS is used to monitor navigational performance, detect navigational deviations, and expedite traffic flow.

3) The control of air traffic requires that a certain level of navigational performance be achieved by aircraft operating under visual flight rules (VFR) to ensure safe separation of aircraft and to expedite the flow of air traffic.

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a) During cruising flight, the VFR flight altitude appropriate to the direction of flight must be maintained to ensure the required vertical separation between VFR and IFR aircraft and to assist in the prevention of collision between VFR aircraft.

b) Any aircraft operating in accordance with ATC instructions must navigate with the level of accuracy required to comply with ATC instructions.

c) If a clearance to enter controlled airspace has not been received, the flightcrew must navigate the aircraft with sufficient precision to avoid that airspace.

d) A pilot must navigate VFR aircraft with sufficient precision to:

- Avoid weather conditions that would prevent visual contact with terrain and other aircraft.
- Locate a suitable airport and land safely without requiring assistance from ATC.

4-2 U.S. PUBLIC LAW, REGULATIONS, INTERNATIONAL AGREEMENTS, AND THE INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO).

A. General.

1) Protection. The need to ensure protection of persons and property both in flight and on the ground is fundamental to the Regulations. Many of the design and performance requirements in aircraft certification rules are established to provide this protection. This protection is also extensively addressed in the operating and equipment rules related to air navigation. It is important that the regulations provide this protection equally to persons and property in flight and on the ground. Approvals of route and areas of en route operation must take into account the need to protect persons and property in flight and on the ground.

2) FAA Powers. The authorities and responsibilities of the FAA related to air navigation and navigation systems, practices, and procedures originate in Title 49 of the United States Code (49 U.S.C.) (formerly, the Federal Aviation Act of 1958 (FA Act)). Two important sections of the act are summarized as follows:

a) Section 40103 (formerly, § 307 of the FA Act) states that “The Administrator of the Federal Aviation Administration shall develop plans and policy for the use of the navigable airspace and assign by regulation or order the use of the airspace necessary to ensure the safety of aircraft and the efficient use of airspace.”

b) Section 44701 (formerly, § 601(a) of the FA Act) empowers the Secretary to “promote safety of flight of civil aircraft in air commerce by prescribing …minimum standards required in the interest of safety for …performance of aircraft…and appliances … regulations and minimum standards for other practices, methods, and procedure…necessary for safety in air commerce and national security.”

3) Convention Articles. The Articles of the Convention represent international law and are equivalent to the FA Act. The foundation for ICAO was established on

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December 7, 1944, when the text of the convention was opened for signature in Chicago, Illinois. This document (DOC 7300) is referred to as the "ICAO Convention" or the "Chicago Convention." This "Convention" contains 96 articles known as the Articles of the Convention. By signing the Convention, a government (State) agreed to abide by "certain principles and arrangements in order that international civil aviation may be developed in a safe and orderly manner and that international air transport services may be established on the basis of equality of opportunity and operated soundly and economically." The Articles of the Convention represent those certain principles and arrangements and serve as the foundation for international aviation laws, standards, recommended practices, and guidance material. Articles 44 through 66 established ICAO as a body within the United Nations. Articles 1 through 43 established general principles concerning international air navigation. The following are some of the more significant articles that relate to air navigation:

a) Article 1 recognizes that each State has complete and exclusive sovereignty over the airspace above its territory.

b) Article 3 states that the convention applies only to civil aircraft and that each State will require their state aircraft to operate with due regard for the safety of navigation of civil aircraft.

c) Article 11 requires that the international air navigation laws and regulations of a contracting State relating to "the operation and navigation of such aircraft while within its territory, shall be applied to the aircraft of all contracting States without distinction to nationality, and shall be complied with by such aircraft upon entering or departing from or while within the territory of that state."

d) Article 12 is the most significant requirement related to flight operations (Rules of the Air). This Article requires that "Each contracting State undertakes to adopt measures to ensure that every aircraft flying over or maneuvering within its territory and that every aircraft carrying its nationality mark, wherever such aircraft may be, shall comply with the rules and regulations relating to the flight and maneuver of aircraft, there in force." This article also requires that "Over the high seas, the rules in force shall be those established under this Convention. Each contracting State undertakes to insure the prosecution of all persons violating the regulations applicable."

e) Article 37 requires each contracting State to achieve the highest practicable degree of uniformity with ICAO standards and recommended practices, in matters related to the safety, regularity, and efficiency of air navigation.

4) ICAO Annexes. The articles of the ICAO convention contain basic principles that are the foundation for ICAO annexes. ICAO annexes contain the Standards and Recommended Practices (SARP) that have been adopted through international agreement to ensure the safety, regularity, and efficiency of air navigation. An ICAO standard is worded in mandatory language (shall, must, will) and is directive in nature. A recommended practice is worded in permissive language (should, may, can) and is not directive. Recommended practices represent practices that, although internationally recognized as safe operating practices, are not sufficiently comprehensive or lack the mature development appropriate for an international

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standard. The following are the ICAO annexes that are most significant to FAA operations inspectors:

a) Annex 1, Personnel Licensing, Paragraph 3.4, Flight Radiotelephone Operator.

b) Annex 2, Rules of the Air.

c) Annex 6, Operation of Aircraft.

d) Annex 11, Air Traffic Services.

5) ICAO Annex 1, Personnel Licensing, Paragraph 3.4, Flight Radiotelephone Operator. This paragraph addresses international telecommunication conventions.

6) ICAO Annex 2. This annex specifies international rules of the air agreed upon by ICAO member States. These rules are equivalent to the U.S. rules for operating within the territory of the United States (part 91). However, for operations over the high seas, Annex 2 is unique since it relates to flight and maneuver of aircraft within the meaning of Article 12 of the convention. Over the high seas, Annex 2 applies without exception (compliance is mandatory for all civil aircraft). Annex 2 is incorporated by reference into part 91. Part 91, § 91.703(a) requires each person operating a civil aircraft of U.S. registry outside the United States to comply with Annex 2 when operating over the high seas. The sections of Annex 2 most relevant to the discussion of air navigation are Chapter 3, General Rules, and Chapter 5, Instrument Flight Rules.

a) Chapter 3, paragraph 3.3 specifies requirements for ATC flight plans, and paragraph 3.6 specifies requirements for ATC services.

b) Chapter 3, paragraph 3.6.2 requires an aircraft to adhere to its “current flight plan” (currently effective ATC clearance), to operate along the defined centerline of any air traffic service (ATS) route used, and on any other route to operate directly between the points defining that route.

c) Chapter 3, paragraph 3.6.5 requires that the flightcrew of any aircraft operated as a controlled flight to maintain a continuous listening watch on and establish two-way communication as necessary with (as required for ATC) the appropriate radio frequency of the appropriate ATC unit.

d) Chapter 5, paragraph 5.1.1 requires aircraft to be equipped with suitable instruments and navigational equipment appropriate to the route the pilot will fly.

e) Chapter 5, paragraph 5.2.1 requires all IFR flights to comply with the provisions of paragraph 3.6 when operating in controlled airspace.

f) These requirements, as specified in Chapters 3 and 5 of Annex 2, mean that the aircraft must be navigated to the degree of accuracy required for ATC. Flightcrews must

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maintain a continuous listening watch and communicate with ATC as necessary for the purpose of ATC.

g) ICAO Doc 7030, Regional Supplementary Procedures, forms the procedural part of the Air Navigation Plan developed by ICAO Regional Air Navigation (RAN) meetings to meet those needs of specific areas that are not covered in the worldwide provisions. Flightcrews must be aware of the regional procedures and Notices to Airmen (NOTAM) for the areas in which they plan on operating, that complement the statement of requirements for facilities and services contained in the Air Navigation Plan (ANP) publications. Procedures of worldwide applicability are either included in Annexes to the Convention as Standards and Recommended Practices (SARPs) or they form part of one of the documents titled, "Procedures for Air Navigation Services" (PANS).

7) ICAO Annex 6. ICAO Annex 6 has two parts applicable to fixed-wing aircraft. Part I specifies requirements for airplanes engaged in scheduled international air services and nonscheduled international air transport operations for compensation or hire. Part I applies to airplanes operated under Title 14 of the Code of Federal Regulations (14 CFR) parts 121 and 135. Part II specifies requirements for international general aviation operations. The purpose of Annex 6, Part I is to facilitate safety in international airspace by providing standards for safe navigational operating practices. Part I also contributes to the efficiency and regularity of international air navigation by encouraging States to facilitate passage of other States' airplanes over their territories by operating in conformity with such standards. The application of Annex 2 to international operations differs slightly from Annex 6. A State may take exception (have different criteria) to Annex 2 standards for operations conducted in its sovereign airspace; however, no State can take exception to Annex 2 standards for operations conducted over the high seas. Annex 2, which specifies the international rules of the air, applies to all operations over the high seas without exception. Under Annex 6 standards, a State may take exception for operations in its sovereign airspace and for operation of its aircraft over the high seas. For air navigation, the most relevant section of Annex 6 is Chapter 7, Aeroplane Communication and Navigation Equipment. This chapter contains ICAO SARPs related to navigation and communication. Pertinent elements of these SARPs are described as follows:

a) Each airplane must have radio communication equipment capable of receiving meteorological information during the flight and conducting two-way communication at any time during the flight with aeronautical stations on frequencies prescribed by the appropriate authority. This requirement cannot be routinely satisfied by relaying reports through other aircraft.

b) Each airplane must have navigational equipment that enables it to proceed in accordance with its operational flight plan and the requirements of ATC services. Operations in NAT HLA or routes or airspaces with an RNP specification require navigational equipment that continuously provides information to the flightcrew of adherence to or departure from track with respect to the required degree of accuracy at any point along that track. Any operation in NAT HLA or RNP routes or airspace must be authorized by the State responsible for that operator.

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c) Each airplane must have enough navigation equipment installed and operational to ensure that, if one item of equipment fails at any time during the flight, the remaining equipment will be sufficient to enable navigation to the degree of accuracy (and to ensure continuity of service) required for ATC. Additionally, failure of any single unit required for communication or navigation purposes, or both, must not result in the loss of another required unit.

8) ICAO Annex 11. ICAO Annex 11 pertains to the establishment of airspace, units, and services necessary to promote a safe, orderly, and expeditious flow of air traffic. A clear distinction is made between ATC service, flight information service, and alerting service. Its purpose, together with Annex 2, is to ensure that flying on international air routes is carried out under uniform conditions designed to improve the safety and efficiency of air operation. The SARPs in Annex 11 apply in those parts of the airspace under the jurisdiction of a Contracting State where ATSs are provided and a Contracting State accepts the responsibility of providing ATSs over the high seas or in airspace of undetermined sovereignty. A Contracting State accepting such responsibility may apply the SARPs in a manner consistent with that adopted for airspace under its jurisdiction.

B. Relationship Between 14 CFR, ICAO Annexes, and Foreign National Regulations. Title 49 U.S.C. is the authority for 14 CFR. Title 14 CFR represents the regulatory implementation of the responsibilities assigned by the U.S.C. and the implementation of the principles derived from the ICAO convention. The relationship between 14 CFR, ICAO Annexes, and foreign national regulations are discussed in the following subparagraphs.

1) Title 14 CFR part 91 regulates the operation of all civil and public aircraft within the United States and specifies minimum capabilities necessary to navigate to the degree of accuracy required for ATC. It also regulates the operation of civil aircraft of U.S. registry outside the United States. The following are examples of part 91 regulations applicable outside the United States:

a) Section 91.703 requires each person operating a U.S. aircraft to comply with ICAO Annex 2 when over the high seas and to comply with the regulations of a foreign country when operating within that country's airspace.

b) Section 91.703(a)(3) requires compliance with part 91 when not in conflict with the regulations of a foreign nation or Annex 2.

2) In addition to part 91 requirements in paragraph 1) above, for operators conducting operations under part 121, § 121.1 requires compliance with that part while operating within or outside the United States. Section 121.11 specifies that these operators, when operating within a foreign country, must comply with the following:

a) Rules of the country concerned and any local airport rules that may be in force.

b) All rules of part 121 that are more restrictive than a foreign country's rules must be followed, if it can be done without violating the rules of that country.

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c) Annex 2 when over the high seas, in accordance with § 91.703.

3) The regulations listed below are in addition to part 91 requirements. For operators conducting operations under part 125, § 125.23 requires compliance with that part while operating within and outside the United States and specifies that these operators, when operating within a foreign country, must comply with the following:

a) Rules of the country concerned and any local airport rules that may be in force.

b) All rules of 14 CFR parts 61, 91, and 125 that are more restrictive than a foreign country's rules must be followed, if it can be done without violating the rules of that country.

c) Annex 2 when operating over the high seas, in accordance with § 91.703.

4) The following regulations are in addition to part 91 requirements. For operators conducting operations under part 135, § 135.3 requires compliance with that part while operating within the United States. It also specifies that while operating outside the United States, these operators must comply with the following:

a) Rules of the country concerned (and any local airport rules that may be in force), when operating within that country.

b) All the regulations of parts 61, 91, and 135, which are more restrictive than Annex 2 or regulations of a foreign country when compliance with these U.S. regulations would not violate requirements of Annex 2 or the foreign country.

c) Annex 2, when operating over the high seas, in accordance with § 91.703.

5) Part 91 regulates the operation of all civil and public aircraft within the United States and specifies minimum capabilities necessary to navigate to the degree of accuracy required for ATC. For program managers conducting operations under part 91K, § 91.701 requires compliance with that part while operating within the United States. In addition to the sections of part 91 that regulate civil aircraft of U.S. registry outside the United States, the program managers must comply with the following:

a) Rules of the country concerned and any local airport rules that may be in force.

b) All regulations of parts 61, 91, and 91K that are more restrictive than a foreign country's rules must be followed, if it can be done without violating the rules of that country.

C. Relationship of U.S. 14 CFR to Air Navigation.

1) Title 14 CFR related to air navigation have been promulgated and frequently changed to accommodate the need to efficiently handle a continuous growth in air traffic. Significant advances in air navigation technology, ATC techniques, and ATC equipment have

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permitted and required these regulations to evolve to their current status. Over the past years, numerous operational regulations have been adopted to specifically satisfy the critical air navigation objective of safely separating aircraft. Certain regulations, such as those requiring filing an ATC flight plan and complying with ATC clearances, are clearly related to this objective. Other 14 CFR provisions are not as clearly related, but have a direct bearing on the overall plan used to separate aircraft. The ATC system presumes compliance with all of the regulations related to air navigation. Any noncompliance with these regulations can seriously degrade the ability to separate aircraft.

2) Examples of operational 14 CFR related to air navigation and the objective of safely separating aircraft include the following:

a) Section 91.123, Compliance with ATC Clearances and Instructions;

b) Section 91.129, Operation in Class D Airspace;

c) Section 91.130, Operation in Class C Airspace;

d) Section 91.131, Operation in Class B Airspace;

e) Section 91.135, Operations in Class A Airspace;

f) Section 91.137, Temporary Flight Restrictions in The Vicinity of Disaster/Hazard Areas; Section 91.143, Flight Limitation in the Proximity of Space Flight Operations;

g) Section 91.157, Special VFR Weather Minimums;

h) Section 91.159, VFR Cruising Altitude or Flight Level;

i) Section 91.169, IFR Flight Plan: Information Required;

j) Section 91.173, ATC Clearance and Flight Plan Required;

k) Section 91.179, IFR Cruising Altitude or Flight Level;

l) Section 91.181, Course to Be Flown;

m) Section 91.511, Communication and Navigation Equipment for Overwater Operations;

n) Section 91.703, Operations of Civil Aircraft of U.S. Registry Outside Of the United States; and

o) Section 91.706, Operations Within Airspace Designated as Reduced Vertical Separation Minimum Airspace.

D. Regulations Specifying Air Navigation Equipment Requirements. Many Regulations require specific aircraft equipment. These requirements relate directly to the air

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navigation objective of safely separating aircraft. Some of these equipment rules specifically relate to the operational requirement of navigating to the degree of accuracy required for ATC. The air navigation equipment rules of parts 121, 125, and 135 are often supplemented by operations specifications (OpSpecs) that contain specific authorizations, limitations, and conditions which must be complied with by operators conducting flights under those 14 CFR parts. The following discussion references air navigation equipment requirements and provides direction, guidance, and clarification when appropriate.

1) Certain subparts of part 91 specify navigation and communications equipment necessary for operations in the U.S. National Airspace System (NAS). The following are examples of part 91 equipment requirements, with clarification when appropriate. Inspectors should read the appropriate 14 CFR in conjunction with this material.

a) Section 91.171, VOR Equipment Check for IFR Operations.

b) Section 91.205, Powered Civil Aircraft with Standard Category U.S. Airworthiness Certificates: Instrument and Equipment Requirements.

1. Section 91.205(d)(2) requires air navigation equipment to be appropriate to the ground facilities used. The current NAS is based on Very high frequency Omnidirectional Range (VOR) and VOR/distance measuring equipment (DME) ground facilities. Therefore, this regulation requires that VOR and/or VOR/DME equipment or an Area Navigation (RNAV) system that meets the en route criteria be installed in the aircraft and operable if it is to be used for IFR flight in the U.S. NAS. This navigational equipment is necessary to navigate to the degree of accuracy required for ATC. If the route to be flown is predicated on nondirectional radio beacon (NDB), then automatic direction finder (ADF) airborne equipment is also required.

2. Section 91.205(e) requires approved DME equipment when operating at or above 24,000 feet mean sea level (MSL) if the route or route segment is predicated on VOR. DME is not required, for example, when navigation is based on the use of an RNAV system that meets the appropriate Airworthiness Certificate or equivalent en route performance and reliability criteria (or equivalent) without input from DME.

c) Section 91.209, Aircraft Lights.

d) Section 91.215, ATC Transponder and Altitude Reporting Equipment and Use.

e) Section 91.217, Data Correspondence Between Automatically Reported Pressure Altitude Data and the Pilot’s Altitude Reference.

f) Section 91.219, Altitude Alerting System or Device: Turbojet-Powered Civil Airplanes.

g) Section 91.221, Traffic Alert and Collision Avoidance System Equipment and Use.

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2) Part 121 specifies the navigational equipment necessary for all operations conducted under that part, including operations outside the United States. These requirements are in addition to the navigational equipment requirements of part 91, but do not require duplication of any equipment specified in part 91. All of part 121 en route requirements reflect the concept of "demonstrated ability." The following are examples of part 121 navigation equipment requirements. Inspectors should read the appropriate 14 CFR in conjunction with this material.

a) The air carrier must show that it is able to conduct satisfactory operations over the routes and areas in which it operates. Approvals in areas and on specific routes are granted in OpSpecs and listed by "area of en route operation" and specific route, when appropriate. The general requirements specified in §§ 121.93 and 121.113 are not applicable to Class II navigation. Certain OpSpecs stipulate requirements for operations in Class G airspace.

b) Sections 121.95 (domestic/flag) and 121.115 (supplemental), Route Width, specify the lateral navigation considerations necessary for the control of air traffic in Class I navigation. Certain Part B OpSpecs address these requirements (see Volume 3, Chapter 1, Section 4).

c) Sections 121.103 and 121.121, En Route Navigational Facilities.

1. Sections 121.103(a) and 121.121(a) implement the concept of "navigation performance" when conducting IFR Class I navigation and certain types of Class II navigation that use nonvisual ground aids. Nonvisual ground aids are electronic Navigational Aids (NAVAID), but not necessarily limited to VOR, DME, or NDB. Long-range navigation-C system (LORAN-C) is an example of a navigation system considered to be a nonvisual ground aid. Each part 121 operator must show that nonvisual ground aids are available and located to allow navigation to the degree of accuracy required for ATC and the type of operation involved.

2. Area navigational systems that are certified for IFR flight in areas where domestic ATS procedures are applied meet the intent of §§ 121.103 and 121.121 when conducting Class I navigation (including space-based systems such as global positioning system (GPS)).

3. Certain long-range operations may be conducted under these regulations using the following navigational equipment:

- Automatic LORAN-C systems approved in reference to Advisory Circular (AC) 20-121, Airworthiness Approval of LORAN-C Navigation Systems for use in the U.S. National Airspace System (NAS) and Alaska, current edition.
- Operations using approved satellite-based systems such as GPS.
- When operating in the U.S. Class A airspace, RNAV systems that have not been demonstrated to meet the criteria for IFR flight in areas where domestic ATS procedures are applied also meet the intent of these rules, provided the ATC radar is serviceable and dual airborne VOR/DME equipment is installed and operable. OpSpecs provide

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authorization to conduct operations in the U.S. Positive Control Area (PCA) using these RNAV (or long-range navigation) systems.

4. Sections 121.103 and 121.121 do not specifically state or imply a redundant navigation equipment capability. In addition, these regulations do not apply to VFR pilotage operations, operations with a flight navigator or long-range navigation operations using an inertial navigation system (INS).

d) Section 121.305, Flight and Navigational Equipment.

e) Section 121.323, Instrument and Equipment for Operations at Night.

f) Section 121.325, Instruments and Equipment for Operations Under IFR or Over-the-Top.

g) Section 121.345, Radio Equipment.

h) Section 121.347, Communications and Navigation Equipment for Operations Under VFR Over Routes Navigated by Pilotage.

1. If the route is navigated using an area navigational system, radio navigational signals compatible with the airborne area navigational system must be available if required for the system to perform its intended function. Unless the route is navigated using an area navigation system certified for IFR flight in accordance with criteria in the appropriate guidance, airborne VOR equipment is required when the route is predicated on VOR. Airborne ADF equipment is required when it is predicated on NDB.

2. Although § 121.611 permits VFR en route operations, part 121 operators are generally prohibited from conducting VFR en route operations by Part B of the OpSpecs. Certain part 121 operators may be specifically authorized to conduct VFR en route operations in special situations (see Volume 3, Chapter 1).

3. This rule does not apply to Class II navigation.

NOTE: Section 121.347(b) specifies that for night VFR pilotage operations, the airplane must be equipped with the radio equipment necessary to receive radio navigational signals applicable to the route flown.

i) Section 121.349, Communication and Navigation Equipment for Operations Under VFR Over Routes Not Navigated by Pilotage or For Operations Under IFR or Over the Top, requires that airplanes be equipped to receive radio navigational signals from all primary en route and approach navigational facilities intended to be used.

1. The intent of this regulation is to require redundant airways navigation capability (VOR, VOR/DME, and NDB) to ensure the ability to navigate to the degree of accuracy required for ATC when conducting Class I navigation. Sections 121.103 and 121.121 clearly state that nonvisual ground aids are not required for operations over routes where celestial or other means of navigation are approved by the Administrator. Since all IFR primary en route

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and approach navigation facilities have historically been nonvisual ground aids (Standard ICAO ground-based NAVAIDs), § 121.349 is intended to apply only to operations over routes predicated on VOR, VOR/DME, or NDB.

2. Section 121.349 applies to both Class I and Class II navigation operations. Sections 121.103, 121.121, and 121.389 apply to Class II navigation operations. The intent of § 121.349 is met when any Class I navigation operation is predicated on the following:

3. VOR, provided dual independent VOR equipment is installed and operable in the airplane.

4. NDB, provided dual independent ADF equipment is installed and operable in the airplane. However, if one ADF system and a dual independent VOR system are installed and operable, the intent of § 121.349 is met provided VOR NAVAIDs are located at ground positions that would permit the flight to safely proceed (from any point along the route) to a suitable airport and complete an instrument approach without using ADF equipment.

5. RNAV systems, provided either dual independent RNAV systems certified under the appropriate guidance are installed and operable or if the capability exists to revert to VOR or NDB, a single RNAV system is installed and operable.

6. Part B of the OpSpecs permits (under specified conditions) an RNAV system fix to be substituted for an ICAO ground-based NAVAID when that facility is temporarily out of service.

j) Section 121.351, Communication and Navigation Equipment for Extended Overwater Operations and for Certain Other Operations, Applies to Both Class I and Class II Navigation Operations. Sections 121.103, 121.121, and 121.389 apply to all other Class II navigation operations.

k) Section 121.357, Airborne Weather Radar Equipment Requirements, apply to weather radar normally used for thunderstorm detection and avoidance.

l) Section 121.355, Equipment for Operations on Which Specialized Means of Navigation Are Used, limits the definition of “specialized means of navigation,” such as INS operations, when operating outside the United States. Section 121.355 is referenced in § 121.389 which requires “specialized means of navigation” (INS or inertial reference system (IRS)) to be approved in accordance with § 121.355. GPS, INS, and IRS are long-range navigation systems (LRNS) that can be used to satisfy the requirements of Class II navigation.

m) Section 121.389, Flight Navigator and Specialized Navigation Equipment, applies to situations when the aircraft position cannot be reliably fixed for a period of more than 1 hour.

1. “Reliably fixed,” as defined in the OpSpecs, is a station passage of a VOR, Collocated VOR and Tactical Air Navigational Aid (TACAN) (VORTAC), or NDB waypoint. A “reliable fix” also includes a VOR/DME fix, an NDB/DME fix, a VOR intersection, an NDB intersection, and a VOR/NDB intersection, provided course guidance is available from one of the

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facilities and the fix lies within the operational service volume of both facilities that define the fix. A "reliable fix" also includes positioning information obtained from an IFR-certified area navigation system, such as GPS, LORAN-C, or DME/DME updated flight management system (FMS).

2. Section 121.389 does not apply to those situations where the airplane's position can be reliably fixed, at least once each hour to the degree of accuracy required for the control of air traffic. If the operator can show compliance with § 121.103/121.121, the requirements of § 121.389 are automatically met by providing fixes more frequently than once an hour. Therefore, Class II navigation operations using a GPS system meets the requirements of § 121.103 or 121.121 and are approved under these regulations.

3. Class II operations with an INS system are approved under § 121.355 and Appendix G.

4. Class II navigation systems are divided into two categories.

5. INS, Inertial Reference Units (IRU), and IRS (inertial systems) are defined as "specialized means of navigation," as addressed in §§ 121.389 and 121.355. They are self-contained, electronic dead reckoning systems that have no "position fixing" capabilities.

6. LORAN-C and GPS are "position fixing" or "position keeping" devices that receive their signals from an external source. LORAN-C and GPS are nonvisual ground and space-based aids, respectively, and are addressed in §§ 121.103 and 121.121, En route navigational facilities.

3) Part 125 specifies the navigation and communications equipment necessary for all operations under part 125, including part 125 operations outside the United States. These requirements are in addition to the navigation and communications equipment requirements of part 91, but do not require duplication of any equipment specified in part 91. The following are examples of part 125 navigation and communications equipment requirements, with clarification, when appropriate. Inspectors should read the appropriate 14 CFR in conjunction with this material.

a) Section 125.203, Communication and Navigation Equipment.

b) Section 125.224, Collision Avoidance System.

c) Section 125.225, Flight Data Recorders.

d) Section 125.226, Digital Flight Data Recorders.

e) Section 125.227, Cockpit Voice Recorders.

f) Section 125.267, Flight Navigator and Long-Range Navigation Equipment.

4) Part 135 specifies the navigation and communications equipment necessary for all operations under part 135, including part 135 operations outside the United States. These

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requirements are in addition to the navigation and communications equipment requirements of part 91, but do not require duplication of any equipment specified in part 91. The following are examples of part 135 navigation and communications equipment requirements, with clarification, when appropriate. Inspectors should read the appropriate 14 CFR in conjunction with this material.

a) Section 135.143, General Requirements.

b) Section 135.149, Equipment Requirements: General.

c) Section 135.159, Equipment Requirements: Carrying Passengers Under VFR at Night or Under VFR Over-the-Top Conditions.

d) Section 135.161, Communication and Navigation Equipment for Aircraft Operations VFR at Night or Under VFR Over-the-Top Conditions, requires radio navigational equipment able to receive radio signals from the ground facilities to be used. The ground facilities and airborne equipment used must enable navigation to the degree of accuracy required for ATC. Airborne equipment requirements must also comply with Part B of the OpSpecs.

1. If the route is navigated using an RNAV system installed in accordance with the appropriate guidance, the installed RNAV equipment must be operable. VOR and/or ADF equipment are not required for en route operation dispatch where an RNAV system certified for IFR flight is installed, in accordance with the applicable guidance, and operable. Additionally, all ground-based or space-based elements of the support system must be operational at dispatch.

2. Unless the route is navigated using an RNAV system certified for IFR flight in accordance with appropriate ACs, VOR equipment must be installed and operable if the route is predicated on VOR. ADF equipment must be installed and operable if the route is predicated on NDB.

e) Section 135.163, Equipment Requirement: Aircraft Carrying Passengers Under IFR.

f) Section 135.165, Communication and Navigation Equipment: Extended Over-Water or IFR Operations.

1. The requirements of § 135.165 apply to both Class I and Class II navigation equipment requirements. Part 135 Class II navigation requirements are specified in Part B of the OpSpecs.

2. This regulation requires two independent systems for navigation compatible with the facilities to be used. For en route navigation (excluding terminal operations), the facilities that must be used, whether self-contained, ground-based, or space-based, must enable navigation to the degree of accuracy required for ATC. Airborne equipment requirements must also comply with Part B of the OpSpecs.

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3. If the route is navigated using an RNAV system installed and approved in accordance with the en route criteria of the applicable airworthiness certificates, two independent RNAV systems must be installed and operable. Dual VOR and/or dual ADF equipment is not required for en route operations when two independent RNAV systems, certified for IFR flight in accordance with the applicable ACs, are installed and operable and all elements of the support facilities are serviceable. For example, two independent GPS systems or one independent GPS system and some other approved independent RNAV system would be acceptable configurations.

4. Part B of the OpSpecs permits (under specified conditions) an approved RNAV system fix to be substituted for an ICAO ground-based NAVAID when that facility is temporarily out of service.

5. Unless routes are navigated using an RNAV system certified for IFR flight in accordance with the appropriate airworthiness certificates, two independent VOR systems must be installed and operable if the route is predicated on VOR and two independent ADF systems must be installed and operable if the route is predicated on NDB. Section 135.165(d) allows for the installation and use of a Single Long-Range Navigation System (S-LRNS) in specific geographic areas. This may be authorized by the issuance of OpSpec B054, Class II Navigation Using Single Long-Range Navigation System (S-LRNS).

g) Section 135.175, Airborne Weather Radar Equipment Requirements.

h) Section 135.215, IFR: Operating Limitations, specifies the degree of accuracy required when operating IFR outside of controlled airspace (e.g., Class G airspace and/or at an airport without an operating control tower). It also reflects the concept of “demonstrated ability” to safely conduct operations.

4-3 NAVIGATION CONCEPTS.

A. Concept of Navigation Performance. The concept of navigation performance involves the precision that must be maintained for both the assigned route and altitude by an aircraft operating within a particular area. Navigation performance is affected by the deviation (for any cause) from the route of flight specified in the ATC clearance. This includes errors due to degraded accuracy and reliability caused by the design and maintenance of airborne and ground-based navigational equipment and the flightcrew’s competency.

1) The concept of navigational performance is fundamental to the regulations and is best defined in §§ 121.103 and 121.121, which state that each aircraft must be navigated to “the degree of accuracy required for air traffic control.” Section 91.123 requirements related to compliance with ATC clearances and instructions also reflect this fundamental concept. The concept of navigational performance is also inherent in ICAO SARPs. For example, Annex 2 states that the aircraft “shall adhere to its current flight plan” (comply with the currently effective ATC clearance) and “when on an established ATS route, operate along the defined centre line of that route.”

NOTE: Various ICAO Planning and Implementation Regional Groups (PIRG) are considering the implementation of strategic lateral offset procedures, to be

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used at the pilot's option, whereby properly equipped aircraft can be flown offset 1 or 2 nautical miles (NM) to the right of centerline based on direction of flight. This procedure is designed to decrease the technical collision risk in the applicable airspace. An operational trial of this procedure is ongoing in the West Atlantic Route System (WATRS).

2) RNAV operations permit flight in any airspace with prescribed accuracy tolerances without the need to fly directly over ground-based navigation facilities. The application of RNAV techniques in various parts of the world has already been shown to provide a number of advantages over more conventional forms of navigation.

3) RNP is intended to provide RNAV performance standards that can be used and applied by aircraft and aircraft equipment manufacturers, airspace planners, aircraft certification and operations, pilots and controllers, and international aviation authorities. RNP, along with other aspects of communications, navigation, and surveillance, can be applied to obstacle clearance or aircraft separation requirements to ensure a consistent application level. RNP is a concept that applies to navigation performance within an airspace, and therefore affects both the airspace and the aircraft. RNP is intended to characterize an airspace through a statement of the navigation performance accuracy (RNP type) to be achieved within the airspace. The RNP type is based on a navigation performance accuracy value that is expected to be achieved by the population of aircraft operating within the airspace 95 percent of the time. Required levels of navigation performance (standards) vary from area to area, depending on traffic density and complexity of the routes flown. The implementation of RNP is part of ICAO's Global Air Navigation Plan for Communication, Navigation, and Surveillance (CNS) and supports ICAO's air traffic management (ATM) concepts. The end state of the transition is the implementation of free flight, allowing user-defined trajectory. The development of the RNP concept recognizes that current aircraft navigation systems are capable of achieving a predictable level of navigation performance accuracy and that a more efficient use of available airspace can be realized on the basis of this navigation capability. The carriage of specialized navigation equipment is a requirement in some regions and may become a requirement in others.

B. Concept of Operational Service Volume. Operational service volume is that volume of airspace surrounding an ICAO standard airways navigation facility that is available for operational use. Within that volume of airspace, a signal of usable strength exists that is not operationally limited by co-channel interference. Within this volume of airspace (the operational service volume), an ICAO standard ground-based NAVAID signal in space conforms to flight inspection signal strength and course quality standards including frequency protection. ICAO standard ground-based NAVAIDs are VOR, VOR/DME, and NDB. GPS has been accepted by ICAO as a standard NAVAID, however, a distinction is made between "standard ground-based NAVAIDs" and "standard NAVAIDs." "Standard ground-based NAVAIDs" have an operational service volume and "standard NAVAIDs" do not. The NAS of ICAO contracting member States are based on the operational service volume of these ground-based facilities, but GPS, by virtue of its universal signal coverage, is not restricted to an operational service volume. Navigational performance within the operational service volume and ATC separation minima can be predicated by the use of both standard ground-based NAVAIDs and standard NAVAIDs. The concept of operational service volume is critical for understanding and applying the principles of

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air navigation, as discussed in this handbook. Refer also to the Aeronautical Information Manual (AIM) for further discussion on operational service volume.

C. Categories of Navigational Operations. A thorough comprehension of the categories of navigational operations is essential to understand air navigation concepts and requirements discussed in this handbook and other documents. Understanding the categories of navigational operations is also essential for evaluating an operator's ability to navigate to the degree of accuracy required for the control of air traffic. In the broad concept of air navigation, two major categories of navigational operations are identified:

- Class I navigation.
- Class II navigation.

1) Class I Navigation. Class I navigation is defined as any en route flight operation conducted in controlled or Class G airspace that is entirely within operational service volumes of ICAO standard ground-based NAVAIDs (VOR, VOR/DME, NDB).

a) The operational service volume describes a three-dimensional volume of airspace within which any type of en route navigation is categorized as Class I navigation. For any type of navigation within this volume of airspace, IFR navigational performance must be at least as precise as IFR navigation is required to be using VOR or VOR/DME. It is important to understand that the definition of Class I navigation is not dependent upon the equipment installed in the aircraft. For example, an aircraft equipped and approved to use LORAN-C or GPS in the United States as the sole means of en route navigation is conducting Class I navigation when the flight is operating entirely within the operational service volume of Federal VORs and VOR/DMEs. In this example, if IFR operations are to be conducted, the IFR navigational performance of the LORAN-C or GPS must be as precise as IFR navigation is required to be using the ICAO standard ground-based NAVAIDs. In another example, a VFR flight navigated by pilotage is conducting Class I navigation when operating entirely within the operational service volume.

b) A determination of the lateral and vertical extent of the airspace where Class I navigation is conducted is determined solely by the operational service volumes of ICAO standard ground-based NAVAIDs (see Section 3 of this chapter). Class I navigation cannot be conducted outside of this airspace. Class I navigation also includes VFR or IFR navigation operations on the following:

- Federal airways.
- Published IFR direct routes in the United States.
- Published IFR off-airway routes in the United States.
- Airways, Advisory Routes (ADRs), direct routes, and off-airway routes published or approved by a foreign government, provided that these routings are continuously within the operational service volume (or foreign equivalent) of ICAO standard ground-based NAVAIDs.

c) Class I navigation requirements are directly related to separation minima used by ATC. IFR separation minima applied in the United States. NAS and most other countries are

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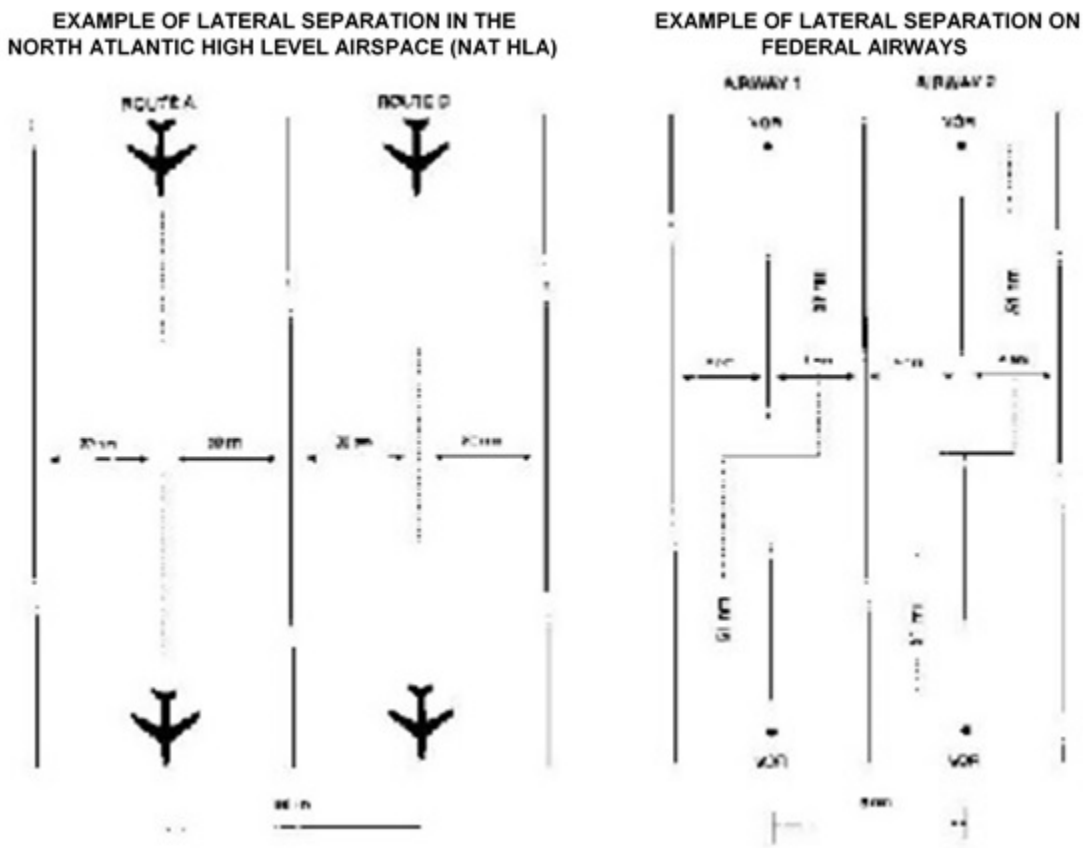
based on the use of ICAO standard ground-based NAVAIDs. However, these separation minima can only be applied by ATC within areas where the ground-based NAVAID signal in space meets flight inspection signal strength and course quality standards. An ICAO standard ground-based NAVAID signal in space conforms to flight inspection signal strength and course quality standards, including frequency protection, within its designated operational service volume. Therefore, air navigation and the safe separation of aircraft within that service volume can be predicated on the use of these facilities.

d) Within areas where the safe separation of aircraft is based on the use of ICAO standard ground-based NAVAIDs, any IFR operation must be navigated with at least the same accuracy as the accuracy specified by the appropriate national separation minima. The illustration following this paragraph provides several examples of Class I navigation.

Figure 4-1. Examples of Lateral Separation in the North Atlantic High Level Airspace and Lateral Separation on Federal Airways



2) Class II Navigation. Class II navigation is any en route operation that is not categorized as Class I navigation and includes any operation or portion of an operation that takes place outside the operational service volumes of ICAO standard ground-based NAVAIDs. For example, an aircraft equipped with only VOR conducts Class II navigation when the flight operates in an area outside the operational service volume of a VOR.

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a) Class II navigation involves operations conducted in areas where the signals from ICAO standard ground-based NAVAIDs have not been shown to meet flight inspection signal strength, course quality, and frequency protection standards. Therefore, ATC cannot predicate aircraft separation on the use of these facilities alone and must apply larger separation criteria.

b) When operating outside the operational service volume of ICAO standard ground-based NAVAIDs, signals from these stations cannot be relied upon as the sole means of conducting long-range operations to the degree of accuracy required for the control of air traffic or as the sole means of obstacle avoidance. Therefore, when operating outside the designated operational service volumes of ICAO standard ground-based NAVAIDs, operators must use LRNS approved to navigate to the degree of accuracy required for the control of air traffic and to avoid obstacles

c) It is important to understand that the definition of Class II navigation does not address the equipment installed in the aircraft. For any type of navigation within this volume of airspace, the IFR navigational performance must be at least as accurate as the navigational performance assumed during establishment of the ATC separation minima for that volume of airspace.

d) In the U.S. NAS, it is not uncommon for VFR flights at low altitude to conduct Class II navigation while outside the operational service volumes of ICAO standard ground-based NAVAIDs. Class II navigation includes transoceanic operations and operations in remote land areas. A more detailed discussion of Class II navigation is provided in Section 4 of this chapter.

D. GPS and Wide Area Augmentation System (WAAS) Navigation. GPS is a satellite-based radio navigation system that uses precise range measurements from GPS satellites to determine a precise position anywhere in the world. The GPS constellation consists of a minimum of 24 satellites in various orbital planes approximately 11,000 NM above the earth. The satellites broadcast a timing signal and data message that the airborne equipment processes to obtain satellite position and status data and to measure how long each satellite's radio signal takes to reach the receiver. By knowing the precise location of each satellite and precisely matching timing with the atomic clocks on the satellites, the receiver can accurately measure the time the signal takes to arrive at the receiver. Thus, the receiver can determine the satellite's precise position. A minimum of three satellites must be in view to determine a two-dimensional position. Four satellites are required to establish an accurate three-dimensional position. GPS equipment determines its position by precise measurement of the distance from selected satellites in the system and the satellite's known location. The accuracy of GPS position data can be affected by various factors. Many of these accuracy errors can be reduced or eliminated with mathematics and sophisticated modeling, while other sources of errors cannot be corrected. The following are examples of those errors that cannot be corrected:

- Atmospheric propagation delays can cause relatively small measurement errors, typically less than 100 feet. Ionospheric propagation delays can be partially corrected by sophisticated error-correction capabilities.

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- Slight inaccuracies in the atomic clocks on the satellites can cause a small position error of approximately 2 feet.
- Receiver processing (such as mathematical rounding and electrical interference) may cause errors that are usually either very small, which may add a few feet of uncertainty into each measurement, or very large, that are easy to detect. Receiver errors are typically on the order of 4 feet.
- Conditions that cause signal reflections before the satellite's transmitted signal gets to the receiver can cause small errors in position determination or momentary loss of the GPS signal. While advanced signal processing techniques and sophisticated antenna design are used to minimize this problem, some uncertainty can still be added to a GPS measurement.
- A satellite's exact measured orbital parameters (ephemeris data) can contain a small error of approximately 4 feet.

1) System Operation.

a) The Department of Defense (DOD) is responsible for operating the GPS satellite constellation and constantly monitors the GPS satellites to ensure proper operation. Every satellite's ephemeris data are sent to each satellite for broadcast as part of the data message sent in the GPS signal. The GPS is a system of Cartesian earth-centered, earth-fixed coordinates, as specified in the DOD World Geodetic System 1984 (WGS-84). Navigation values, such as groundspeed and distance and bearing to a waypoint, are computed from the aircraft's latitude/longitude and the location of the waypoint. Course guidance is usually provided as a linear deviation from the desired track of a great circle course between defined waypoints.

b) GPS navigation capability from the 24-satellite constellation is available 24 hours a day anywhere in the world. GPS status is broadcast as part of the data message transmitted by the satellites. Additionally, system status is available through NOTAMs and from the U.S. Coast Guard.

c) GPS signal integrity monitoring will be provided by the GPS navigation receiver, using receiver autonomous integrity monitoring (RAIM). For GPS sensors that provide position data only to an integrated navigation system (e.g., FMS, multi-sensor navigation system), a level of GPS integrity equivalent to that of RAIM may be provided by the integrated navigation system. Availability of RAIM capability to meet non-precision approach requirements in the United States with the 24-satellite constellation is expected to exceed 99 percent.

2) Selective Availability (SA). SA is a method by which the DOD can artificially create a significant clock and ephemeris error in the satellites. This feature is designed to deny an enemy nation or terrorist organization the use of precise GPS positioning data. SA is the largest source of error in the GPS system. When SA is active, the DOD guarantees horizontal position accuracy will not be degraded beyond 100 meters, 95 percent of the time, and beyond 300 meters, 99.99 percent of the time. The United States began discontinuing the use of intentional degradation, SA, May 1, 2000 until 2006 with an annual assessment of its continued use. Civilian users will realize a dramatic improvement in GPS accuracy with the discontinuation

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of SA. It is envisioned that SA will not be turned on unless a national emergency exists or is imminent.

3) GPS Performance. TSO-C145a/C146a, Avionics Equipment for Wide Area Augmentation Systems (WAAS), has been developed to improve the accuracy, integrity, availability, and reliability of GPS signals. It is a safety-critical system consisting of a ground network of reference and integrity monitor data processing sites that assess current GPS performance, as well as a space segment that broadcasts that assessment to Global Navigation Satellite System (GNSS) users to support IFR navigation. WAAS equipment has been designed to automatically use the WAAS data and ranging signal. The operational availability of navigation for WAAS-equipped operators in any given area may be ascertained by accessing the FAA NOTAM system (refer to TSO-C145a/C146a and RTCA DO229B, Minimum Operational Performance Standards for Global Positioning System/Wide Area Augmentation System Airborne Equipment).

a) Recent developments in navigation technology include the availability of WAAS-capable navigation systems approved under TSO-C145a/C146a. This equipment constitutes a significant improvement over the older GPS standards (TSO-C129) by the incorporation of new technology to provide enhanced signal integrity using WAAS, fault detection and exclusion (FDE), and RAIM. The improved navigation accuracy and flexibility of WAAS equipment will ultimately produce an increase in both system capacity and overall flight safety.

b) TSO-C145a provides the certification standards for airborne navigation WAAS sensors, while TSO-C146a refers to a WAAS standalone airborne navigation system. TSO-C145a/C146a equipment must be installed in accordance with the current edition of AC 20-138, Airworthiness Approval of Positioning and Navigation Systems.

c) For TSO-C145a equipment, the FMS must comply with TSO-C115b, Airborne Area Navigation Equipment using Multi-Sensor Inputs, and be installed in accordance with the current edition of AC 20-138, Airworthiness Approval of Positioning and Navigation Systems. When all provisions are met, including the installation of dual independent systems, these systems may be authorized for use as the only means of conducting IFR RNAV in the U.S. NAS.

d) FDE technology allows WAAS equipment to automatically detect a satellite failure that effects navigation and to exclude that satellite from the navigation solution.

e) RAIM is a function that considers the availability of satisfactory signal integrity broadcasted from the particular GPS satellites used during a given flight. Onboard GPS/WAAS navigators accomplish this automatically as the aircraft proceeds along its route. When insufficient signal integrity is detected, a ‘loss of integrity’ or RAIM alert is provided to the flightcrew. To support preflight planning, operators can identify outages that impact WAAS equipment through NOTAMs or by accessing an FAA-approved prediction program.

f) Under present regulations, operators certificated in accordance with 14 CFR part 119 proposing to use WAAS equipment as the only means of IFR navigation must have a

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TSO-C145a/C146a approach-capable navigation system installed and operating in their aircraft. In the event of a complete failure of WAAS and GPS navigation capability, operators must provide for reversion to another form of radio navigation or the navigation system must provide for an automatic positioning capability to ensure the flight can be safely continued to its destination or a suitable alternate.

4) Use of WAAS in Alaska Operations.

a) POIs should refer to Volume 3, Chapter 18, Section 4, OpSpec B030, IFR Navigation Using GPS/WAAS RNAV Systems, for issuance of OpSpecs that authorize WAAS RNAV operations in Alaska. OpSpec paragraph B030 is issued to those certificate holders identified in Section 1 of Special Federal Aviation Regulation (SFAR) 97 for IFR en route RNAV operations in Alaska and its airspace on published air traffic routes using TSO-C145a/C146a navigation systems as the only means of IFR navigation. The OpSpec also authorizes TSO-C145a/C146a navigational systems to be used for IFR en route operations at special minimum en route altitudes (MEA) that are outside the operational service volume of ground-based NAVAIDs, if the aircraft operation meets the requirements of Sections 3 and 4 of SFAR 97.

b) SFAR 97 is applicable to U.S. and foreign operations conducted in Alaska under parts 91, 121, 125, 129, and 135. The SFAR allows IFR operations using dual TSO-C145a/C146a GPS/WAAS systems as the only means of navigation on Federal airways and other published ATS routes in domestic airspace, both within and outside the operational service volume of ground-based NAVAIDs. The rule also authorizes the use of GPS-designated MEA for aircraft using TSO-C145a/C146a systems. These GPS MEAs along applicable routes are indicated on IFR charts in blue followed by the letter “G.” The SFAR also establishes training requirements for operators of TSO-C145a/C146a-equipped aircraft including training in service degradation and equipment failure modes.

E. Concept of the Degree of Accuracy Required for Control of Air Traffic. The fundamental concept for all IFR navigation standards, practices, and procedures is that all IFR aircraft must be navigated to the degree of accuracy required for control of air traffic.

1) When a flight adheres to the clearance assigned by ATC at all times, that aircraft is considered to be navigated to the degree of accuracy required for the control of air traffic. If an aircraft makes an unauthorized deviation from its assigned clearance, that aircraft has not been navigated to the degree of accuracy required for control of air traffic.

2) ATC separation minima establish the minimum lateral, vertical, and longitudinal distances that are used to safely separate aircraft operating within a specified area. Separation minima also represent the minimum level of overall navigation performance and a buffer that can be accommodated at any time without jeopardizing safety of flight. These separation minima have been established for IFR operations in controlled airspace. These standards are usually established through international agreement and implemented through national regulations. These minima are established for particular categories of navigational operation and specified areas. Examples of particular categories of navigational operations and specified areas include

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navigation on airways in the national airspace of ICAO member States and long-range navigation (LORAN) in oceanic or remote land areas.

3) For operations where ATC services are provided by the United States, separation minima are established by 14 CFR and ATC directives. For operations where ATSs are provided by contracting ICAO member States, separation minima are established by the national regulations of the member States (if established) and in ICAO documents. Operations in Class G airspace are not provided ATC services (aircraft are not separated by ATC). Separation minima are not normally established for Class G airspace. The prevention of collision is dependent upon the "see and avoid" concept and other practices discussed in Chapter 2, Section 3.

4) Separation minima applied for operations in the U.S. NAS can be found in the current edition of FAA Order 7110.65, Air Traffic Control. FAA Order 7110.83, Oceanic Air Traffic Control, prescribes separation minima in international oceanic airspace delegated to the United States by ICAO. ICAO Document 7030/4, Regional Supplementary Procedures, also prescribes separation minima in international airspace.

4-4 AUTOMATIC DEPENDENT SURVEILLANCE-BROADCAST (ADS-B).

A. ADS-B System. The ADS-B system:

1) Automatically and periodically transmits position, velocity, and other information with no pilot or controller action required for the information to be transmitted;

2) Is dependent on the aircraft position source (e.g., GNSS/GPS);

3) Is used for surveillance services, much like traditional radar; and

4) Is used to broadcast aircraft position and other data to any aircraft or ground station equipped to receive ADS-B.

B. ADS-B System Elements. The ADS-B system consists of three elements:

1) Avionics. Installed aircraft avionics gather, format, and transmit the message elements from the aircraft via a discrete frequency. ADS-B messages include at least the following elements:

- Aircraft horizontal position (latitude/longitude).
- Aircraft barometric altitude.
- Aircraft identification: the assigned, unique ICAO 24-bit address.
- Flight ID.
- Special Position Indicator (SPI).
- Emergency status.

NOTE: Flight ID, SPI, and the emergency status are the only message elements that can be modified by the flightcrew.

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2) Positioning Source. Position data is typically derived from GNSS/GPS to provide an aircraft's position.

3) Ground Radio Stations. The ground infrastructure must be in place to receive and process the message elements from aircraft and to provide the air traffic automation system with the necessary information for ATC surveillance and separation services.

C. ADS-B Out (Transmit) Functions. Different avionics packages and suites are available to support ADS-B Out. The transmission of message elements by ADS-B-equipped aircraft is known as ADS-B Out.

D. Position Source Dependency.

1) ADS-B derives horizontal and vertical position information from the positioning source on the aircraft, which is typically the GNSS/GPS navigation system. This can mean that the accuracy of the ADS-B system is directly related to the availability of the GPS constellation of satellites. In some installations, the altimeter is also used as an added vertical cross-check referred to as baro-aiding. The navigation service and the altimeter must be available and of sufficient quality in order to provide the required level of safety to meet air traffic separation services standards.

2) The ADS-B system is heavily dependent on the continued high performance of the avionics and position source. This dependency requires an operator to ensure that the planned operation can meet the performance requirements for the entire route and time of the flight. For this reason, certificate holders/operators should check the availability of the ADS-B service and GNSS/GPS (e.g., NOTAM) to ensure that ADS-B performance is available.

E. Air Traffic Separation Services.

1) Air traffic separation services using ADS-B enhances operations in several ways. ADS-B data is provided to ATC at a higher rate than existing radar surveillance, resulting in more accurate position information to the controller. This increased position accuracy enables more efficient and effective use of airspace.

2) Air traffic separation services using ADS-B are dependent on the quality and performance of the individual aircraft and the ground system. It is critically important that each piece of the system is operated and maintained in a manner that ensures design performance, supporting the approved safety levels associated with the operation.

F. Contingency Operations. A failure of any one component of the ADS-B system requires ATC to "fallback" to procedural separation standards. Therefore, service provider or certificate holder/operator reliance on ADS-B must be carefully weighed for the contingency operations, which may be required should the ground service, avionics, or positioning source fail.

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G. Automatic Dependent Surveillance-Broadcast (ADS-B)-Related Definitions.

1) ADS-B. A surveillance system in which an aircraft or vehicle to be detected is fitted with cooperative equipment in the form of a data link transmitter.

a) The aircraft or vehicle periodically broadcasts its GPS-derived position and other information such as velocity over the data link, which is received by a ground-based transmitter/receiver (transceiver) for processing and display at an ATC facility.

b) ADS-B is a system for airborne or surface aircraft, or other surface vehicles operating within the airport surface movement area, that periodically transmits a state vector (horizontal and vertical position, horizontal and vertical velocity) and other information.

c) ADS-B is a function on an aircraft or surface vehicle operating within the surface movement area that periodically broadcasts its state vector and other information. ADS-B is automatic because no external stimulus is required to elicit a transmission; it is dependent because it relies on onboard navigation sources and onboard broadcast transmission systems to provide surveillance information to other users.

d) ADS-B is an advanced surveillance technology where ADS-B Out-equipped aircraft share position, altitude, velocity, and other information with ATC and other appropriately equipped aircraft.

2) ADS-B Out.

a) The capability of an aircraft to periodically broadcast its position, velocity, and other information. ADS-B Out is automatic in the sense that no flightcrew or controller action is required for the information to be transmitted. It is dependent surveillance in the sense that the surveillance information depends on the navigation and broadcast capability of the source.

b) Transmission of an aircraft's position, altitude, velocity, and other information to other aircraft and ATC ground-based surveillance systems.

3) Extended Squitter (ES). A long message (e.g., format DF=17) that Mode S transponders transmit automatically, without need for interrogation by radar, to announce the own ship aircraft's presence to nearby ADS-B-equipped aircraft.

4) Global Navigation Satellite System (GNSS).

a) A worldwide position, velocity, and time determination system that includes one or more satellite constellations, receivers, and system integrity monitoring, augmented as necessary to support the RNP for the actual phase of operation.

b) The generic term for a satellite navigation system, such as GPS, that provides autonomous worldwide geospatial positioning and may include local or regional augmentations.

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5) Global Positioning System (GPS).

a) A space-based radio positioning, navigation, and time transfer system. The system provides highly accurate position and velocity information, and precise time (on a continuous global basis) to an unlimited number of properly equipped users. The system is unaffected by weather and provides a worldwide common grid reference system. The GPS concept is predicated upon accurate and continuous knowledge of the spatial position of each satellite in the system with respect to time and distance from a transmitting satellite to the user. The GPS receiver automatically selects appropriate signals from the satellites in view and translates these into three-dimensional position, velocity, and time. System accuracy for civil users is normally 100 meters horizontally.

b) A space-based position, velocity, and time system composed of space, control, and user segments. The space segment, when fully operational, will be composed of 24 satellites in 6 orbital planes. The control segment consists of five monitor stations, three ground antennas, and a Master Control Station (MCS). The user segment consists of antennas and receiver processors that provide positioning, velocity, and precise timing to the user.

c) A U.S. satellite-based radio navigation system that provides a global positioning service. The service provided by GPS for civil use is defined in the GPS Standard Positioning System Performance Standard, 4th Edition.

6) International Civil Aviation Organization (ICAO) 24-Bit Address. Address assigned to each aircraft transponder of an ADS-B transmitter. For aircraft equipped with Mode S transponders, their replies to TCAS interrogations and their ADS-B transmissions should use the same 24-bit address, allowing correlations by Airborne Surveillance and Separation Assurance Processing (ASSAP).

7) Mode S. A Secondary Surveillance Radar (SSR) system that operates using addressed interrogation on 1030 megahertz (MHz), and the transponder replies on 1090 MHz. Mode S systems interrogate for aircraft identity (Mode A), altitude (Mode C), and other aircraft-specific information. The aircraft transponder replies with the requested information. Mode S supports a two-way data link that provides ADS-B data through an ES.

8) Position Source.

a) The onboard avionics equipment that provides the latitude, longitude, geometric altitude, velocity, position and velocity accuracy metrics, and position integrity metrics. Additionally, the position source may provide the vertical rate parameters.

b) Within this OpSpec, RAIM is a synonym for Aircraft-Based Augmentation System (ABAS) and is used to refer to both RAIM and RAIM-equivalent algorithms.

9) Secondary Surveillance Radar (SSR). A radar sensor that listens to replies sent by transponders carried onboard airborne targets. SSR sensors, in contrast to primary surveillance radar (PSR) sensors, require the aircraft under surveillance to carry a transponder.

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10) Surveillance. Detection, tracking, characterization, and observation of aircraft, other vehicles, weather, and airspace status information and phenomena for the purposes of conducting flight operations in a safe and efficient manner. The primary purposes of traffic surveillance (as distinct from all surveillance functionality) are to control the flow of aircraft, to provide SA for pilots and controllers, and to separate aircraft.

4-5 THE CONCEPT OF AN ATC CLEARANCE. Issuance of an ATC clearance by a controller and the acceptance of this clearance by a pilot is a negotiation process that establishes conditions for the prevention of collision hazards (in flight and terrain).

A. Controller-Issued IFR Clearance. When a controller issues an IFR clearance, the controller agrees to reserve a three-dimensional block of airspace for that aircraft along the route defined in that clearance. The controller also agrees to issue clearances to all other controlled air traffic, ensuring safe separation.

B. Pilot-Accepted ATC IFR Clearance. When a pilot accepts an ATC IFR clearance, the pilot agrees to continuously remain within that three-dimensional block of airspace assigned by ATC, and adhere to the rules of flight for that operation. The pilot is obligated to comply with the clearance unless amended or an emergency is declared.

C. Expected Degree of Pilot Accuracy. The pilot is expected to navigate to the degree of accuracy required for ATC. A failure to navigate to the degree of accuracy required may create a flight safety hazard.

D. Nonradar or Non-ADS Environment. In a nonradar or non-ADS environment, ATC has no direct knowledge of the actual position of an aircraft or its relationship to other aircraft in adjacent airspace. Therefore, ATC’s ability to detect a navigational deviation and resolve collision hazards is seriously degraded when a deviation from an agreed-to clearance occurs.

RESERVED. Paragraphs 4-6 through 4-20.

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VOLUME 4 AIRCRAFT EQUIPMENT AND OPERATIONAL AUTHORIZATIONS

CHAPTER 1 AIR NAVIGATION, COMMUNICATIONS, AND SURVEILLANCE

Section 2 Air Navigation Approval Requirements

4-21 GENERAL. This section contains direction and guidance to be used by certification teams and inspectors when approving operator requests for air navigation operations. Inspectors approve these operations by issuing appropriate operations specifications (OpSpecs) paragraphs in part B of OpSpecs. Except for Class I navigation, the approval process normally requires validation testing. This section provides guidance specifically related to air navigation requirements.

4-22 SUBJECT FAMILIARIZATION AND APPROVAL REQUIREMENTS. Once an operator has requested approval for air navigation operations, it is essential that inspectors fully understand the concepts, national policies, standard practices, direction, and guidance related to the area of proposed operations. In addition, Federal Aviation Administration (FAA) navigation technical specialists are available to assist principal inspectors in understanding, evaluating, and approving air navigation operations.

A. Section Layout. Section 1 and subsequent sections of this chapter contain much of this information and additional references for more detailed information and guidance.

B. Processing Initial Requests. When processing initial requests for any air navigation operations involving Class II navigation, certification teams and principal inspectors must request guidance from a navigation specialist. Certification teams and principal inspectors must also request guidance from a navigation specialist for any operations involving "special areas of operation (e.g., Reduced Vertical Separation Minimum (RVSM), Required Navigation Performance (RNP), North Atlantic High Level Airspace (NAT HLA), West Atlantic Route System (WATRS))." Certification teams and principal inspectors must request guidance from a navigation specialist at one of the following locations:

- The San Francisco (SFO) International Field Office (IFO), or
- The operations section of the Flight Technologies and Procedures Division (AFS-400) (HQ).

4-23 DETERMINING THE CLASS OF NAVIGATION. The first determination that must be made concerning an air navigation approval request is the category of operation proposed. The inspector must determine whether the proposed operation is Class I navigation, Class II navigation, or both. The decisive factor in this determination is the operational service volume of International Civil Aviation Organization (ICAO) standard ground-based navigational aids (NAVAIDs) within the proposed area of operation. If the minimum en route flight altitudes specified and the locations of the ICAO standard ground-based NAVAIDs ensure that the flight will always be within the operational service volume, the entire en route operation is Class I navigation. In situations where the entire area of operation (at the minimum flight altitude specified) is outside (beyond) the operational coverage volume of ICAO standard ground-based NAVAIDs, the operation is Class II navigation. When portions of the proposed area of operation

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ensure that flights are continuously within the operational service volumes of ICAO standard ground-based NAVAIDs, that portion of the flight is Class I navigation and the remaining portion is Class II navigation (see Sections 3 and 4 of this chapter for in-depth discussions of Class I and Class II navigation). The Global Positioning System (GPS) has been accepted by ICAO as a standard NAVAID; however, a distinction is made between standard ground-based NAVAIDs and standard NAVAIDs. Standard ground-based NAVAIDs have an operational service volume and standard NAVAIDs do not. The NAS of ICAO contracting member States are based on the operational service volume of these ground-based facilities but GPS, by virtue of its universal signal coverage, is not restricted to an operational service volume. Navigational performance within the operational service volume and ATC separation minima can be predicated on the use of both ICAO standard ground NAVAIDs and ICAO standard NAVAIDs.

A. Flight Altitude. It is important to understand that the minimum flight altitude is a key factor in the determination of the category of navigation (Class I or Class II). The operational service volume of a particular standard ground-based NAVAID is heavily influenced by flight altitude. For example, at high altitude (above flight level (FL) 180), most very high frequency omnidirectional range stations (VOR) published for use at these altitudes have an operational service volume that extends to a radius of at least 130 nautical miles (NM) from the facility. However, at low altitudes (below 10,000 feet mean sea level (MSL)), the operational service volume of many VORs seldom exceeds 40 NM. Therefore, it is highly probable that for a route length of 260 NM between VORs, operations above FL 180 would be Class I navigation and operations conducted below 10,000 feet MSL would include both Class I and Class II navigation. The Class II navigation portion would begin at the edge of the operational service volume of the first VOR and end at the edge of the operational service volume of the second VOR. If the inspector determines that the proposal only involves Class I navigation, the direction and guidance in section 3 of this chapter will be used. If the proposal involves both Class I and Class II navigation, the direction and guidance in sections 3 and 4 of this chapter will be used for evaluation and approval or denial of the proposal.

NOTE: Refer to the Aeronautical Information Manual (AIM) for a more extensive discussion of operational service volume.

B. Range of Standard Ground-Based NAVAIDs. Generally, determination of the exact range (operational service volume) of the ground-based NAVAIDs intended to be used is not necessary. For example, a flight departing from the continental United States with a destination in Europe would obviously perform Class I and Class II navigation and require equipment appropriate for both. In other situations, it can be readily determined that flight operations will be conducted entirely within the operational service volume of standard ground-based NAVAIDs. However, sometimes a determination of the exact range of a NAVAID is required to evaluate compliance with the requirement for a reliable fix once each hour. In the United States, the frequency management branch (of Airways Facilities) in each region may be contacted to determine if a particular NAVAID has been flight checked to a range greater than standard.

C. Foreign/Remote Operations. In foreign countries and in oceanic/remote areas, this determination is more complex. In these cases, the determination is based on an equivalence to U.S. standards. In general, VOR, VOR/distance measuring equipment (DME) routes and fixes

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published in those areas are within the operational service volume (or foreign equivalent) of the ground-based NAVAIDs specified. However, most air traffic service (ATS) routes based on nondirectional radio beacons (NDBs) in oceanic/remote areas are Class II navigation over a considerable portion of the route. For example, the standard service volume (or coverage) of high powered NDBs seldom exceeds 75 NM. In special cases, a few NDBs have been evaluated by flight inspection and have an officially designated extended service volume significantly greater than 75 NM. National/regional Aeronautical Information Publications (AIP) and foreign flight inspection offices are the best and most up to date sources of information on the operational service volume of these NAVAIDs.

4-24 SPECIAL OPERATIONS. After determining whether a particular operation is Class I navigation, Class II navigation, or a combination of both, another important step is to determine if the operation involves any specific navigation authorizations to operate into special areas of operation or to use equipment or special navigation techniques.

A. Special Areas of Operation. Examples of special areas of operation include the following:

- Areas of Magnetic Unreliability (AMU).
- Polar operations.
- NAT HLA.
- Canadian MNPS airspace.
- Central East Pacific (CEPAC) airspace.
- North Pacific (NOPAC) airspace.
- Pacific Organized Track System (PACOTS).
- Restricted international areas.
- Arctic Ocean or Antarctic Ocean.
- West Atlantic Route System (WATRS) and the Caribbean Sea.
- South Atlantic (Atlantic routes).
- Gulf of Mexico control areas (Gulf routes).
- Reduced Vertical Separation Minimum (RVSM).
- Required Navigation Performance (RNP)-x (x is the value in nautical miles associated with an airspace or route that requires a specific RNP).

B. Special Navigation Equipment. Examples include:

- Private (non-Federal) NAVAIDs or broadcast stations (14 CFR part 171, Nonfederal Navigation Facilities).
- Area Navigation (RNAV).
- LORAN-C.
- Inertial navigation systems (INS) and inertial reference systems (IRS).
- GPS.

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C. Special Navigation. Methods of special navigation include the following:

- Pilotage,
- Use of a flight navigator,
- Celestial, and
- Free gyro or grid.

4-25 NAVIGATION EQUIPMENT.

A. Written Aircraft Eligibility Documentation. In all cases, it is necessary for the operator to provide written aircraft eligibility documentation that explicitly states that the aircraft is properly certificated, equipped, and maintained to perform the required functions for the specific type of navigation and other requirements related to any special operation (referred to in paragraph 4-24 above).

1) The written evidence may take the form of a type certificate (TC), supplemental type certificate (STC), Aircraft Flight Manual (AFM), AFM Supplement (AFMS), or Flight Standardization Board (FSB) Report. In certain cases involving special areas of operation, such as AMU, RNP airspace, RVSM, and NAT HLA, the airworthiness approval must reflect that these special requirements are also met.

2) The eligible aircraft must have equipment where the aircraft documentation explicitly states that the installation has received airworthiness approval for the type of operations in accordance with a Field Approval (FAA Form 337, Major Repair and Alteration (Airframe, Powerplant, Propeller, or Appliance)), airworthiness certificate, or other applicable documentation.

3) This determination must be coordinated closely with the principal avionics inspector (PAI) or the regional Flight Standards Airworthiness branch. It is FAA policy and guidance that the principal inspectors shall coordinate with one of the FAA navigation specialists (see paragraph 4-22 of this section). If the certificate holder or operator is not able to provide the principal inspectors with specific eligibility from the AFM, AFMS, or the FSB Report, official written equipment eligibility must be attained.

4) If the Flight Standards District Office (FSDO) is unable to determine equipment eligibility from the approved documentation, it should forward the request and supporting data through its FAA Flight Standards Regional Division to the appropriate Aircraft Evaluation Group (AEG). The AEG will verify that the aircraft and equipment meet the criteria for the specific operations and that the system can safely fly the specified operation. The AEG will provide written documentation (e.g., amend FSB Report or other official documentation) to verify the eligibility of that equipment.

B. Conventional Navigation Equipment. In the case of Class I navigation with conventional navigation equipment, such as VOR, VOR/DME, NDB, a statement in the FAA-approved AFM or STC that the navigation system and/or equipment is approved for instrument flight rules (IFR) flight is usually sufficient. For Class I navigation with other types of RNAV equipment, the equipment must be certified for IFR operations and installed and

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maintained in accordance with the FAA-approved documentation appropriate for that specific RNAV equipment.

C. Area Navigation (RNAV). RNAV provides enhanced navigational capability. RNAV equipment can automatically compute the airplane position, actual track, and ground speed and then provide meaningful information relative to a route of flight selected by the pilot. Typical equipment will provide the distance, time, bearing, and crosstrack error relative to the selected "TO" or "active" waypoint and the selected route. Several RNAV systems with different navigational performance characteristics are capable of providing area navigational functions. Present day RNAV equipment is considered to be equipment that operates by automatically determining aircraft position from one or a combination of the following sensors with the means to establish and follow a desired path:

1) VOR/DME,

2) DME/DME, or

3) INS must be approved under the provision of 14 CFR part 121, § 121.355 and Appendix G. This approval is not specifically required for 14 CFR part 135, but the same approval criteria apply.

4) LORAN-C systems must be approved for the area of operation under the provisions of AC 20-121, Airworthiness Approval of Airborne Loran-C Navigation Systems for Use in the U.S. National Airspace System (NAS), (or equivalent). See AC 90-92, Guidelines for the Operational Use of Loran-C Navigation Systems Outside the U.S. National Airspace System (NAS).

5) GPS systems must be approved in accordance with:

- AC 20-130, Airworthiness Approval of Navigation or Flight Management Systems Integrating Multiple Navigation Sensors;
- AC 20-138, Airworthiness Approval of Global Positioning System (GPS) Navigation Equipment for Use as a VFR and IFR Supplemental Navigation System; and
- AC 90-94, Guidelines for Using GPS Equipment for IFR En Route and Terminal Operations and for Nonprecision Instrument Approaches in the U.S. National Airspace System, as applicable.
- Technical Standard Order (TSO) C-129, Airborne Supplemental Navigation Equipment Using the Global Positioning System (GPS);
- TSO C-145, Airborne Navigation Sensors Using the Global Positioning System (GPS) Augmented by the Wide Area Augmentation System (WAAS); or
- TSO C-146, Stand-Alone Airborne Navigation Equipment Using the Global Positioning System (GPS) Augmented by the Wide Area Augmentation System (WAAS), and other installation criteria.

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6) Modern multi-sensor systems (such as IRS/flight management system (FMS)) can integrate one or more of the above sensors to provide a more accurate and reliable navigational system (see AC 20-130 and AC 25-15, Approval of Flight Management Systems in Transport Category Airplanes).

7) RNAV systems used for visual flight rules (VFR) operations (Class I and/or Class II) must reflect an approval for VFR use. RNAV systems used for IFR Class I navigation (except operations in the U.S. Class A airspace) and Class II navigation must reflect a statement that the system meets the reliability and performance criteria, that the system is approved for IFR flight, and if required, approved for any special areas of operation in accordance with the following ACs (latest editions) and TSOs, as applicable:

- AC 20-130.
- AC 20-121, Airworthiness Approval of Airborne Loran-C Navigation Systems for Use in the U.S. National Airspace System (NAS).
- AC 20-138.
- AC 25-4, Inertial Navigation Systems.
- AC 25-15.
- AC 90-94.
- TSO C-129.
- TSO C-145b.
- TSO C-146b.

4-26 TRAINING PROGRAMS AND MANUALS. Other important areas that must be considered are approved/ accepted training programs and approved/accepted company manuals for the equipment used. The training programs and company manuals must adequately address the special characteristics of the proposed area of operation and the operational (navigation) practices and procedures that must be used. Other sections of this chapter provide additional direction and guidance on some specific requirements for training programs and company manuals for the various navigation systems and/or areas of operation.

4-27 MINIMUM EQUIPMENT LISTS (MEL). Additionally, most approvals of navigation equipment and/or areas of operation new to a particular operator also require changes to the company MEL. In all cases, principal inspectors must review the company MEL to ensure that complete and accurate direction and guidance are provided to company personnel.

4-28 NAVIGATION PRACTICES, TECHNIQUES, AND PROCEDURES. Navigation practices, techniques, and procedures are other important parts of the approval process. They are especially significant in long range navigation systems and in operations using RNAV systems. The approval of these operations almost always necessitates changes in cockpit checklists and operating practices and procedures. Due to the complexity of these operations, the necessary changes must be determined on a case-by-case basis considering the operator, the equipment, and the area of operations.

4-29 VALIDATION TESTING REQUIREMENTS. It is essential for the inspector to evaluate the need for validation testing. In a simple case, such as approving Class I navigation in additional areas within the United States using conventional VOR/DME systems, a validation

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test is not necessary. However, in more complex cases, validation testing is essential to demonstrate the operator's capability and competence to safely conduct the proposed operation.

4-30 GUIDANCE FOR USE OF AIRCRAFT EQUIPMENT SUFFIXES. For guidance in the use of aircraft equipment suffixes, refer to the Aeronautical Information Manual or the ATC handbook, Order 7110.65. Any comments or inquiries concerning the criteria and guidance to qualify and use the equipment suffix should be directed to the Flight Technologies and Procedures Division, AFS-400 (HQ).

4-31 FAA APPROVAL OF GLOBAL POSITIONING SYSTEM (GPS) EQUIPMENT AND OPERATIONS.

A. Portable Units. Portable GPS receivers can only be used as a supplemental aid to VFR in conjunction with an approved primary means of navigation. All portable electronic systems and portable GPS units must be handled in accordance with the provisions of 14 CFR part 91, § 91.21. The operator of the aircraft must determine that each portable electronic device will not cause interference with the navigation and communications systems of the aircraft on which it is to be used. Yoke mounts usually sold with a portable GPS unit must be mounted as to not interfere with the operation of the aircraft controls. Permanent mounts and externally mounted antennas for use with a portable GPS unit must be installed in an FAA-approved manner. A critical aspect of any GPS installation is the installation of the antenna. Shadowing by the aircraft structure can adversely affect the operation of the GPS equipment. Operators should be aware that a GPS signal is weak, typically below the value of the background noise. Electrical noise or static in the vicinity of the antenna can adversely affect the performance of the system.

B. GPS Equipment Classes. GPS equipment is categorized into classes A, B, and C (refer to TSO-C129, TSO-C145, and TSO-C146). See Table 4-2.

Table 4-2. GPS Equipment Classes

TSO-C129						
EQUIPMENT CLASS	**RAIM**	**INTEGRATED NAVIGATION SYSTEM TO PROVIDE RAIM EQUIVALENT**	**OCEANIC**	**EN ROUTE**	**TERMINAL**	**NONPRECISION APPROACH CAPABLE**
Class A—GPS sensor and navigation capability						
A1	Yes		Yes	Yes	Yes	Yes
A2	Yes		Yes	Yes	Yes	No
Class B—GPS sensor data to an integrated navigation system (i.e., FMS, multi-sensor navigation system, etc.)						
B1	Yes		Yes	Yes	Yes	Yes
B2	Yes		Yes	Yes	Yes	No
B3		Yes	Yes	Yes	Yes	Yes
B4		Yes	Yes	Yes	Yes	No

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Table 4-2. GPS Equipment Classes (continued)

Class C—GPS sensor data to an integrated navigation system (as in Class B) that provides enhanced guidance to an autopilot or flight director to reduce flight technical errors. Limited to part 121 or equivalent criteria.						
C1	Yes		Yes	Yes	Yes	Yes
C2	Yes		Yes	Yes	Yes	No
C3		Yes	Yes	Yes	Yes	Yes
C4	Yes	Yes	Yes	Yes	No	

GPS APPROVAL REQUIRED FOR AUTHORIZED USE					
EQUIPMENT TYPE	**INSTALLATION APPROVAL REQUIRED**	**OPERATIONAL APPROVAL REQUIRED**	**IFR EN ROUTE**	**IFR TERMINAL**	**IFR APPROACH**
Hand Held	X				
VFR Panel Mount	X				
IFR En Route and Terminal	X	X	X	X	X
IFR Oceanic/ Remote	X	X	X	X	
IFR En Route, Terminal, and Approach	X	X	X	X	X

1) Class A is equipment incorporating both the GPS sensor and navigation capability. This equipment incorporates receiver autonomous integrity monitoring (RAIM). See subparagraph E for more discussion in regard to RAIM.

a) Class A1 equipment includes en route, terminal, and nonprecision approach navigation capability.

b) Class A2 equipment includes only en route and terminal navigation capability.

2) Class B is equipment consisting of a GPS sensor that provides data to an integrated navigation system (i.e., Flight Management System (FMS), multi-sensor navigation system, etc.).

a) Class B1 equipment includes RAIM and provides en route, terminal, and nonprecision approach capability.

b) Class B2 equipment includes RAIM and provides only en route and terminal capability.

c) Class B3 equipment requires the integrated navigation system to provide a level of GPS integrity equivalent to RAIM and provides en route, terminal, and nonprecision approach capability.

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d) Class B4 equipment requires the integrated navigation system to provide a level of GPS integrity equivalent to RAIM and provides only en route and terminal capability.

3) Class C is equipment consisting of a GPS sensor that provides data to an integrated navigation system (FMS, multisensor navigation system, etc.) that provides enhanced guidance to an autopilot or flight director in order to reduce flight technical error.

a) Class C1 equipment includes RAIM and provides en route, terminal, and nonprecision approach capability.

b) Class C2 equipment includes RAIM and provides only en route and terminal capability.

c) Class C3 equipment requires the integrated navigation system to provide a level of GPS integrity equivalent to RAIM and provides en route, terminal, and nonprecision approach capability.

d) Class C4 equipment requires the integrated navigation system to provide a level of GPS integrity equivalent to RAIM and provides only en route and terminal capability.

C. Avionics-Initial Installations and Continued Airworthiness. The operator must ensure that the equipment is properly installed and maintained. No special maintenance requirements, other than the standard practices currently applicable to navigation or landing systems, have been identified that are unique to GPS (e.g., Airworthiness Directives, Service Bulletins.)

1) Documentation must be provided that validates approval of the installed GPS airborne receiver in accordance with Handbook Bulletin HBAT 95-09, Guidelines for Operational Approval of Global Positioning System (GPS) to Provide the Primary Means of Class II Navigation and Remote Areas of Operation, AC 20-129 (latest edition), Airworthiness Approval of Vertical Navigation (VNAV) Systems for use in the U.S. NAS and Alaska, and AC 20-130 (latest edition), as appropriate, or other applicable airworthiness criteria established for GPS installations. When it has been established that the airborne system has been certified for GPS IFR operations, the following criteria should be used to determine the operational suitability of airborne systems for GPS IFR use.

2) A GPS installation with a TSO C-129 (or TSO C-145a or TSO C-146a, as applicable) authorized navigation system in Class A1, A2, B1, B2, C1, or C2 may be used in combination with other approved LRNS for unrestricted operations in NAT HLA or may be used as the primary means of long-range navigation on the special routes that have been developed for aircraft equipped with only one LRNS and on the special routes developed for aircraft equipped with short-range navigation equipment. The basic integrity for these operations must be provided by RAIM or an equivalent method. A single GPS installation in Class A1, A2, B1, B2, C1, or C2, that provides RAIM for integrity monitoring, may also be used on those short oceanic routes that have only one required means of long-range navigation.

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D. GPS Equipment Approval and Installation for Class II Navigation and Remote Areas. The approval of GPS to provide the primary means of Class II navigation requires equipment approval, installation approval, and operational approval. Primary means of navigation equipment is that which provides the only required means on the aircraft of satisfying the necessary levels of accuracy, integrity, and availability for a particular area, route, procedure, or operation.

1) In addition to specific aircraft certification requirements, dual long-range GPS receivers are required for GPS (TSO C-129) to be approved as a primary means of navigation in oceanic airspace. The equipment must be approved by the FAA Aircraft Certification Service (AIR) in accordance with AC 20-138 or AC 20-130 and HBAT 95-09.

2) The applicant must obtain initial installation approval of GPS equipment for primary use on a specific make and model aircraft via the TC or STC certification process. FAA Form 337 or forms acceptable to the Administrator for those operators with acceptable engineering organization will be used for the installation of the same GPS equipment in the same make/model aircraft provided the data developed for the initial certification is used.

3) Once the installation has been approved, the Aircraft Flight Manual Supplement (AFMS) must be updated to state: "The ____ GPS equipment as installed has been found to comply with the requirements for GPS primary means of Class II navigation in oceanic and remote airspace, when used in conjunction with the ____ prediction program. This does not constitute operational approval." Detailed requirements for AFMS content are contained in FAA Notice N8110.60.

E. System Availability.

1) Receiver autonomous integrity monitoring (RAIM) is a technique whereby a civil GPS receiver/processor determines the integrity of the GPS navigation signals using only GPS signals or GPS signals augmented with altitude. This determination is achieved by a consistency check among a series of satellites being tracked. At least one satellite in addition to those required for navigation must be in view for the receiver to perform the RAIM function.

2) Fault detection exclusion (FDE) is the capability of GPS to detect a satellite failure that effects navigation and automatically exclude that satellite from the navigation solution. All operators conducting GPS primary means of Class II navigation in oceanic/remote areas under parts 91, 121, 125, and 135 must utilize an FAA-approved FDE prediction program for the installed GPS equipment that is capable of predicting, prior to departure, the maximum outage duration of the loss of fault exclusion, the loss of fault detection, and the loss of navigation function for flight on a specified route. The "specified route of flight" is defined by a series of waypoints (to include the route to any required alternates) with the time specified by a velocity or series of velocities. Since specific ground speeds may not be maintained, the predeparture prediction must be performed for the range of expected ground speeds. This FDE prediction program must use the same FDE algorithm (a step-by-step procedure for solving a problem) that is employed by the installed GPS equipment and must be developed using an acceptable software development methodology. The FDE prediction program must provide the capability to manually designate satellites that are scheduled to be unavailable in order to

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perform the prediction accurately. The FDE prediction program will be evaluated as part of the navigation system's installation approval. The requirements for the FDE prediction algorithm can be found in FAA Notice N 8110.60 or its successor.

3) Operational control restrictions for Class II Navigation in oceanic and remote areas.

a) Prior to departure, the operator must use the FDE prediction program to demonstrate that there are no outages in the capability to navigate the specified route of flight (the FDE prediction program determines whether the GPS constellation is robust enough to provide a navigation solution for the specified route of flight). Any predicted satellite outages that affect the capability of GPS equipment to provide the navigation function on the specified route of flight requires that the flight be canceled, delayed, or rerouted.

b) Once navigation function is ensured (the equipment can navigate on the specified route of flight), the operator must use the FDE prediction program to demonstrate that the maximum outage of the capability of the equipment to provide fault exclusion for the specified route of flight does not exceed the acceptable duration (fault exclusion is the ability to exclude a failed satellite from the navigation solution). The acceptable duration (in minutes) is equal to the time it would take to exit the protected airspace (one-half the lateral separation minimum), assuming a 35 NM per hour cross-track navigation system error growth rate when starting from the center of the route. For example, a 60 NM lateral separation minimum yields 51 minutes acceptable duration (30 NM divided by 35 NM per hour). If the fault exclusion outage exceeds the acceptable duration, the flight must be canceled, delayed, or rerouted. If the fault exclusion capability outage (exclusion of a malfunctioning satellite) exceeds the acceptable duration on the specific route of flight, the flight must be canceled, delayed, or rerouted.

F. En Route Procedures for GPS Class II Navigation in Oceanic and Remote Areas.

1) If the GPS displays a loss of navigation function alert, the pilot should maintain heading and altitude until GPS navigation is regained. The pilot will report degraded navigation capability to ATC in accordance with part 91, § 91.187. Additionally, flightcrew members operating under 14 CFR part 121 will notify the appropriate dispatch or flight following facility of any degraded navigation capability in accordance with the air carrier's FAA-approved procedures. For at least one hour, the approved long-range GPS units have the ability to automatically provide electronic dead reckoning navigation solutions based on last known information. There are strict procedural requirements for dispatch and en route RAIM to ensure satellite coverage along the oceanic routes and that no outages are scheduled to occur during the planned flight. The standardized application of disciplined, systematic cross-checking of navigation information during all phases of flight during Class II navigation should be required in each operator's long-range navigation program. AC 91-70, latest edition, Oceanic Operations, provides amplification of these procedures.

2) If the GPS displays an indication that a fault detection function outage (e.g., RAIM) is not available, navigation integrity must be provided by comparing the GPS position with a position computed by extrapolating the last verified position with true airspeed, heading, and estimated winds. If the positions do not agree to within 10 NM, the pilot should

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immediately maintain heading and altitude until the exclusion function or navigation integrity is regained and report degraded navigation capability to ATC in accordance with § 91.187.

3) If the GPS displays a fault detection alert (failed satellite), the pilot may choose to continue to operate using the GPS-generated position if the current estimate of position uncertainty displayed on the GPS from the FDE algorithm is actively monitored. If this number exceeds 10 NM or is not available, the pilot should immediately maintain heading and altitude until the failed satellite is excluded and report degraded navigation capability to ATC in accordance with § 91.187.

4) Validation tests are required. Such tests may consist of a single flight or series of flights. The following references are provided:

- Part 121, § 121.93.
- Part 121, § 121.113.
- Part 135, § 135.13(a)(2).

G. Approved GPS Navigation System. An approved GPS navigation system may be substituted for both an automatic direction finder (ADF) and DME receiver, provided facility or fix coordinates can be called up from the current GPS airborne database. Waypoints, fixes, intersections, and facility locations used for these operations must be retrieved from the current GPS airborne database. If the required positions cannot be retrieved from the airborne database, the substitution of GPS for ADF and DME is not authorized.

1) For all operators, using GPS in lieu of DME does not preclude any equipage requirements of the applicable regulations. To provide navigation performance equivalent to ADF or DME avionics, the GPS navigation systems must be properly certified, installed, and authorized for use under IFR, as described above.

2) This approval does not alter the conditions and requirements for use of GPS when GPS is used to provide lateral course guidance to fly GPS or GPS RNAV standard instrument approach procedures.

3) For those operations where the operating rules require that DME be installed, the operator's MEL should include provisions for authorizing continued operations using a certified GPS when the installed DME is inoperative. Operators in the NAS may be authorized to use GPS equipment certified for IFR operations in lieu of ADF and DME equipment for the following operations:

- Determining the aircraft position over a DME fix. GPS satisfies the part 91, § 91.205e requirement for DME at and above 24,000 feet mean sea level (MSL) (FL240).
- Flying a DME arc.
- Navigating to/from an NDB/compass locator.
- Determining the aircraft position over an NDB/compass locator.
- Determining the aircraft position over a fix made up of a crossing NDB/compass locator bearing.

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- Holding over an NDB/compass locator.
- The ground-based NDB or DME facility may be temporarily out of service.

4) For further information on the use of GPS in lieu of DME, refer to the AIM.

4-32 FAA APPROVAL OF GPS/WIDE AREA AUGMENTATION NAVIGATION SYSTEMS (WAAS).

A. General. GPS/Wide Area Augmentation System (WAAS)-capable navigation systems are approved under TSO-C145a or TSO-C146a.

1) TSO-145a applies to GPS/WAAS sensors incorporated as a component of a flight management system (FMS).

2) TSO-146a applies to stand-alone GPS/WAAS units.

3) This GPS/WAAS equipment constitutes a significant improvement over the older GPS (non-WAAS) standards provided by TSO-C129 equipment, with technology that provides:

- Enhanced signal integrity using GPS/WAAS, FDE, and RAIM.
- Improved navigation accuracy, availability, and flexibility that will ultimately produce an increase in both system capacity and overall flight safety.
- Performance capabilities for new IFR RNAV routes that are currently under development for navigation in domestic and remote airspace.
- Performance accuracy to meet Required Navigation Performance (RNP)-2, RNP-1, and RNP-0.3; and the equivalent containment values in Table 4-3 below.

Table 4-3. RNP Types or RNAV Containment Values

RNP TYPE	REQUIRED ACCURACY (95 PERCENT CONTAINMENT)	DESCRIPTION
0.3	± 0.3 NM	Nonprecision, LNAV, VNAV, and some LPV approaches using GPS/WAAS
1	± 1.0 NM	Supports Arrival, Initial/Intermediate Approach, Departure and some En route applications
2	± 2.0 NM	Supports ATS routes and airspace

B. GPS/WAAS Equipment. Table 4-4, GPS/WAAS Equipment Classes, should be used to authorize the phase of flight (modes) and intended operational use when approving GPS/WAAS navigation systems.

1) TSO-C145a provides the certification standards for airborne navigation GPS/WAAS sensors, as part of an FMS, that is categorized into three classes.

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2) TSO-C146a GPS/WAAS equipment refers to a GPS/WAAS stand-alone airborne navigation system that is categorized into four classes.

3) TSO-C145a/C146a equipment must be installed in accordance with Advisory Circular (AC) 20-138, Airworthiness Approval of Global Navigation Satellite System (GNSS) Equipment, latest edition.

4) For TSO-C145a GPS/WAAS sensors, the parent FMS must comply with TSO-C115b (installed in accordance with AC 20-130).

Table 4-4. GPS/WAAS Equipment Classes

FOR TSO-C145A SENSORS AND TSO-C146A RECEIVERS			
EQUIPMENT CLASS	**OCEANIC AND DOMESTIC EN ROUTE, TERMINAL AREA OPERATIONS, NONPRECISION APPROACH**	**LNAV/VNAV APPROACHES**	**LATERAL PATH VERTICAL GUIDANCE (LPV) APPROACHES**
GPS/WAAS SENSOR [TSO-C145A]			
Class 1	Yes	No	No
Class 2	Yes	Yes	No
Class 3	Yes	Yes	Yes
GPS/WAAS NAVIGATION EQUIPMENT [TSO-C146A]			
Class 1	Yes	No	No
Class 2	Yes	Yes	No
Class 3	Yes	Yes	Yes
Class 4	No	No	Yes

C. IFR Operations in the NAS. GPS/WAAS equipment meets the performance accuracy for operations over all existing published or approved air traffic service routes including air traffic clearances “direct to” fixes or navigation aids. These routes, NAVAIDs, or fixes must be retrievable from the navigation database. When all applicable provisions outlined in Volume 4, Chapter 1, Section 2, paragraphs 4-31 and 4-32 are met, including the installation of dual independent systems appropriate to the route of flight, GPS/WAAS equipment may be authorized for use as the only means of navigation in conducting IFR navigation in the U.S. NAS. This requirement may be met with:

1) Dual Class 1, 2, or 3 (see subparagraph B and Table 4-4 above) GPS/WAAS TSO-C146a units;

2) Dual independent FMSs that comply with TSO-C115b (installed in accordance with AC 20-130, latest edition) with dual TSO-C145a, Class 1, 2 or 3 sensors (installed in accordance with AC 20-138, latest edition); or

3) A combination of one GPS/WAAS TSO-C146a unit and one FMS with a GPS/WAAS TSO-C145a sensor.

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NOTE: The FAA has certified GPS/WAAS systems as primary navigation systems and they can be used as the only means of navigation as long as the 14 CFR operating rules do not prohibit this use. Whereas, GPS navigation systems certified under TSO-C129 are limited as a supplemental means of navigation except for certain operation in oceanic and remote areas when TSO-C129 systems meet HBAT 95-09.

D. GPS/WAAS, TSO-C145a, or TSO-C146a (and subsequent revisions) Equipment Can Be Approved for Operations Where an Accuracy Performance of RNP-2, -1, or -0.3 is Required.

1) GPS/WAAS systems certified under TSO-C145a or TSO-C146a and installed in accordance with AC 20-138, latest edition, perform to the accuracy requirements of RNP-2, RNP-1, or RNP-0.3; and the equivalent containment values in Table 4-3 above.

2) A flight management system with a TSO-C145a sensor, and TSO-C146a units with documentation in the AFM or AFMS of the RNP types for the installed GPS/WAAS navigation system of RNP-2, -1, and -0.3 can be authorized for operations requiring those RNP types.

3) TSO-C145a and TSO-C146a GPS/WAAS equipment meet the performance requirements for operations over all existing published air traffic service routes and “direct to” routes authorized in an air traffic clearance. Navigation databases used in conjunction with these routes must be current and include the applicable published procedures.

4) TSO-145a and TSO-C146a equipment without an RNP statement in the AFM or Aircraft Flight Manual Supplement (AFMS), performs to the accuracy requirements of RNP-2, RNP-1, and RNP-0.3 when in en route mode, terminal mode, or nonprecision approach modes respectively and the installed equipment provides annunciation to the pilot of the mode that is in use. If the TSO-C146a equipment meets this requirement, it can be authorized for operations requiring those RNP types.

5) Operational approvals may be issued to authorize an operator to conduct approved or published en route, terminal, and approach procedures that require these specific RNP values if they meet the following general requirements. (This authorization could apply to any published or special en route, terminal, or approach procedure.)

a) The approved GPS/WAAS system must be installed and operating when conducting flights over the published or approved route segments or procedures.

b) Operators approved for en route segments using these RNP types should include modules in their training program that ensure the pilot’s ability to accurately maintain the aircraft’s position within the protected portions of the route or procedure using reduced course deviation indicator (CDI) guidance cues.

6) Questions concerning the operational approval for en route, terminal, or approach procedures requiring a published RNP should be directed to the appropriate FAA Regional All Weather Office (AWO) or AFS-400.

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E. Operational Approval for Operations in Alaska.

1) For operations in Alaska, see paragraph 4-31D, and SFAR 97, Special operating rules for the conduct of instrument flight rules (IFR) Area Navigation (RNAV) operations using global positioning systems (GPS) in Alaska.

2) OpSpec B030 is issued to those certificate holders and operators identified in section 1 of SFAR 97 for IFR RNAV en route operations in the State of Alaska and its airspace on published air traffic routes using navigation systems, certified in accordance with TSO-C145a/C146a, as the only means of IFR navigation appropriate for the route to be flown.

RESERVED. Paragraphs 4-33 through 4-50.

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VOLUME 4 AIRCRAFT EQUIPMENT AND OPERATIONAL AUTHORIZATION

CHAPTER 1 AIR NAVIGATION, COMMUNICATIONS, AND SURVEILLANCE

Section 4 Class II Navigation

4-76 GENERAL.

A. Concepts, Direction, and Guidance. This section provides concepts, direction, and guidance, which should be used by Federal Aviation Administration (FAA) inspectors to evaluate and approve or deny requests for authorization to conduct Class II navigation operations not previously approved for a particular operator. It also amplifies the general concepts, direction, and guidance provided in Section 1 of this chapter. Specific "standard practices" are provided in this section for evaluating Class II navigation operations using navigation systems that, within particular areas of en route operation, have well known operational characteristics and limitations. When an operator requests initial approval to conduct Class II navigation using a special means of navigation or in areas not addressed by these standard practices, the principal operations inspector (POI) must forward a request for direction and guidance to the Flight Technologies and Procedures Division (AFS-400) with a copy to the Regional Flight Standards Division.

B. En Route Flight Operation or Portion of a Flight Operation. Class II navigation is any en route flight operation or portion of a flight operation that is not Class I navigation. Any operation or portion of an en route operation is Class II navigation if it takes place outside the officially designated operational service volumes of ICAO) standard ground-based NAVAIDs, such as VOR, VOR/DME, and NDB. Class II navigation is dependent on the use of a LRNS. An LRNS may be satellite-based (Global Positioning System (GPS)), self-contained (e.g., inertial reference system (IRS)), or referenced to ground stations (e.g., long range navigation (LORAN-C)). Additional information on the concept of Class II navigation is provided in Sections 1 and 2. The various types of Class II navigation and the evaluation and approval or denial processes for these specific types are discussed in the following paragraphs.

4-77 INSTRUMENT FLIGHT RULES (IFR) CLASS II NAVIGATION. IFR Class II navigation is any Class II navigation operation conducted under IFR. The primary generic IFR Class II navigation requirements are identical to generic IFR Class I navigation requirements. However, in many cases, the means of navigation and the procedures/techniques necessary to satisfy these generic requirements are significantly different for IFR Class II navigation.

4-78 EQUIPMENT FOR IFR CLASS II NAVIGATION.

A. Electronic Long-Range Navigation Systems (LRNS). The vast majority of IFR Class II navigation operations are conducted using automatic electronic navigation systems. An automatic long-range navigation system must contain sensors that either detect motion or changes in geographic position and a computational capability that generates the guidance information necessary to adhere to the selected route centerline and determine arrival at selected waypoints. Navigation equipment must be capable of enabling the aircraft to be navigated within the constraints of the ATS to the accuracy requisite for the control of air traffic. Navigation systems can consist of a single unit or a combination of various sensors and computers. These

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various systems are collectively referred to as area navigation, or RNAV. Global Navigation Satellite System (GNSS), a space-based system (e.g., GPS), provides highly accurate coverage over most of the world. This section provides general direction and guidance that is appropriate to all automatic pilot-operated electronic LRNS. This equipment covers a wide range of capability and sophistication. The basic types of automatic LRNS are self-contained or position fixing and described in the following subparagraphs.

B. Self-Contained LRNS. These systems may be approved for IFR Class II navigation operations in accordance with Title 14 of the code of Federal Regulations (14 CFR) part 121, § 121.355. IRS and inertial navigation systems (INS) function as high precision navigation instruments, but are not position-fixing devices.

1) An INS is self-contained and does not depend on input from sources external to the aircraft. The initial geographic position (alignment) must be inserted. The inertial sensors detect aircraft movement by measuring acceleration and velocity. These factors are applied to the initial position to calculate subsequent changes in position. The INS precisely measures any change in an aircraft's direction of flight and uses this information to determine position, ground speed, and the course to be flown to the destination airport.

2) Since an INS is not a position-fixing device, it does not have the ability to detect position errors in flight. Errors induced while inserting the initial position can remain undetected by the system. If such errors are made, navigational guidance from the system will be erroneous throughout the flight.

3) The major limitations associated with INS are related to sensor inaccuracies and the possible increase in drift rates based on flight time. Operators must develop procedures to recognize and document INS errors.

4) The more sophisticated multi-sensor equipment is seen in the advanced RNAV systems. The flight management system (FMS) and other multi-sensor systems are integrated systems consisting of airborne sensor, receiver, and computer with both navigation and aircraft performance databases that provide optimum performance guidance to a display and automatic flight control system. The sensors included in multi-sensor system position determination include IRS, DME/DME, GPS, and LORAN C. Using the information available from these systems, the navigation system can continuously examine its own calculations and determine their validity. If the navigation system notes a gross discrepancy, the pilot will be alerted. For more information, see the current edition of AC 20-130, Airworthiness Approval of Navigation or Flight Management Systems Integrating Multiple Navigation Sensors.

C. Non Self-Contained LRNS (Position-Fixing). These systems may be approved for IFR Class II navigation operations in accordance with § 121.389.

1) LORAN-C.

a) An automatic LORAN-C is a position-fixing device. A LORAN-C system detects the aircraft's geographic position through measurements of the signals transmitted from ground-based stations. If usable signals can be received from at least four separate ground-based stations (three Lines of Position, or LOPs), position ambiguity can be detected and automatically

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resolved by the navigation system. Since LORAN-C is station-referenced, its accuracy can be affected by noise sources and signal irregularities. Since most automatic LORAN-C depend upon aircraft compass input, LORAN C cannot be used in areas of magnetic unreliability.

b) The accuracy of LORAN-C is not flight time-dependent. The accuracy of these systems is dependent on the signal quality, signal strength, and signal geometry (typical errors are less than 1 NM). The major limitation to the use of LORAN-C is inadequate signal coverage in most areas of the world. LORAN-C coverage is nonexistent in the Southern Hemisphere and only limited coverage exists in the Northern Hemisphere. See the following advisory circulars (latest editions) for more information:

- AC 20-101, Airworthiness Approval of Omega/VLF Navigation Systems for use in the U.S. National Airspace System (NAS) and Alaska.
- AC 20-121, Airworthiness Approval of Loran-C Navigation Systems for use in the U.S. National & Airspace System (NAS) and Alaska.
- AC 20-129, Airworthiness Approval of Vertical Navigation (VNAV) Systems for use in the U.S. National Airspace System (NAS) and Alaska.
- AC 20-130, Airworthiness Approval of Navigation or Flight Management Systems Integrating Multiple Navigation Sensors.
- AC 23-15, Small Airplane Certification Compliance Program.
- AC 25-15, Approval of Flight Management Systems in Transport Category Airplanes.
- AC 25-7, Flight Test Guide for Certification of Transport Category Airplanes.
- AC 61-89, Pilot Certificates: Aircraft Type Ratings.
- AC 90-92 CHG 1, Guidelines for the Operational Use of Loran-C Navigation Systems Outside the U.S. NAS.
- AC 90-92, Guidelines for the Operational Use of Loran-C Navigation Systems Outside the U.S. NAS.
- AC 90-94, Guidelines for using Global Positioning System Equipment for IFR En Route and Terminal Operations and for Nonprecision Instrument Approaches in the U.S. National Airspace System.
- AC 91-70, [Large AC] Oceanic Operations.
- AC 97-2, Data Base Standardization for the Global Positioning System (GPS) Overlay Program.
- AC 125-1, Operations of Large Airplanes Subject to 14 CFR Part 125.

2) GPS. GPS is a satellite-based radio navigation system that uses precise range measurements from GPS satellites to determine a precise position anywhere in the world (see AC 120-29A).

a) The approval of GPS to provide the primary means of Class II navigation requires equipment approval, installation approval, and operational approval. This subparagraph provides inspectors with information on the performance standards, procedures, and operational restrictions for using the GPS as a primary means of Class II navigation and guidance in the process to be used in granting operational approvals for the use of GPS.

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b) Operational references:

- AC 120-33, Operational Approval of Airborne Long-Range Navigation Systems for Flights Within The North Atlantic Minimum Navigation Performance Specification Airspace.
- Title 14 CFR part 91, § 91.703, Operations of Civil Aircraft of U.S. Registry Outside of the United States.
- Title 14 CFR Part 121, Subparts N and O.

c) Definitions.

1. Primary Means of Navigation. Navigation equipment that provides the only required means on the aircraft of satisfying the necessary levels of accuracy, integrity, and availability for a particular area, route, procedure, or operation.

2. Class II Navigation. Any en route flight operation or portion of an en route operation (irrespective of the means of navigation) which takes place outside (beyond) the designated operational service volume of ICAO standard airway navigation facilities (VOR, VOR/DME, NDB).

3. Fault Detection and Exclusion (FDE). Capability of GPS to:

a. Detect a satellite failure which effects navigation; and

b. Automatically exclude that satellite from the navigation solution.

4. Algorithm. A step-by-step procedure for solving a problem.

d) The PAI must determine that the GPS equipment is approved and installed in accordance with the following:

1. The equipment must be approved by the FAA Aircraft Certification Office (ACO) in accordance with Advisory Circular (AC) 20-138, Airworthiness Approval of Global Positioning System (GPS) Navigation Equipment for Use as a VFR and IFR Supplemental Navigation System; or AC 20-130, Airworthiness Approval of Multi Sensor Navigation Systems for Use in the U.S. National Airspace System (NAS) and Alaska; and Notice N 8110.57, GPS as a Primary Means of Navigation for Oceanic/Remote Operations.

2. The applicant must obtain initial installation approval of GPS equipment for primary use on a specific make and model aircraft via the type certificate (TC) or the Supplemental Type Certificate (STC) certification process. The FAA Form 337 or forms acceptable to the Administrator for those operators with acceptable engineering organizations will be used for the installation of the same GPS equipment in the same make/model aircraft provided the data developed for the initial certification is used.

3. Once the installation has been approved, the Aircraft Flight Manual Supplement (AFMS) must be updated to state: “The ____ GPS equipment as installed has been found to comply with the requirements for GPS primary means of Class II navigation in oceanic

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and remote airspace, when used in conjunction with the ____ prediction program. This does not constitute operational approval." Detailed requirements for AFMS content are contained in FAA Notice N 8110.57.

e) The POI must use the following guidance in granting operational approval:

1. POIs should contact AFS-400 to obtain technical/operational assistance.

2. Crew training must be modified to include modules that ensure crews are familiar with navigation equipment operations, data base updating procedures, pre-departure procedures, standard en route procedures, and contingency procedures (refer to 14 CFR part 121 subpart N).

3. The required flightcrew must have received training in the use of dual GPS as the only means of long-range navigation when completing PIC/SIC initial new hire and initial equipment flight training or when completing the latest recurrent training (refer to 14 CFR part 121 subpart O and Volume 3, Chapter 19).

4. POIs must ensure that the following predeparture policies and procedures are incorporated into pilot and where appropriate, dispatcher training/qualification programs and manuals:

a. All operators conducting GPS primary means of Class II navigation in oceanic/remote areas under 14 CFR parts 91, 121, 125, or 135 must utilize an FAA-approved FDE prediction program for the installed GPS equipment that is capable of predicting, prior to departure, the maximum outage duration of the loss of fault exclusion, the loss of fault detection, and the loss of navigation function for flight on a specified route. The "specified route of flight" is defined by a series of waypoints (to include the route to any required alternates) with the time specified by a velocity or series of velocities. Since specific ground speeds may not be maintained, the pre-departure prediction must be performed for the range of expected ground speeds. This FDE prediction program must use the same FDE algorithm that is employed by the installed GPS equipment and must be developed using an acceptable software development methodology (e.g., RTCA/DO-178B). The FDE prediction program must provide the capability to designate manually satellites that are scheduled to be unavailable in order to perform the prediction accurately. The FDE prediction program will be evaluated as part of the navigation system's installation approval.

b. Any predicted satellite outages that affect the capability of GPS equipment to provide the navigation function on the specified route of flight requires that the flight be canceled, delayed, or rerouted (see subparagraph 5D(3)). If the fault exclusion capability outage (exclusion of a malfunctioning satellite) exceeds the acceptable duration on the specific route of flight, the flight must be canceled, delayed, or rerouted.

c. Prior to departure, the operator must use the FDE prediction program to demonstrate that there are no outages in the capability to navigate on the specified route of flight (the FDE prediction program determines whether the GPS constellation is robust enough to provide a navigation solution for the specified route of flight).

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d. Once navigation function is ensured (the equipment can navigate on the specified route of flight), the operator must use the FDE prediction program to demonstrate that the maximum outage of the capability of the equipment to provide fault exclusion for the specified route of flight does not exceed the acceptable duration (fault exclusion is the ability to exclude a failed satellite from the navigation solution). The acceptable duration (in minutes) is equal to the time it would take to exit the protected airspace (one-half the lateral separation minimum) assuming a 35-nautical mile (NM) per hour cross-track navigation system error growth rate when starting from the center of the route. For example, a 60-NM lateral separation minimum yields 51 minutes acceptable duration (30 NM divided by 35 NM per hour). If the fault exclusion outage exceeds the acceptable duration, the flight must be canceled, delayed, or rerouted.

5. POIs must ensure that the following en route policies and procedures are incorporated into pilot and where appropriate, dispatcher training/qualification programs, and manuals:

a. If the GPS displays a loss of navigation function alert, the pilot should immediately begin using dead reckoning procedures until GPS navigation is regained. The pilot will report degraded navigation capability to air traffic control (ATC) in accordance with part 91, § 91.187. Additionally, flightcrew members operating under part 121 will notify the appropriate dispatch or flight-following facility of any degraded navigation capability in accordance with the air carrier's FAA-approved procedures.

b. If the GPS displays an indication of a fault detection function outage (RAIM is not available), navigation integrity must be provided by comparing the GPS position with a position computed by extrapolating the last verified position with true airspeed, heading, and estimated winds. If the positions do not agree to within 10 NM, the pilot should immediately begin using dead reckoning procedures until the exclusion function or navigation integrity is regained and report degraded navigation capability to ATC in accordance with § 91.187.

c. If the GPS displays a fault detection alert (failed satellite), the pilot may choose to continue to operate using the GPS-generated position if the current estimate of position uncertainty displayed on the GPS from the FDE algorithm is actively monitored. If this number exceeds 10 NM or is not available, the pilot should immediately begin using dead reckoning procedures until the failed satellite is excluded and report degraded navigation capability to ATC in accordance with § 91.187.

f) Validation tests.

1. Validation tests are required. Such tests may consist of a single flight or series of flights. The following references are provided:

a. Part 121, §§ 121.93, 121.113, and 135.13(a)(2).

b. Volume 3, Chapter 29, Section 8.

c. Volume 4, Chapter 1, Section 2.

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2. Program/document evaluation is required. As an element of the evaluation process, the POI should ensure that operator training programs and manuals contain the policies and procedures detailed in subparagraph e) of this paragraph (see Volume 4, Chapter 1, Section 2).

3. Whenever possible, one of the FAA navigation specialists should participate in the validation of operator programs and procedures for use of GPS as the primary means of Class II navigation.

4. Flight(s) required for validation tests.

a. The following is intended to provide broad guidance for the development of GPS/Class II navigation validation tests. The POI should consider each application on its own merit and apply judgment when developing validation test requirements. The POI should communicate the objective, duration and number of validation test flights required to the operator during Phase One of the approval process.

b. If an operator is requesting approval to conduct Class II Navigation with GPS, but has no previous experience in conducting Class II navigation, then the operator must conduct at least one flight in the Class II area of navigation where it intends to operate. This flight must be conducted as a nonrevenue operation with the exception that cargo may be carried.

c. If an operator is requesting approval to conduct Class II Navigation with an aircraft/GPS equipment combination with which it has not previously conducted Class II operations, the operator should be required to conduct a validation test flight(s). If the flight(s) is conducted in a Class I navigation area to simulate operation in a Class II Navigation area, then the flight(s) may be conducted in revenue operations. If the flight is conducted in a Class II navigation area, then it must be conducted as a nonrevenue flight with the exception that cargo may be carried.

d. The following conditions apply to validation test flights:

- At least one flight should be observed by an FAA aviation safety inspector (ASI).
- Dispatch procedures must be demonstrated for the Class II navigation area(s) where operations are intended to be conducted.
- The flight(s) should be of adequate duration for the pilots to demonstrate knowledge of dispatch requirements, capability to navigate with the system, and to perform normal and non-normal procedures.

e. Requests to deviate from this policy should be forwarded to Flight Technology Requirements Branch, AFS-430, FAA National Headquarters, Washington, DC, for consideration.

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g) Operation specifications (OpSpecs) authorizing flight in Class II airspace using GPS as the only means of long-range navigation must be issued or modified, as appropriate, prior to any air carrier operations being conducted in the Class II airspace. The appropriate operation specification paragraphs must be issued.

4-79 IFR CLASS II NAVIGATION APPROVALS. General direction and guidance on air navigation approvals are in Sections 1 and 2 of this chapter. Specific direction and guidance for approving IFR Class II navigation is discussed in the following subparagraphs and other sections of this chapter.

A. Degree of Accuracy Required. Inspectors must determine that the navigation equipment and operational procedures/techniques used permit reliable IFR Class II navigation to the degree of accuracy required for the control of air traffic. The degree of accuracy required for any IFR Class II navigation operation must provide for the following criteria:

- Meets regulatory requirements.
- Meets the standard practices in this order.
- Meets the requirements of Part B of OpSpecs.
- Provides accepted, safe operating practices.
- Permits the safe separation of aircraft.
- Assures obstacle avoidance along the route of flight.
- Assures adequate protection for persons and property on the ground.
- Permits reliable navigation to the intended destination and any necessary alternate or diversionary airports.
- Meets Required Navigation Performance (RNP) (if applicable).

B. Airworthiness of Navigation Equipment. Inspectors must determine that any required navigation equipment is airworthy for IFR flight and installed in accordance with approved data. The operator must provide written evidence that shows that any navigation system used for IFR Class II navigation meets the requirements of the intended operation. If the operation involves flight into special areas of operations (NAT HLA, Canadian MNPS airspace, Pacific Ocean airspace, areas of magnetic unreliability (AMU), etc.), the operator must also provide evidence that the installed equipment is Airworthy in accordance with requirements for the Special Areas of Operations (SAO). It is imperative that the Operations inspectors coordinate the installation and certification validations with the Maintenance and Avionics inspectors.

C. LRNS.

1) Any intended flight or portion of a flight outside of Class I airspace requires a Class II-capable LRNS or a flight navigator, unless the aircraft position can be “reliably fixed” at least once each hour in accordance with the provisions of part 121, § 121.389. LRNS are the primary means by which the IFR Class II navigation requirements can be met (see Section 5).

2) The use of LRNS or a flight navigator requires special navigation procedures/techniques.

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3) All IFR Class II navigation operations using LRNS shall use the practices and procedures recommended in the current edition of AC 91-70, Oceanic Operations, or equivalent procedures. Any deviation from the procedures in AC 91-70 must be coordinated through AFS-400 navigation specialists. Inspectors must determine that these practices and procedures are included in the certificate holder's approved training programs and operating procedures.

4-80 PLOTTING AND SYSTEMATIC CROSS-CHECKING OF NAVIGATION INFORMATION. During all phases of flight in Class II navigation the standardized application of disciplined, systematic cross-checking of navigation information shall be required in each operator's long-range navigation program. AC 91-70 provides amplification of these procedures.

A. Plotting Procedures. Plotting procedures have had a significant impact on the reduction of gross navigational errors. There is a requirement to plot the route of flight on a plotting chart and to plot the computer position, approximately 10 minutes after waypoint passage. Plotting may or may not be required, depending upon the distance between the standard ICAO ground-based NAVAIDs.

1) Plotting procedures are required for all turbojet operations where the route segment between the operational service volume of ICAO standard ground-based navigational aids exceeds 725 NM.

2) Plotting procedures are required for all turboprop operations where the route segment between the operational service volume of ICAO standard ground-based navigational aids exceeds 450 NM.

3) The Administrator requires plotting procedures for routes of shorter duration that transit airspace where special conditions exist, such as reduced lateral and vertical separation standards, high density traffic, or proximity to potentially hostile border areas.

4) Any existing approvals that differ from the plotting requirements in this paragraph and Class II navigation procedures should be reviewed and revised as necessary. Direction and guidance is available from the navigation specialists in coordination with AFS-400.

RESERVED. Paragraphs 4-81 through 4-95.

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VOLUME 4 AIRCRAFT EQUIPMENT AND OPERATIONAL AUTHORIZATIONS

CHAPTER 2 ALL WEATHER TERMINAL AREA OPERATIONS

Section 11 Introduction to Performance-Based Navigation Operations

4-451 MODERNIZATION OF THE NATIONAL AIRSPACE SYSTEM (NAS).

A. The Next Generation Air Transportation System (NextGen). NextGen is the modernization of the U.S. NAS and includes transformation to a performance-based NAS. Operations in the performance-based NAS are evolving with greater use of "coordinate-referenced" vice conventional "station-referenced" operations via the application of Performance-based Navigation (PBN) to air traffic routes, instrument procedures, and defined airspace.

B. PBN. PBN is a framework for defining performance and functional requirements through navigation specifications (NavSpecs) and provides a basis for the design and implementation of airspace, routes, and Instrument Flight Procedures (IFP). The two main components of PBN framework are Area Navigation (RNAV) and Required Navigation Performance (RNP). Since all operations in a performance-based NAS are based on RNAV capabilities, PBN flightpaths are not restricted to overflying ground-based Navigational Aids (NAVAID).

4-452 U.S. PBN EN ROUTE OPERATIONS, INSTRUMENT DEPARTURE PROCEDURES (DP), AND RNAV STANDARD TERMINAL ARRIVALS (STAR).

A. General. This paragraph provides guidance for Federal Aviation Administration (FAA) aviation safety inspectors (ASI) assigned to operators conducting aircraft operations under Title 14 of the Code of Federal Regulations (14 CFR) parts 91, 91 subpart K (part 91K), 121, 125, and 135 regarding NextGen operations and approval.

B. Authorizations. The following operations specifications (OpSpec)/management specifications (MSpec)/letters of authorization (LOA) are available for operators to request for RNAV authorization/approval.

- OpSpec B030, IFR Navigation Using GPS/WAAS RNAV Systems.
- OpSpec/Mspec/LOA B034, IFR Class I Terminal and En Route Navigation Using RNAV Systems.
- OpSpec/Mspec/LOA B035, Class I Navigation in U.S. Class A Airspace Using Area or Long-Range Navigation Systems.
- Opspec/Mspec/LOA C052, Straight-In Non-Precision, APV, and Category I Precision Approach and Landing Minima—All Airports.
- OpSpec/MSpec/LOA C063, Area Navigation (RNAV) and Required Navigation Performance (RNP) Terminal Operations.
- OpSpec C073, Vertical Navigation (VNAV) Instrument Approach Procedures (IAP) Using Minimum Descent Altitude (MDA) as a Decision Altitude (DA)/ Decision Height (DH).

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- OpSpec C300, 14 CFR Part 97 NDB, NDB/DME, VOR, and VOR/DME Instrument Approach Procedures Using Substitute Means of Navigation.
- OpSpec/MSpec/LOA C358, Special Restrictions for Foreign RNAV Terminal Instrument Procedures with RNP Lines of Minimums.
- OpSpec/MSpec/LOA C384, Required Navigation Performance Procedures with Authorization Required.

C. Policy. Principal operations inspectors (POI) should review and comply with the guidance for issuance of each OpSpec/MSpec/LOA contained in Volume 3, Chapter 18, Sections 3 through 5 for domestic operators, and Volume 12, Chapter 2, Sections 3 through 5 for 14 CFR part 129 foreign air carriers. POIs should issue these paragraphs to the operators for whom they are responsible, and make the operators aware of operating procedures as well as pilot knowledge and training guidance. The OpSpecs/MSpecs/LOAs are available in the Web-based Operations Safety System (WebOPSS).

D. Advisory Circulars (AC). Additional information may be found in the current editions of:

- AC 90-100, U.S. Terminal and En Route RNAV Operations;
- AC 90-101, Approval Guidance for RNP Procedures with AR; and
- AC 90-105, Approval Guidance for RNP Operations and Barometric Vertical Navigation in the U.S. National Airspace System and in Oceanic and Remote Continental Airspace.

NOTE: These ACs are available at http://www.faa.gov/regulations_policies/advisory_circulars/.

RESERVED. Paragraphs 4-453 through 4-485.

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VOLUME 4 AIRCRAFT EQUIPMENT AND OPERATIONAL AUTHORIZATIONS

CHAPTER 12 LETTER OF AUTHORIZATION FOR OPERATIONS IN SPECIAL AREAS OF OPERATION (SAO)

Section 1 Issue a Letter of Authorization

4-1286 PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

A. North Atlantic (NAT): 1406.

B. Other: 1402, 1404, and 1408.

C. PTRS Data Sheet. Complete the appropriate sections of the electronic PTRS Data Sheet (this is the Direct Entry Form in Enhanced Flight Standards Automation System (eFSAS).

1) Enter Title 14 of the Code of Federal Regulations (14 CFR) part 91 reference and activity number 1402 (Required Navigation Performance (RNP)), 1404 (Basic Area Navigation (B-RNAV)/Precision Area Navigation (P-RNAV)), 1406 (5433 for avionics; 3433 for maintenance) for NAT operations. Enter activity number 1408 (5434 for avionics; 3434 for maintenance) for other areas. PTRS codes for Reduced Vertical Separation Minimum (RVSM) are found in Volume 4, Chapter 10, Section 1, Evaluate an Operator's Application to Conduct Flight in Reduced Vertical Separation Minimum Airspace.

NOTE: Certificate Holders under 14 CFR part 125 will have operations specifications (OpSpecs) issued and A125 Letter of Deviation Authority (LODA) holders will be issued a letter of authorization (LOA).

2) Enter any comments as appropriate by clicking on the Add New Comment bar.

3) Select B (General Aviation Operations (GAOP)) or G (General Aviation Airworthiness (GAAW)) from the Primary Area dropdown menu.

4) Select code 643 (Waivers/Authorizations) in the Keyword dropdown menu.

5) Enter Opinion Code I (Information) and comments as appropriate.

6) Enter applicable Special Areas of Operation (SAO) under the Miscellaneous item in Section I (e.g., North Atlantic High Level Airspace (NAT HLA), RVSM, RNP 4, or RNP 10). Make the following entries in Section IV:

a) In the Comment Text field, enter the name, address, and telephone number of the responsible person for operations as stated on the LOA.

b) Enter Opinion code I.

7) At conclusion of an LOA project, PTRS codes from operations, avionics and airworthiness should be entered.

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4-1287 OBJECTIVE. The objective of this task is to verify crew qualifications, and aircraft eligibility and issue an LOA to a part 91 General Aviation (GA) operator planning a flight in an SAO. Guidance to inspectors issuing OpSpecs to air carriers and part 125 operators planning flights in an SAO is contained in Volume 4, Chapter 1, Section 5, Special Navigation Areas of Operation.

4-1288 BACKGROUND. SAOs are international airspace where Communication, Navigation, and Surveillance (CNS) performance standards are governed by international agreements, separation minimums are reduced, and the standards of CNS performance are strictly enforced. In this chapter, particular emphasis is on NAT HLA in the NAT region. Inspectors should be familiar with the information in this chapter, Volume 4, Chapter 1, Section 5, and NAT Doc. 007, North Atlantic Operations and Airspace Manual, before processing an LOA for operations in NAT HLA. Figure 4-70, Regulations Applicable to International Operations 14 CFR Parts 45, 47, and 91, at the end of this section, contains regulations that are applicable to SAO operations. If any questions should arise regarding the issuance of an LOA, inspectors should request guidance from a regional Next Generation Air Transportation System (NextGen) (AXX-220) SAO specialist, formerly known as navigation specialist.

4-1289 GENERAL REQUIREMENTS FOR OCEANIC OPERATIONS. Inspectors should be aware of the requirements imposed on operators for flights in an SAO. Operator, as used in this chapter, is defined as one who exerts operational control as defined in 14 CFR part 1, § 1.1. General guidance is contained within Volume 4, Chapter 1, Section 5. Flights across oceanic airspace into other states' airspace is complex and often requires multiple LOAs, therefore any questions regarding application or interpretation of this guidance must be addressed to your regional NextGen (AXX-220) SAO specialist, formerly known as a navigation specialist. Excellent resources available to inspectors and operators are the FAA's North Atlantic and Pacific Resource Guides for U.S. Operators, which incorporate FAA and international guidance specific to those regions. There is an ongoing change to apply RNP standards in airspace within many states that subscribe to ICAO standards. Inspectors and operators MUST refer to the state Aeronautical Information Publication (AIP) for each state's airspace they will be flying into, fly over, or use as an alternate.

- LOA B034, IFR Class I Terminal and En Route Navigation Using RNAV Systems, is required for operation in Europe, for Q-routes (high), for domestic T-Routes (low), or Y-Routes between Florida and Puerto Rico.
- LOA B036, Class II Navigation Using Multiple Long-Range Navigation System (M-LRNS), is required for U.S.-registered aircraft operating within RNP airspace for another state and is required before issuing LOA B039. LOA B036 can be used to authorize RNP 4 or RNP 10 for part 91 navigation in West Atlantic Route System (WATRS) or for navigation in the Pacific.
- LOA B039, Operations in North Atlantic High Level Airspace, is required for flights within the NAT HLA.
- LOA B046, Operations in Reduced Vertical Separation Minimum (RVSM) Airspace is required for U.S.-registered aircraft transiting the NAT HLA at RVSM altitudes. Refer to part 91, § 91.706 and appendix G.
- LOA B050, Authorized Areas of En Route Operation, Limitations, and Provisions, is issued for Special Federal Aviation Regulations (SFAR) approval.

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NOTE: Inspectors needing access to ICAO documents should contact their regional NextGen (AXX-220) SAO specialist, formerly known as navigation specialist. Consultations regarding SAO applications should be documented using specific tracking tools as outlined in Volume 3, Chapter 1, Section 1, subparagraph 3-4D, Online Posting of Application.

A. International Operations Procedures. A journey logbook required by International Civil Aviation Organization (ICAO) Annex 6, Operation of Aircraft, Part II, International General Aviation – Aeroplanes, for any aircraft engaged in international navigation and is regulatory for U.S.-registered aircraft under § 91.703. A sample log page should be submitted to the approving office. Operators are strongly encouraged to prepare an International Operations Procedures Manual inclusive of CNS procedures used while operating in an SAO. The International Operations Procedures Manual should be accessible to the flightcrew where they can reference specific procedures and contingencies that they may encounter for the route flown. The manual should include:

- Specific preflight, in-flight, and post-flight procedures;
- Flight planning;
- Designation of crewmember(s) responsible for inserting waypoints) and verification of waypoint insertions in the long-range navigation systems (LRNS);
- Procedures for logging equipment accuracy;
- Sample log depiction in the manual and submit sample log page to approving office;
- Plotting chart procedures, oceanic checklist and a completed sample chart, (incorporate an LRNS checklist with the regular aircraft checklists, and include procedures in case of LRNS equipment failure); and
- AIP for every state for which flight is intended over, or to airports in that state or an alternate in the state.

B. Communication Equipment Required. ICAO standards Annex 2, Rules of the Air, paragraph 3.6.5.1 state that an aircraft operated on a flight plan shall maintain continuous listening watch on the appropriate radio frequency and establish two-way communication, as necessary, with the appropriate air traffic control (ATC) facility, except as prescribed by the ATC authority in regard to an aircraft forming part of the air traffic pattern at a controlled airport. Refer to § 91.511, Communication and navigation equipment for overwater operations.

1) To maintain communication capability, high frequency (HF) communications equipment is normally required for each aircraft crossing the Atlantic, Pacific, WATRS, Caribbean, and Gulf of Mexico oceanic airspace. In the oceanic control areas (OCA) and flight information regions (FIR), very high frequency (VHF) coverage is not sufficient to ensure continuous two-way communications with ground stations.

2) VHF equipment shall include 121.5 MHz capability. Inspectors should verify that the operator has policy and procedures in place for the pilot(s) to maintain a listening watch on 121.5 MHz unless communication on another frequency prevents this. Frequency 121.5 MHz is not authorized for routine use; 123.45 MHz should be used for air-to-air communications.

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C. Navigation Equipment and Procedures. Approved navigation equipment must be installed in accordance with a Supplemental Type Certificate (STC) original type certificate (TC), or a field approval. In either case, the operations inspector should coordinate with the principal avionics inspector (PAI) and the regional NextGen (AXX-220) SAO specialist (formerly known as navigation specialist) to ensure that the equipment installation is acceptable. Navigation equipment requirements for an LRNS are addressed in the guidance located in Volume 3, Chapter 18, Section 4, Part B Operations Specifications – En Route Authorizations and Limitations, which addresses many of the issues specific to LOAs in special areas of navigation.

D. Surveillance Equipment and Procedures. ICAO Doc. 4444, Procedures for Air Navigation Services, states that "a procedural environment exists in those areas where surveillance coordination procedures are not available because at least one of the coordinating ATS units does not have a surveillance capability or the surveillance capabilities differ." Surveillance in oceanic and remote areas is often achieved with voice position reports. Some ATS units incorporate Automatic Dependent Surveillance-Broadcast (ADS-B), Automatic Dependent Surveillance-Contract (ADS-C) and, Controller-Pilot Data Link Communications (CPDLC), or voice position reports.

E. Crew Qualification Requirements. ICAO Annex 6, Part II, International General Aviation – Aeroplanes, and Part III, International Operations – Helicopters, establishes standards that the signature states agree to. ICAO signature states have regulations/rule that allows for enforceable regulatory action. The FAA uses § 91.703(A)(1)(2). Unless an exception is established by a state which is published in their AIP, the following stipulations are applicable for flights outside the jurisdiction of member states:

1) An operator shall ensure that all employees, when abroad, know that they must comply with the laws, regulations, and procedures of those states where they conduct operations, and also comply with the relevant laws, regulations, and procedures of their State of Registry.

2) An operator shall ensure that all pilots are familiar with the laws, regulations, and procedures pertinent to the performance of their duties that are prescribed for the areas to be traversed, the airports to be used, and the related air navigation facilities. The operator shall ensure that other members of the flightcrew are familiar with those laws, regulations, and procedures that are pertinent to the performance of their duties.

3) Operators shall ensure that all pilots in command (PIC) understand that if a deviation in an emergency situation violates local regulations or procedures, the PIC shall notify the appropriate local authorities without delay. If required by the state where the incident occurs, the PIC shall submit a report on any such violation to the appropriate authority of that state.

4) An operator shall not use a pilot as PIC of an aircraft on a route or route segment for which that pilot is not currently qualified until that pilot has satisfied the knowledge requirements of the following:

- The route to be flown and the airports to be used;
- The terrain and minimum safe altitudes;

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- The seasonal meteorological conditions;
- The meteorological, communication, and air traffic facilities, services, and procedures;
- Search and rescue procedures; and
- The navigational facilities and procedures, including any long-range navigation (LRN) procedures associated with the planned route.

F. Pilot Qualification. The minimum pilot qualification for any oceanic flight is a private pilot certificate. An instrument rating is required if operating at or above 5,500 feet pressure altitude in the NAT region. Some states (for example, Canada) require pilots to hold an instrument rating for operating at any altitude in the NAT region under their jurisdiction; therefore, it is imperative that pilots are acquainted with states' varying legislative requirements, which are found in each state's AIP. Pilots must comply with the regulations imposed by the State of Registry of the aircraft they are flying and with the regulations of countries in which they land or overfly. Irrespective of the mandatory requirements, inspectors should strongly recommend that all pilots hold a valid instrument rating. In addition to cross-country flight time, the demanding nature of the oceanic operational environment requires that the PIC meet the recency-of-experience requirements stipulated by the State of Registry, have adequate recent flight experience in the use of long-range CNS equipment, and training in dead reckoning navigation techniques.

G. Training Curriculum Content. Experience has clearly demonstrated that the presence of sophisticated navigational equipment on board an aircraft does not, by itself, ensure that the flightcrew will achieve a high level of safety performance. The rapid growth in traffic density and the complexity of CNS requirements in the SAOs makes it essential that operators provide adequate training for the personnel operating or maintaining the equipment. Inspectors must be proficient in using test equipment when returning navigation equipment back to operable service. Operating drills and procedures by flightcrew should also be included as required by ICAO Doc. 7030, Regional Supplementary Procedures. Questions concerning the acceptability of training should be referred to the regional NextGen (AXX-220) SAO specialist, formerly known as navigation specialist. Inspectors should strongly recommend that the crew qualifications include, at a minimum, the subjects listed below:

- ICAO operational standards, state regulations and differences found in the state AIP;
- General knowledge of airspace CNS requirements to include reduced separation standards;
- Oceanic error risk mitigations;
- Complete understanding of Strategic Lateral Offset Procedures (SLOP);
- ICAO measurement standards;
- Use of oceanic flight planning charts;
- Use of oceanic checklist;
- Sources and content of international flight publications;
- Itinerary planning;
- Preparation of ICAO flight plans, plotting charts, and flight logs to include equal time point (ETP) calculations;

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- Route planning within the special areas of operation where flights are to be conducted;
- En route and terminal procedures (different from U.S. procedures);
- Use of CNS equipment, procedures, and related contingencies;
- Structure of the SAO where the flights are to be conducted;
- Air traffic clearances;
- International meteorology, including significant weather charts, prognostic weather charts, tropopause prognostic charts, and terminal aerodrome forecasts (TAF), contingency procedures for weather diversions;
- Emergency procedures, including required emergency equipment, Search and Rescue (SAR) techniques, and navigation and communications equipment failure techniques; and
- If operations are to be conducted in areas of magnetic unreliability (AMU), specialized training must be given.

4-1290 SPECIAL AREAS OF OPERATION REQUIREMENTS.

A. When Authorization is Required. There is no requirement for a GA operator to obtain authorization for oceanic operations outside of a designated SAO. However, GA operators may call their inspector to obtain information on oceanic operations. Operators and inspectors should consult their regional NextGen (AXX-220) SAO specialist, formerly known as navigation specialist in this regard.

B. ICAO Requirements. When conducting oceanic flights, pilots of U.S.-registered aircraft must adhere to the U.S. regulations, ICAO Standards and Recommended Practices (SARP), and state regulations for the countries they overfly or where they land. Section 91.703 specifically addresses ICAO Annex 2, which ensures that ICAO standards are regulatory to operators of U.S.-registered aircraft operating in oceanic airspace. The Convention on International Civil Aviation, commonly known as the Chicago Convention, is the basis for this requirement. Pilots should also review Annex 6, Part II, International General Aviation – Aeroplane and Part III, International Operations – Helicopter.

4-1291 NAT REGION OCEANIC OPERATIONS.

A. NAT Region. Flights conducted over the NAT region shall be conducted in accordance with the instrument flight rules (IFR) when operated at or above flight level (FL) 60 or 600 m (2,000 ft) above ground, whichever is higher (refer to ICAO Doc. 7030, Regional Supplementary Procedures). Within the NAT region, two types of SAOs have been structured. The first of these is NAT HLA, which has been operational for many years. The second SAOs is RVSM airspace, § 91.706. RVSM airspace is any airspace or route where aircraft are separated by 1,000 feet vertically between FL 290 and FL 410 (inclusive). Requirements for operation in this airspace are contained in Advisory Circular (AC) 91-85, Authorization of Aircraft and Operators for Flight in Reduced Vertical Separation Minimum Airspace, as regulated by § 91.706 and Part 91 Appendix G, Operations in Reduced Vertical Separation Minimum (RVSM) Airspace.

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B. NAT HLA Dimensions. NAT HLA is that volume of airspace between FL 285 and FL 420 within the oceanic control areas of Bodo Oceanic, Gander Oceanic, New York Oceanic East, Reykjavik, Santa Maria, and Shanwick, excluding the Shannon and Brest Ocean Transition Areas.

C. NAT HLA Approval Process. All aircraft operating in NAT HLA are required to have a specified minimum navigation performance capability that has been approved by the State of Registry for GA/corporate aircraft and State of the Operator for commercial operators. The approval process includes all aspects of the required navigation accuracy, navigation equipment required, installation and maintenance procedures, and crew training. It is implicit in the concept of NAT HLA and essential to the application of the lateral separation minimums that all operations in NAT HLA achieve the highest standards of navigation performance accuracy. The approval process includes all aspects of the required navigation accuracy, navigation equipment required, installation and maintenance procedures. The following summarizes the obligations of the operator and crew operating under part 91 for flight in NAT HLA:

1) The operator must have an LOA from the State of Registry for that aircraft. U.S.-registered aircraft must have LOA B036 before being issued LOA B039 or B059, Canadian MNPS (C-MNPS);

2) The approved aircraft Multiple Long-Range Navigation System (M-LRNS) must be operational and checked for accuracy while airborne by the flightcrew, before entry into NAT HLA;

3) Operators must follow approved operating procedures while in NAT HLA, and must not deviate from their assigned clearance without prior ATC approval, except for emergency or weather contingencies;

4) Operators must advise ATC in the event of CNS equipment failure or navigation uncertainty;

5) There must be a high standard of supervision, monitoring, and cross-checking of data inserted into automatic navigation systems;

6) Operators must maintain coordination with ATC to ensure that misunderstandings over the route to be flown do not occur; and

7) RVSM authorization should be noted in the LOA for operators wishing to operate in RVSM airspace. RVSM authorization for U.S.-registered aircraft is LOA B046.

a) Additionally, for part 125 operators, approval to operate in RVSM airspace is indicated in Volume 3, Chapter 18, Section 4.

NOTE: Part 125 is NOT an ICAO-recognized operation. The operator, when filing their international flight plan, should identify whether they are a commercial or private operation. States will handle the flight according with a ramp check based on this identification code.

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b) Operators operating in RVSM airspace are required to participate in a monitoring program according to ICAO Annex 6, Part II, International General Aviation, Chapter 2.5. An RVSM approval is valid globally on the understanding that any operating procedures specific to a given region will be stated in the operations manual or appropriate crew guidance. ICAO Annex 6, Part II, Paragraph 2.5.2.7 states, "The State of Registry that has issued an RVSM approval to an owner/operator shall establish a requirement which ensures that a minimum of two aeroplanes of each aircraft type grouping of the owner/operator have their height-keeping performance monitored, at least once every two years or within intervals of 1,000 flight hours per aeroplane, whichever period is longer. If an owner/operator aircraft type grouping consists of a single aeroplane, monitoring of that aeroplane shall be accomplished within the specified period." ICAO Doc. 9574, Manual on Implementation of a 300 m (1,000 ft) Vertical Separation Minimum Between FL 290 and FL 410 Inclusive, also provides guidance in this area.

c) The operator can currently participate in the program by overflying a fixed-location Aircraft Geometric Height Measurement Element (AGHME). These elements in the United States are located near Atlantic City, NJ; Wichita, KS; Cleveland, OH; Phoenix, AZ; and Portland, OR. Elements in Canada are located in Ottawa, Ontario and Lethbridge, Alberta. European units are called a height monitoring unit (HMU). HMUs are located at Strumble, United Kingdom; Linz, Austria; Nattenheim, Germany; and Geneva, Switzerland. Operators also have the option to carry a portable GPS-based Monitoring Unit (GMU) to fulfill the RVSM monitoring requirement. They can do this by contacting either of the two FAA contract providers, which are Aeronautical Radio, Inc. (ARINC) RVSM and Cabin Safety Subject Index (CSSI) RVSM.

D. Navigation Performance Requirements. For approval of unrestricted operation in NAT HLA, an aircraft must be equipped with two fully serviceable and independent LRNSs. Acceptable LRNSs include an inertial navigation system (INS), a Technical Standard Order (TSO) FAA–approved Global Positioning System (GPS), and flight management computer systems (FMCS) with inputs from inertial reference systems (IRS), or approved GPS sensors. Each LRNS must be capable of providing a continuous indication of the aircraft's position relative to track. When coupled with an FMCS for automatic flight guidance, INS-IRS have demonstrated a capability to meet NAT HLA requirements. Some aircraft may carry two IRSs, but only one FMCS. Such an arrangement may meet track-keeping parameters, but does not provide the required redundancy (in terms of continuous indication of position relative to track or of automatic steering guidance) should the FMCS fail. In this case, dual FMCS is required to obtain unrestricted NAT HLA certification.

E. Routes for Aircraft with Only One LRNS. A number of special routes exist for aircraft equipped with only one LRNS or aircraft suffering a partial loss of navigation capability. These routes are within NAT HLA and require an LOA. Aircraft that are equipped with normal short-range navigation equipment (VHF omnidirectional radio range (VOR)/distance measuring equipment (DME), Automatic Direction Finding (ADF)) and at least one fully operational LRNS are capable of meeting the requirements of NAT HLA while operating along the special routes/Blue Spruce routes. Continuous VHF coverage exists on these routes at FL 310 and above, except as depicted on current aeronautical charts. Inspectors issuing LOA B039 for routes

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approved for aircraft with only one LRNS must note this under paragraph 3, Table 2. The special routes, known as Blue Spruce routes, are found in:

- Iceland AIP. Source document for special routes/Blue Spruce routes and detailed information about route definitions and operating procedures, which enables flight along other special routes within NAT HLA.
- NAT Doc. 007, North Atlantic Operations and Airspace Manual.
- Atlantic Orientation Charts.
- Transport Canada Aeronautical Information Manual (TC AIM), Section RAC 11.20.4 Special Routes for Aircraft Fitted with a Single Long-Range Navigation System.

F. Routes for Aircraft with Short-Range Navigational Equipment. Special routes of short stage lengths flown by aircraft with short-range navigation equipment (VOR/DME, ADF), require LOA B039 for operation within NAT HLA. Inspectors issuing B039 LOA for routes approved for aircraft with short-range navigational equipment must note this equipment under paragraph 4, Table 3, Airplanes with Only Short-Range Navigation Equipment, VOR, DME, and ADF Authorized to Use Special Routes of Short Stage Lengths Only in NAT HLA Airspace. The special routes of short stage lengths can be found in:

- Iceland AIP, Section ENR 1.8.
- NAT Doc. 007.
- Atlantic Orientation Charts.
- TC AIM, Section RAC 11.20.4.
- Consult with your regional NextGen (AXX-220) SAO specialist (formerly known as navigation specialist) to determine if aircraft equipped with only short-range navigation equipment meet the legal requirements for operation in the NAT HLA.

G. Special Provisions for Aircraft Not Equipped for Operation in NAT HLA to Climb or Descend Through NAT HLA. Some aircraft, particularly higher performance international general aviation (IGA) aircraft, operate at FLs above the upper limit of NAT HLA (above FL 420). Depending on their point of departure, such aircraft often require a comparatively brief penetration of NAT HLA. In order that these aircraft are not unduly penalized by excluding them from operating at their most economic cruising level, the NAT Systems Planning Group (NAT SPG) makes provisions for climb and descent through NAT HLA. The NAT SPG agreed to the following provisions on the understanding that the states concerned would publish them in the relevant AIP, stating the VOR/DMEs they will use and indicating those parts of the NAT HLA that may be affected by this procedure. The responsible ATC unit that directs an aircraft to climb or descend through NAT HLA may clear aircraft not equipped for operation in NAT HLA provided the following circumstances exist:

- The climb or descent can be completed within the usable coverage of selected VOR/DMEs and/or within the radar coverage of the ATC unit issuing such clearance;
- The aircraft is able to maintain direct pilot-controller communications on VHF; and

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- The application of this procedure does not penalize NAT HLA-authorized aircraft operating in that part of the NAT HLA affected by such climb or descent.

4-1292 USE OF GPS EQUIPMENT. The FAA Satellite Navigation Team provides satellite (GPS)-based Positioning, Navigation, and Timing (PNT) services in the United States to enable performance-based (RNP/Area Navigation (RNAV)) operations for all phases of flight from en route, terminal, approach, and surface navigation. The Web site located at: http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/techops/navservices/gnss/ provides GPS, Ground Based Augmentation System (GBAS) and Satellite-based Augmentation System (SBAS) information. Guidance for Air Navigation, Communications and Surveillance is found in Volume 4, Chapter 1, Sections 1 through 6.

4-1293 FAA DOCUMENTATION AND EVALUATION OF GPS EQUIPMENT.

A. Avionics. Documentation must be provided that validates approval of the installed GPS airborne receiver in accordance with the current editions of FAA Order 8110.48, How to Establish the Certification Basis for Changed Aeronautical Products, and AC 20-138, Airworthiness Approval of Positioning and Navigation Systems, as appropriate, or other applicable airworthiness criteria established for GPS installations.

B. Initial Installations and Continued Airworthiness. The operator must assure that the equipment is properly installed and maintained. No special requirements, other than the standard practices currently applicable to navigation or landing systems, have been identified that are unique to GPS (e.g., Airworthiness Directives (AD) or Service Bulletins (SB)).

C. Action. Aviation safety inspectors (ASI) must evaluate installation, crew capabilities, and operational responsibilities relative to GPS oceanic operations prior to issuing an LOA for operation in NAT HLA. An avionics inspector should evaluate the avionics installation and must confirm that the aircraft is properly configured prior to the issuance of an LOA to operate in NAT HLA. Specific items to check are as follows:

1) Navigation systems. Check AC 20-138 for use as a visual flight rules (VFR) and IFR supplemental navigation system. This AC addresses the following avionics:

- GPS equipment including those using GPS augmentations.
- RNAV equipment integrating data from multiple navigation sensors.
- RNAV equipment intended for RNP operations.
- Barometric vertical navigation (baro-VNAV) equipment.

2) Receiver autonomous integrity monitoring (RAIM) or an equivalent method must provide the basic integrity for these operations.

3) The GPS operation must be conducted in accordance with the FAA-approved flight manual or flight manual supplement, if required.

4) Procedures must be established for use in the event that significant GPS navigation outages are predicted to occur. In situations where pilots encounter this, the flight

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must rely on other approved equipment that meets navigation performance standards for the duration of the flight, or delay the departure, or cancel the flight.

5) Aircraft navigating by GPS are considered to be RNAV aircraft. Therefore, the appropriate equipment suffix must be included in the ATC flight plan.

4-1294 FLIGHT INFORMATION. Operators must supply and ensure that the information necessary to plan, conduct, and control operations is available to operational control and flightcrew personnel. You can obtain most of this data through subscriptions to a government service or to a commercial aeronautical information and charting service. Operators should expect to supplement these services if necessary and, in all cases, are responsible for ensuring that the information used is accurate and complete. This data includes Notices to Airmen (NOTAM), track messages, and airport obstruction data, when applicable. A 24-hour voice GPS constellation status is available by calling (703) 313-5907 and GPS RAIM prediction is available at http://sapt.faa.gov.

A. Airport and Facilities. The Airport/Facility Directory (A/FD) contains information on airports and facilities that flightcrew members and operational control personnel need. Operators should obtain this information from the AIPs of the country for operations outside the United States. In addition, inspectors should ensure that operators understand their requirement to make the A/FD information available to their personnel.

B. NOTAMs. Guidance for NOTAMs is found in Volume 3, Chapter 26, Section 6, Notices to Airmen. Domestic and ICAO NOTAMs can be found on the Internet at https://pilotweb.nas.faa.gov/PilotWeb. This site is sponsored by the FAA Aeronautical Information Management Office and provides access to current NOTAM information from the United States NOTAM System. Operators are reminded that flight planning services purchased from vendors are not at this time subject to FAA oversight, and the quality, accuracy, and completeness of such services is the sole responsibility of the pilot in command (PIC). These services include but are not limited to: computerized flight plans, flight plan filing, NOTAMs, weather information, and AIPs. Particular attention should be given to § 91.703 and the requirements therein.

NOTE: International and Airspace NOTAMs are published in the Notices to Airmen Publication (NTAP), Part 3, International Notices to Airmen. Operators should ensure that this information is made available to the PIC and operations personnel (dispatchers) for any international flight.

C. Track Messages. Messages containing the coordinates of routes operators will follow on flexible track systems, such as the NAT-Organized Track System (OTS), are transmitted approximately every 12 hours. The North Atlantic Tracks issued by Shanwick Center (EGXX) and Gander Center (CZQX) can be found at www.notams.faa.gov/common/nat.html. Western Pacific and Northern Pacific Track NOTAMs are available as international NOTAMs under the location identifiers of the respective air route traffic control center; examples are Oakland Center (KZOA), Oakland OCA/FIR (KZAK) or Anchorage Center (PAZA) which can be found at https://pilotweb.nas.faa.gov/PilotWeb/. Flightcrews operating over these routes are required to have the current track message available in the cockpit to verify flight plan coordinates, should

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an in-flight rerouting become necessary. Inspectors must ensure that an operator's operational control personnel have this information for flight planning and flight monitoring purposes.

NOTE: ICAO procedures routinely require operators flying in or above a track system to have a current track message onboard. This also applies to operators flying a random route in the SAO. Operators should consult ICAO Doc. 7030 for area specific requirements for track messages.

4-1295 PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. This task requires knowledge of FAA policies, pertinent ICAO standards, and other applicable regulations and qualification as an ASI (Operations, Avionics, and Airworthiness). Enforcement authority falls under § 91.703(A)(1)(2).

B. Coordination Requirements. This task requires coordination with the regional NextGen (AXX-220) SAO specialist (formerly known as navigation specialist), and may require assistance from FAA headquarters (HQ) airworthiness unit, and the avionics unit.

4-1296 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- Title 14 CFR Parts 61 and 91.
- TSO C-145, Airborne Navigation Sensors Using the Global Positioning System Augmented by the Satellite Based Augmentation System.
- TSO C-146, Stand-Alone Airborne Navigation Equipment Using the Global Positioning System Augmented by the Satellite Based Augmentation System.
- ICAO Annex 2, Rules of the Air.
- ICAO Annex 6, Part I – International Commercial Air Transport – Aeroplane.
- ICAO Annex 6, Part II – International General Aviation – Aeroplane.
- ICAO Annex 6, Part III – International Operations – Helicopter.

B. Forms. FAA Form 8000-36, Program Tracking and Reporting Subsystem Data Sheet.

C. Job Aids. Format for LOA B039 to operate in the NAT HLA can be found on Web-based Operations Safety System (WebOPSS).

4-1297 THE APPROVAL PROCESS. The approval process for oceanic operations is used to ensure that those operations meet regulatory standards and provide for safe operating practices. The inspector must ensure the operator has a clear understanding of the minimum requirements that constitute an acceptable submission. Ensure the operator has a clear understanding of the minimum requirements that constitute an acceptable submission. The process consists of five phases that result in approving or not approving an applicant's proposal. The inspector must:

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- Accurately assess the character and scope of the proposal;
- Determine if a demonstration is required;
- Determine the need for any coordination requirements; and
- Determine the date the operator intends to implement the proposal.

4-1298 NAT HLA OPERATIONAL APPROVAL. In the United States, operational approval to fly in NAT HLA for part 91 operators is obtained by the issuance of LOA B039. LOA B046 must be issued if the operator will fly at altitudes from FL 290 to FL 410 in NAT HLA. During initial inquiries, it is important for the FAA and the operator to become familiar with the subject matter in phase 1. The operator and FAA inspector should contact their regional NextGen (AXX-220) SAO specialist, formerly known as navigation specialist. Authorization for operations in NAT HLA requires FAA approval of crew qualifications as described in Volume 3, Chapter 18, Section 4, the current edition of AC 91-70, Oceanic and International Operations, approval of equipment installation and maintenance procedures, and verification that the ICAO Annex 6 requirements for navigation equipment redundancy are satisfied. PTRS entries will ensure that a database of all FAA approvals for operation in SAOs is maintained and available. Additionally, reports of oceanic operations deviations will be available from Oceanic Evens Review Committee (OERC) PTRS entries. These databases will ensure that the United States meets two specific obligations as an ICAO member state. These obligations are that the states should maintain detailed records of all current IGA approvals and that the responsibility for enforcement of flight rules that apply over the high seas rests with the aircraft's State of Registry for GA/Corporate operators and the States of the Operators for commercial operations.

4-1299 PHASE ONE. Phase one is initiated when an applicant inquires about the need for an LOA.

A. Purpose of the LOA. Operators of U.S.-registered aircraft must be authorized by the Administrator to conduct operations in NAT HLA. All LOAs will have a PTRS tracking number. If new equipment has been installed or a different person is responsible for international crew qualifications, a new application for a LOA is required to replace the previous LOA. LOAs must be carried on the aircraft at all times when operating in NAT HLA. The LOA will specify the type of operation authorized. These include unrestricted NAT HLA authorization, restricted authorization for routes requiring one LRNS, routes for aircraft with short-range navigation equipment, and restricted authorization for routes not requiring HF radios.

B. Applicant-FAA Communication. The inspector must ensure that the operator clearly understands the requirements that must be met for the FAA to approve the proposal. Excellent resources for ICAO and FAA guidance are found in the FAA North Atlantic and Pacific Guides for U.S. Operators located at: http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs400/afs470/media/NAT.pdf and http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs400/afs470/media/PAC.pdf. It is essential for the operator to understand that, although the inspector may provide advice and guidance, the proposal submitted to the FAA for approval is solely the operator's responsibility. The inspector must inform the operator of the benefits of submitting required documents as early as possible. The operator must also be aware of the responsibility to advise the FAA, in a timely manner, of any significant changes in the proposal.

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C. Authorization Criteria for Issuance of LOAs. A listing of regulations pertinent to international operations is located in Figure 4-70. Before receiving approval for operations in oceanic airspace, the operator must meet the following requirements:

- The required CNS equipment must be inspected and approved;
- The aircraft must be properly registered and certificated as Airworthy; and
- The operator must develop a journey logbook in accordance with ICAO Annex 6, Part I – International Commercial Air Transport – Aeroplanes, Chapter 11, paragraph 11.11.4. Operation of Aircraft, Part II, International General Aviation – Aeroplane, Chapter 23.8, paragraph 2.8.1, and Annex 6, Part III - International Operations – Helicopter, Chapter 9, paragraph 9.9.4. The annexes state, in part, there shall be maintained in respect to every aircraft engaged in international navigation, a journey logbook in which shall enter particulars of the aircraft, its crew, and of each journey.

NOTE: The term journey logbook in this context includes, but is not limited to, a navigation log, Electronic Flight Bag (EFB) computer flight plan, and/or plotting chart that may be kept in the form of electronic data. This record should be maintained for 6 months following the flight.

D. International Operations Qualifications. The crew(s) must have international operations qualifications as certified by an individual U.S. citizen who must accept responsibility for the crew's operation in international airspace. Crews must meet the applicable requirements stated in subparagraph 4-1289E, Crew Qualification Requirements. Inspectors should conduct a review of the operator's training and procedures and conduct a tabletop exercise for the SAO requested, in coordination with the SAO specialist, formerly known as navigation specialist. Prior to validation testing, the inspector will examine aircrew training requirements by approved/authorized instructors and accompanying documentation for the SAO requested. If the inspector determines the crew's qualifications to be inadequate, an LOA will not be issued. Qualifications for the issuance of an LOA may be satisfied by one of the following:

- Completing an operator's oceanic operations training and testing program.
- Completing a commercial oceanic operations training and testing program.
- Submitting military training records indicating prior oceanic operations experience.
- Written, training, or oral exam results that assure the inspector and the operator that the crew can safely conduct oceanic operations.

1) ASIs are encouraged to coordinate with a regional NextGen (AXX-220) SAO Specialist, formerly known as navigation specialist to conduct a review of the operator's training and procedures and conduct a tabletop exercise for the SAO requested.

2) Neither the regulations nor Annex 2 to the ICAO Rules of the Air requires specific training. Inspectors should make critical observations in determining crew qualifications. For a crew to be considered qualified for oceanic operations, crew members must be knowledgeable in the following subject areas:

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- ICAO Standards and Recommended Practices (SARP);
- Use of oceanic flight planning charts;
- Systematic navigation cross-checks;
- Sources and content of international flight publications;
- Itinerary planning;
- FAA international flight plan, ICAO flight plan, and flight log preparation;
- Route planning within the SAO where flights are to be conducted;
- ICAO and state en route and terminal procedure differences from those in the United States;
- Long-range, air-to-ground communication procedures;
- Structure of the SAO where the flights are to be conducted;
- CNS requirements particular to the aircraft flown and the flight profile within the SAO;
- Air traffic clearances;
- International meteorology, including significant weather charts, prognostic weather charts, tropopause prognostic charts, and TAFs;
- Specific en route navigation procedures for each type of navigation equipment required for use in the SAO;
- Emergency procedures, including required emergency equipment, search and rescue techniques, navigation equipment failure techniques, and communication equipment failure techniques.
- Weather deviations, route offsets for engine out and strategic lateral offset procedure (SLOP), etc.; and
- Emergency procedures including required emergency equipment, SAR techniques, navigation, and communication equipment failure techniques. Each state's AIP has specific differences written in regard to emergency, lost communication and search and rescue procedures. This information must be checked for each state the flight intends to fly into, fly over, or use as an alternate.

4-1300 PHASE TWO. Phase two begins when the operator formally submits a proposal for FAA evaluation. The FAA makes initial examination of the documents for completeness with respect to requirements established in phase one. As a result of phase two, the proposal is accepted or returned with an explanation of deficiencies. NextGen Field Program Branch (AFS-408) SharePoint sites SAO Tracker 2010 and/or regional NextGen Application Trackers should be used to submit applications.

A. Initial Action. In phase two, the inspector's initial action is to review the operator's submission to ensure that the operator has clearly defined the proposal and provided the documents specified in phase one. The required information must be complete and detailed enough to permit a thorough evaluation of the operator's ability and competence to fully satisfy the applicable regulations, national policy, and safe operating practices in oceanic operations. The inspector also queries the Safety Performance Analysis Systems (SPAS) database to obtain the flightcrew's accident, incident, and pilot violation history to determine eligibility, and to ascertain whether the aircraft registration and operator citizenship satisfy the requirements of part 47. Phase two does not include a detailed operational and technical evaluation or analysis of

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the submitted information (see phase three). However, in phase two, the inspector must examine the proposal and determine whether all requested and required information has been submitted.

B. Unsatisfactory Submission. If the operator's submission is not complete, or the quality is obviously unacceptable, the inspector must return it immediately before any further review and evaluation is conducted.

1) Normally, an inspector returns an unacceptable submission with a written explanation of the reasons for its return.

2) In complex cases, a meeting with the operator's key personnel and SAO specialist may be necessary to resolve issues and agree on a mutually acceptable solution.

3) If the inspector and the operator cannot reach a mutual agreement, the inspector must terminate the meeting, inform the operator that the submission is unacceptable, and return the submission. If all parties are able to reach agreement on measures to correct omissions or deficiencies, and the inspectors (Operations, Maintenance, and Avionics, if applicable) determine that the submission is acceptable, the operator is informed, and phase three begins.

C. Status Reports. It is important for the inspector involved to keep the operator advised of the status of the proposal. If the inspector takes no other action, or if the submission is deficient and not returned in a timely manner, the operator may assume that the FAA has tacitly accepted the submission and is continuing with the process. Timeliness of action depends on the situation and on the inspector's judgment. The Regional NextGen Branch (AXX-220) Operational Approval Coordination SharePoint site is designed to increase the speed and efficiency of the application process by utilizing online capabilities. See Volume 3, Chapter 1, Section 1, subparagraph 3-4D for further guidance. This subparagraph lists the various application trackers and their Web addresses. SAO applications for LOA are posted using this tool.

4-1301 PHASE THREE. During phase three, the FAA evaluates the operator's formal proposal for compliance with the regulations, compliance with the direction provided in Order 8900.1, and compliance with other safety-related documents and safe operating practices. Evaluation of documents requires coordination with SAO specialist and may require regional airworthiness/avionics review. If the results of the evaluation are unsatisfactory, the proposal is returned to the operator for correction and/or termination of the phase. Planning of phase four (if required) may begin during phase three. When the results of the evaluation are satisfactory, proceed with phase four (if a demonstration is required) and grant conditional approval or acceptance, if appropriate. Proceed to phase five if a demonstration is not required.

A. Detailed Analysis. Phase three is the FAA's detailed analysis, review, and evaluation of the operator's proposal. In phase three, the FAA evaluation is focused on the form, content, and technical quality of the submitted proposal.

B. Evaluation Criteria. The inspector must ensure that the documents adequately establish the operator's ability and competence to conduct operations safely in accordance with the submitted proposal. Operating procedures must be evaluated in coordination with the SAO specialist, formerly known as the navigation specialist. Operators may be required to present

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their aircraft at a location convenient to the operator and the inspectors. A representative minimum flightcrew may be required to accompany the aircraft to the inspection site for evaluation of the crew's qualifications to operate CNS equipment in accordance with operator procedures. Additional crews do not need to be present during this inspection, but a representative of the operator will be required to certify, by the signing of the LOA, that all crews operating aircraft in SAOs meet the same qualifications as the representative crew. An Avionics inspector may inspect CNS equipment or review airplane certification documentation (i.e., FAA-approved TC, STC, SB, or Service Letter (SL)) to ensure that the installation was done in a manner the Administrator approved, and to verify that the aircraft has the required CNS equipment for operations in NAT HLA.

C. Equipment Manuals. Operations supplementary manuals are required for all CNS equipment. These manuals must contain the material required to define all operational limitations associated with the system's performance. For example, the manual would include details in regard to a GPS, which would reference RAIM technology, and fault detection and exclusion (FDE).

D. Addressing Deficiencies. During phase three, the inspector must address any deficiencies in the submitted material in a timely manner before proceeding to subsequent phases. Discussion with the operator may be sufficient to resolve certain discrepancies or questions or to obtain additional information. It may be necessary to return certain portions of the submission to the operator for specific changes. However, when an inspector determines that, for specific reasons, the material is unacceptable, the inspector must return the proposal to the operator with an explanation and immediately terminate the process and close the PTRS file. If the results of the evaluation are acceptable and a demonstration is necessary, the inspector may need to grant conditional, initial, or provisional approval of the proposal, pending the results of the demonstration, before continuing with the process.

E. Phase Four Planning. An important aspect of phase three is for inspectors to begin planning the conduct of phase four. Although validation flights are not required under part 91, validation testing is conducted to demonstrate the operator's ability to perform the operations for which they are applying. While evaluating the operator's formal proposal, inspectors should begin to formulate plans to observe and evaluate the operator's ability to perform, if necessary. These plans must be completed before beginning the actual demonstrations. Inspectors should be aware that situations may arise when a crew that has been conducting oceanic operations under part 91 requests approval to operate under 14 CFR part 135. In this case the inspector may consult with their regional NextGen (AXX-220) SAO specialist, formerly known as the navigation specialist.

4-1302 PHASE FOUR. During phase four, the FAA observes the validation test, and the operator demonstrates ability. Although validation flights are not required under part 91, validation testing is conducted to demonstrate the operator's ability to perform the operations being applied for and requires coordination with the regional NextGen (AXX-220) SAO specialist, formerly known as the navigation specialist. As a result of phase four, the validation test is either satisfactory or unsatisfactory.

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A. Observation and Evaluation of Demonstration. Phase four is an operational evaluation of the operator's ability to function in accordance with the proposal evaluated in phase three. This evaluation may be completed in phase three unless the inspector determines that a validation test is required. If a validation test is required, it will be necessary to complete this phase in accordance with the guidance contained in Volume 3, Chapter 29, Proving and Validations Tests.

B. Evaluation Criteria. Criteria for evaluating an operator's eligibility for an LOA in SAO are described in paragraph 4-1289.

C. Handling Discrepancies. The inspector must plan for the conduct and observation of the validation test, including such items as participants, evaluation criteria, and sequence of events. During these tests, it is normal for minor discrepancies to occur. Discrepancies can often be resolved during the tests by obtaining commitments from responsible company officials. Inspectors may also request the assistance of the regional NextGen (AXX-220) SAO specialist, formerly known as navigation specialist. If any questions should arise with regards to the issuance of an LOA, inspectors should request guidance from a regional NextGen (AXX-220) SAO specialist.

1) The inspector responsible for overseeing a demonstration must evaluate each discrepancy in terms of its overall impact on the operator's ability and competence to conduct the proposed operation.

2) The inspector must stop the demonstration in phase four when deficiencies or unacceptable levels of competency are observed. The inspector must identify the phase of the general process to which the applicant must return or decide to terminate the process entirely. If the demonstration is unacceptable because crewmembers were unable to perform their assigned duties, it may be appropriate to advise the operator that the process is terminated and a new proposal should be submitted.

D. Acceptable Demonstrations. If the FAA evaluation of the operator's demonstrated ability is acceptable, the process continues. An operator will not, under any circumstances, be authorized or otherwise approved to conduct any particular operation until all airworthiness and operations requirements are met and the operator is clearly capable of conducting a safe operation in compliance with FAA regulations and safe operating practices.

4-1303 PHASE FIVE. During phase five, the FAA approves or accepts a proposal.

A. Indicating Approval. Upon satisfactory completion of the aircraft and crew inspection, the inspector will use WebOPSS to generate a part 91 designator and issue requested LOAs.

1) LOA B036 has requirements for authorized airplanes, crew training, responsible person, and deviations to RNP requirements. The aircraft (make, model, and series (M/M/S)) and the LRNS (manufacturer/model) authorized for Class II Navigation must be listed in LOA B036. The inspector must list dual or redundant (separate and independent) LRNS in the LOA. All navigation components that make up the Multiple Long-Range Navigation System (M-LRNS)

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must be listed on LOA B036 such as Inertial Reference Units (IRU), FMC, and GNSS. One navigation component does not make for a complete M-LRNS required by this LOA.

2) Inspectors issuing LOA B039, Operations in North Atlantic High Level Airspace, for routes approved for aircraft with short-range navigational equipment must note this limitation on the LOA. This limitation is specified in LOA B039 template in WebOPSS as follows.

3) Airplanes authorized with only short-range navigation equipment: VOR, DME, ADF. The operator is authorized to use the airplanes equipped with only short-range navigation equipment such as VOR, DME, and ADF listed in Table 3 below to operate within NAT HLA over special routes of short stage lengths. Detailed information about these special routes is published in NAT Doc. 007 and the Icelandic AIP. The equipment must be operational and maintained in accordance with the airplane or equipment manufacturer's recommendations. (If only multiple LRN and/or single LRN equipped aircraft are authorized, enter N/A in each of the cells for Table 3).

Table 3. Airplanes with Only Short-Range Navigation Equipment, VOR, DME, and ADF Authorized to Use Special Routes of Short Stage Lengths Only in NAT HLA

A/C Serial Number	Registration Number	Airplane M/M/S	Short-Range Navigation Systems M/M	Communications Equipment M/M

B. Acceptances. Other proposals, submissions, or requests not requiring specific FAA approval but required to be submitted to the FAA, are items that are presented for acceptance. Acceptance of an operator's proposal by various means includes a letter, verbal acceptance, or by taking no action, which indicates there is no FAA objection to the proposal.

4-1304 DENIAL OF A REQUEST FOR AN LOA. If an operator is unable to satisfy all requirements for issuance of an LOA, the inspector shall deny the request, notify the operator by letter (Figure 4-69, Letter Informing Operator That a Request for an LOA Has Been Denied), and return all submitted documents to the operator.

4-1305 TASK OUTCOMES. Completion of this task results in:

A. Issuance. Issuance of an LOA authorizing operations in SAO.

B. Denial. Denial of application for an LOA.

4-1306 FUTURE ACTIVITIES.

A. Investigate. The inspector investigates a reported navigational error, altitude deviation, erosion of longitudinal separation, or to confirm operator possession of an SAO authorization.

B. Verify. The inspector verifies an LOA.

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C. Cancel. The inspector may cancel an LOA, due to change in responsible person, an oceanic error, or a change in equipment status of the aircraft.

Figure 4-69. Letter Informing Operator That a Request for an LOA Has Been Denied

FROM: Federal Aviation Administration
Flight Standards District Office
[street address]
[city, state, ZIP code]

TO: [person or department requesting LOA]
[company name (if applicable)]
[street address (P.O. Box not acceptable)]
[city, state, ZIP code]

Dear [name],

Your request for a letter of authorization (LOA) to operate in [name of Special Area of Operation] airspace has been denied for the following reasons:

_____

_____

_____

You may reapply for an LOA upon correction of the discrepancies listed above. You may contact this office at [telephone number] if you have any questions.

Sincerely,

[inspector's signature who reviewed application]

[inspector's name]

[title]

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Figure 4-70. Regulations Applicable to International Operations 14 CFR Parts 45, 47, and 91

The tables below are a compilation of Federal regulations that have particular importance in international operations. Crews are advised to reference these regulations prior to planning an oceanic or international flight. This listing of regulations is for guidance only, and does not eliminate or provide relief from other regulations that are not listed.

As per Title 14 of the Code of Regulations (14 CFR) part 91, § 91.703, Operations of Civil Aircraft of U.S. Registry Outside of the United States, (a)(2), each person operating a civil aircraft outside the United States within a foreign country must comply with the regulations relating to the flight and maneuver of aircraft there in force. State regulations for a foreign country can be found in their Aeronautical Information Publication (AIP). Pilots must refer to each state's Aeronautical Information Publication (AIP) in order to comply with § 91.703. Pilots transporting aircraft internationally should also be aware of the contents of Chapter III, Nationality for Aircraft, in the Agreements of the Chicago Convention, 7 December 1944, and the following International Civil Aviation Organization (ICAO) Annexes: Annex 2, Rules of the Air, Annex 6, International General Aviation – Aeroplanes, Part I, Operation of Aircraft, Part II, International General Aviation – Aeroplane, and Part III, International Operations – Helicopter, with part 91.

14 CFR Part 45 Identification and Registration Marking

SUBJECT	14 CFR
Nationality and Registration Marks - General	45.21
Display of Registration Marks - General	45.23
Size of Registration Marks	45.29
Marking of Export Aircraft	45.31

14 CFR Part 47 Aircraft Registration

SUBJECT	14 CFR
Registration Required	47.3
Applicants for Aircraft Registration	47.5
Certification of U.S. Citizenship	47.7
Voting Trust	47.8
Corporation not U.S. Citizen	47.9
Evidence of Ownership	47.11
Effective Date of Aircraft Registration	47.39
Invalid Registration	47.43
Cancellation of Certificate	47.47

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14 CFR Part 91 General Operation and Flight Rules

SUBJECT	14 CFR
Survival Equipment for Overwater Operations	91.509
Radio Equipment for Overwater Operations	91.511
Operation of Civil Aircraft of U.S. Registry Outside of the United States	91.703
Reduced Vertical Separation Minimum Airspace	91.706
Flights Between Mexico or Canada and the United States	91.707
Operations to Cuba	91.709

RESERVED. Paragraphs 4-1307 through 4-1325.

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VOLUME 5 AIRMAN CERTIFICATION

CHAPTER 1 DIRECTION, GUIDANCE, AND PROCEDURES FOR TITLE 14 CFR PARTS 121/135 AND GENERAL AVIATION

Section 1 General Information

5-1 APPLICABILITY. This volume contains direction, guidance, and procedures for certification of airmen. Applicable regulations include Title 14 of the Code of Federal Regulations (14 CFR) part 61, 63, 65, 67, 91 subpart K (91K), 121, 125, 133, 135, 137, 141, or 142.

5-2 INDIVIDUALS AUTHORIZED TO CONDUCT CERTIFICATION. The airman certification process described in this volume may be conducted by a Federal Aviation Administration (FAA) inspector or, when authorized, by a designated air carrier examiner. The guidance of this volume applies to both inspectors and designated air carrier examiners. Airman examiners are designated in accordance with the provisions of 14 CFR part 183 to help meet the certification workloads that exceed the capacity of the inspector workforce. All examiners performing certification of flight engineers and navigators under part 63, aircraft dispatchers under part 65, or pilots and flight engineers (FE) who are graduates of a part 121 or 135 training program shall be designated and their activities administered in accordance with this handbook.

A. Aircrew Program Designees (APD). Designated Examiners (DE), employed by certain large part 135 and 121 operators, who perform certification duties entirely within a special program known as an Aircrew Designated Examiner (ADE) Program, are referred to as APDs. Direction and guidance for designation of APDs and the administration of an ADE program is in Volume 13, Chapter 1.

B. Training Center Evaluators (TCE). DEs, employed by part 142 training centers, who perform certification tests and other checks in accordance with FAA-approved part 142 training programs. In certain cases, a TCE may also serve as a contract check pilot for an air carrier operating under part 121 or 135. See Volume 3, Chapter 54 and Volume 3, Chapter 20 for specific information on TCEs and contract check pilots.

C. Designated Pilot Examiners (DPE). DEs who do not perform certification duties entirely within one of the special programs described in Volume 13, Chapter 1 or 2 are referred to as independent DPEs. Direction and guidance for designation and administration of DPEs is found in Volume 13, Chapter 6.

5-3 INSPECTOR AND EXAMINER QUALIFICATIONS. When a phase of certification is conducted by an examiner, that examiner must be qualified and current in the aircraft in accordance with part 121 or 135, and appropriate company manuals. When a phase is conducted by an inspector, that inspector must hold the certificate and rating the applicant is seeking and be qualified accordingly. When an inspector performs safety pilot duties in an aircraft, that inspector must also be current in accordance with part 61, §§ 61.57 and 61.58.

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5-4 JOB AIDS. The requirements of each phase of the certification process are complex and specialized. Job aids have been prepared for inspector and examiner use. Job aids are intended for quick reference and for keeping track of events during the certification process. Since job aids are not official forms, they should not be attached to certification packages. They may either be retained or disposed of after use. Job aids do not replace the direction and guidance provided in 14 CFR, advisory circulars (AC), or the 8900.1 handbook. Job aids are available within 8900.1 and may be printed and photocopied as needed. Inspectors shall ensure examiners are supplied with appropriate job aids. User comments or suggestions on job aids is requested and should be sent directly to:

Federal Aviation Administration
Air Carrier Training Systems and
Voluntary Safety Programs Branch, AFS-280
800 Independence Ave., SW.
Washington, D.C. 20591

5-5 SURVEILLANCE DURING CERTIFICATION. Surveillance is an ongoing inspector responsibility which is not limited to formal inspections. When engaged in airman certification, an inspector has recurring opportunities to evaluate personnel, manuals, procedures, and training programs. When personnel performances do not meet standards or when other types of deficiencies are observed, inspectors shall report those deficiencies and recommend corrective action to the principal operations inspector (POI). Inspectors are encouraged to correct deficiencies “on the spot” with the operator’s working level personnel when practical. Regardless of whether the discrepancy can be corrected “on the spot” or not, the deficiency shall be reported by the inspector on a Program Tracking and Reporting Subsystem (PTRS) form. Reports of corrected discrepancies are as important as uncorrected ones for building accurate databases for trend detection and analysis. Discrepancies, including potential violations, may be corrected and closed out on site when mutually agreed to by the inspector and the POI. Inspectors, POIs, and managers are expected to act with discretion; however, discrepancies must be corrected in a timely manner.

5-6 INSPECTOR PREPARATION. Inspectors shall prepare themselves before conducting certification tests by becoming thoroughly familiar with the operator’s aircraft operating manual and operations specifications (OpSpecs). Inspectors and examiners shall coordinate with the POI or representative on acceptable methods for the conduct of certification activities for a specific operator. POIs are responsible for developing methods and procedures for briefing inspectors before they conduct certification. This shall include providing inspectors access to appropriate manuals and providing briefings on approved operating minimums and on additional requirements.

5-7 TESTING POLICIES.

A. Single Applicant. Only one applicant for an Airman Certificate or rating shall be administered an oral or a flight test at a time.

NOTE: The practical skills test for pilots, FEs, and flight navigators is referred to as a flight test.

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B. Observers. An inspector monitoring a certification test must be allowed to observe its conduct. Other observers may monitor a test only when their presence has been coordinated with and agreed to by both the applicant and the inspector or examiner conducting the test. In no case shall another applicant be allowed to monitor a flight test as an observer.

C. Crew Concept. The FAA promotes the "crew concept" in training and certification to ensure crew coordination and flight management are adequately addressed. Inspectors and examiners must evaluate the effectiveness of the applicant's interaction with other crewmembers. To facilitate this requirement, all crew positions required by the FAA Approved Flight Manual (AFM) must be occupied by qualified personnel (instructors or flightcrew members).

1) When a flight test is conducted in an aircraft, supporting crewmembers must possess appropriate certificates and be current under 14 CFR. When a flight test segment is conducted in a flight simulator or flight training device (FTD), a supporting crewmember must be qualified to perform the duties of the crew position to a degree of proficiency equivalent to a qualified line crewmember, but does not need to hold a certificate or be current. For example, a simulator instructor may not be able to qualify for a certificate due to a medical deficiency. The operator may qualify such individuals as simulator instructors by training and conducting proficiency tests equivalent to those required for certification. Such individuals are qualified to act as supporting crewmembers during a certification flight test in a flight simulator or training device. It is preferred and recommended that the supporting crewmember not be an applicant for a certificate or rating.

2) When flight tests are conducted in a flight simulator or FTD with a separate instructor's station, inspectors and examiners shall not occupy crew positions while the flight test is in progress. Except as provided in subparagraph 5-7D, inspectors and examiners shall not occupy crew positions when conducting a flight test in an aircraft. This direction and guidance allows inspectors to effectively act as evaluators rather than as participants.

D. Inspector, Examiner, and Safety Pilot Duty Positions. A qualified and current pilot must occupy a pilot seat and act as safety pilot on all flight tests conducted in an aircraft. The preferred procedure is for the operator to provide a qualified instructor pilot or check airman to act as the safety pilot and pilot in command (PIC). On aircraft equipped with jump seats, inspectors will usually occupy a jump seat so that they can evaluate the crew's interaction. However, when necessary a qualified and current inspector may act as a safety pilot and occupy a pilot's position on pilot flight tests. This provision will normally be limited to those families of aircraft in which it is not possible for the inspector to evaluate from a jump seat. On other occasions, an inspector may be the only qualified individual to act as the safety pilot. This may be appropriate when an operator is introducing a new aircraft type or when the aircraft is a type not typically used in part 121 or 135 operations. In such circumstances, an inspector may act as safety pilot and occupy a pilot position during the flight test. When an examiner conducts a pilot flight test in an aircraft, the examiner will usually act as the safety pilot.

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5-8 AIRCRAFT OPERATING MANUALS. Title 14 CFR frequently references the FAA AFM in matters pertaining to the certification of aircrew members. Many operators use the AFM as an operating manual. Most part 121 operators and many part 135 operators, however, extract the information from the approved sections of the AFM and place it in a company aircraft operating manual. Operators may modify AFM procedures with the approval of the POI. Under these circumstances, operators do not normally provide their crewmembers access to the AFM. Inspectors and examiners shall use the company-prepared aircraft operating manual instead of the AFM for airman certification purposes. Inspectors should be alert to deficiencies in the operator's manuals and procedures and for conflicts between company manuals and the AFM. When conflicts or deficiencies are observed, they shall be reported to the POI.

5-9 TESTING SEQUENCE AND TIME LIMITS.

A. Test Sequence. For all flightcrew members, the phases of the certification process must be completed in the following sequence:

1) Written test.

2) Oral test.

3) Flight test.

B. Multiple Segment Flight Tests. When a combination of a flight simulator and aircraft is used for a flight test, the flight simulator segment must be completed before the airplane segment.

C. Completion of Training Before the Oral Test. Applicants must be adequately prepared for each phase of the testing process. The applicant must complete ground training, including systems integration training, before the oral test is administered. Systems integration training may be conducted using a flight simulator or a FTD; however, it is not considered to be flight training. When flight training is conducted entirely in an aircraft, all training must be completed before the oral test. When circumstances make literal compliance with these policies impractical, the POI may approve alternate provisions.

D. Completion of Training Before the Flight Test. When a flight test is conducted either entirely in a flight simulator or in an aircraft, all flight training must be completed before the flight test is conducted. When a flight test is conducted with a combination of flight simulator and aircraft segments, only the simulator training must be completed before the simulator segment of the flight test is conducted. The aircraft portion of the flight training does not need to be conducted until after the simulator segment of the flight test has been completed.

E. Time Limits. The flight test phase must be completed within 2 calendar-months (§ 61.39(f)) of completion of the oral test. If a flight test is conducted with a combination of flight simulator and aircraft segments, the aircraft segment must be completed within 30 days of the simulator segment.

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F. Extending Time Limits. If an unplanned delay beyond the control of the operator occurs, the oral test may be repeated to extend the 2-calendar-month limit between the oral and flight test phases. However, the 30-day limit between the simulator segment and the aircraft segment may not be extended. In any case, if all increments of the practical test for a certificate or rating are not completed within 2 calendar-months after the month the applicant began the test, the applicant must retake the entire practical test (§ 61.39(g)).

RESERVED. Paragraphs 5-10 through 5-25.

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VOLUME 5 AIRMAN CERTIFICATION

CHAPTER 2 TITLE 14 CFR PART 61 CERTIFICATION OF PILOTS AND FLIGHT INSTRUCTORS

Section 17 Issue a Title 14 CFR Part 61 Ground Instructor Certificate and Added Ratings

5-671 PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODE. 1530.

5-672 OBJECTIVE. Completion of this task determines if an applicant is eligible for a Ground Instructor Certificate with basic, advanced, and/or instrument ratings. Successful completion of this task results in the issuance of a Ground Instructor Certificate/rating.

5-673 GENERAL. To be eligible for a Ground Instructor Certificate and rating(s), in accordance with Title 14 of the Code of Federal Regulations (14 CFR) part 61 subpart I, a person must meet the following requirements.

A. Age. Be at least 18 years of age.

B. Language. Be able to read, write, speak, and understand English. If the applicant is unable to meet one of these requirements due to medical reasons, then the Federal Aviation Administration (FAA) Administrator may place such operating limitations on that applicant's Ground Instructor Certificate as are necessary.

C. Fundamentals of Instructing (FOI) Exceptions. Pass a knowledge test on the FOI, unless the person:

- Holds a Ground Instructor Certificate or Flight Instructor Certificate issued under part 61;
- Holds a current teacher's certificate issued by a state, county, city, or municipality that authorizes the person to teach at an educational grade level of the 7th grade or higher; or
- Is employed as a teacher at an accredited college or university.

D. Aeronautical Knowledge Tests. Pass a knowledge test on the following aeronautical knowledge areas:

- For a basic ground instructor (BGI) rating, part 61, §§ 61.97, 61.105, and 61.309;
- For an advanced ground instructor (AGI) rating, §§ 61.97, 61.105, 61.125, 61.155, and 61.309; or
- For an instrument ground instructor (IGI) rating, § 61.65.

E. Certification Application. Apply by submitting a completed FAA Form 8710-1, Airman Certificate and/or Rating Application.

5-674 GROUND INSTRUCTOR RATINGS. Ground Instructor Certificate privileges and limitations for the basic, advanced, and instrument ratings are addressed in § 61.215.

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A. BGI Rating Requirements. A person who qualifies for the BGI rating must receive the basic rating on his or her Ground Instructor Certificate. A person who holds a Ground Instructor Certificate with the basic rating is authorized to provide:

- Ground training in the aeronautical knowledge areas required for the issuance of a Sport Pilot Certificate, Recreational Pilot Certificate, Private Pilot Certificate, or associated ratings under § 61.215;
- Ground training required for a sport pilot, recreational pilot, and private pilot flight review; and
- A recommendation for a knowledge test required for the issuance of a Sport Pilot Certificate, Recreational Pilot Certificate, or Private Pilot Certificate under § 61.215.

B. AGI Rating Requirements. A person who qualifies for the AGI rating must receive the advanced rating on his or her Ground Instructor Certificate. A person who holds a Ground Instructor Certificate with the advanced rating is authorized to provide:

- Ground training in the aeronautical knowledge areas required for the issuance of any certificate or rating under § 61.215, except for the aeronautical knowledge areas required for an instrument rating;
- Ground training required for any flight review, except for the training required for an instrument rating; and
- A recommendation for a knowledge test required for the issuance of any certificate under § 61.215, except for an instrument rating.

C. IGI Rating Requirements. A person who qualifies for the IGI rating must receive the instrument rating on his or her Ground Instructor Certificate. A person who holds a Ground Instructor Certificate with the instrument rating is authorized to provide:

- Ground training in the aeronautical knowledge areas required for the issuance of an instrument rating under § 61.215;
- Ground training required for an instrument proficiency check; and
- A recommendation for a knowledge test required for the issuance of an instrument rating under § 61.215.

5-675 ESTABLISHING ELIGIBILITY.

A. Verification of the Applicant's Identity and Age. See to Volume 5, Chapter 1, Section 3.

B. English Language Requirements. Before accepting a person's application for a Ground Instructor Certificate, the evaluator must determine whether the applicant can read, speak, write, and understand the English language. An evaluator should follow the current procedures in 8900.1 Volume 5 and the current edition of AC 60-28, English Language Skill Standards Required by 14 CFR Parts 61, 63, and 65. Additional resources are available on the International Civil Aviation Organization (ICAO) Web site at http://cfapp.icao.int/rssta/RSSTA.cfm. These resources should be utilized in the development of

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a plan of action to ensure the applicant meets each part of the FAA Aviation English Language Proficiency (FAA AELP) standards.

C. Medical Disability. If the applicant cannot read, speak, write, or understand English because of a medical disability (hearing or speech impairment) that is medically substantiated by a certified physician, an Operations aviation safety inspector (ASI) may accept a Ground Instructor Certificate application. There is no need to issue an operating limitation, because the Ground Instructor Certificate/rating does not authorize any piloting privileges in an aircraft.

5-676 RECENCY OF EXPERIENCE. The holder of a Ground Instructor Certificate may not perform the duties of a ground instructor unless, within the preceding 12 months, that ground instructor has complied with the requirements of § 61.217.

5-677 PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. This task requires knowledge of the regulatory requirements of part 61 subpart I, and FAA policies and qualification as an Operations ASI or aviation safety technician (AST).

B. Coordination. This task may require coordination with the operations unit supervisor.

5-678 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- Title 14 CFR Parts 1, 61, 91, and 141.
- PTRS Field Office Manual.

B. Forms:

- FAA Form 8060-4, Temporary Airman Certificate (Figure 5-81).
- FAA Form 8060-5, Notice of Disapproval of Application (Figure 5-80).
- FAA Form 8710-1, Airman Certificate and/or Rating Application (Figure 5-79).

C. Job Aids. Table 5-2, Knowledge Tests Required for Ground Instructor Certificate or Added Rating.

5-679 PROCEDURES.

A. Schedule Appointment. Inform the applicant of the necessary documentation to bring to the appointment:

- A properly completed FAA Form 8710-1 (see Figure 5-79);
- Airman Knowledge Test Reports (AKTR);
- If applicable, superseded Ground Instructor Certificate; and
- Other documents required to establish eligibility (e.g., documentation for substitution of credit for FOI knowledge test).

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B. Applicant Arrives for Appointment.

1) Collect the documentation indicated above.

2) Open PTRS file.

C. Review Application.

1) In section I, ensure that the applicant has checked the box labeled "Ground."

2) Check the application for accuracy, using the instructions on the top of the form attachment and any additional instructions found in Volume 5, Chapter 1, Section 3.

D. Verify Applicant's Identity and Age. Inspect acceptable forms of identification to establish the applicant's identity. Compare the identification with the personal information provided on FAA Form 8710-1 (see Volume 5, Chapter 1, Section 3).

1) If the applicant's identity can be verified, proceed with the task.

2) If the applicant's identity cannot be verified because of lack of identification or inadequate identification, explain what types of identification are acceptable. Instruct the applicant to return with appropriate identification to reapply.

3) If the applicant's identity appears to be different from the information supplied on FAA Form 8710-1 or it appears that an attempt at falsification has been made, do not continue with this task (see Volume 7, Chapter 6).

E. Determine Eligibility Based on Type of Knowledge Test. Inspect the applicant's AKTR. Use Table 5-2 to determine the Ground Instructor Certificate rating for which the applicant is eligible.

Table 5-2. Knowledge Tests Required for Ground Instructor Certificate or Added Rating

Certificate or Rating Sought	**Knowledge Test Required**				
	BGI	IGI	AGI	FOI	Ratings Usually Appearing on Certificate
BGI	X			X*	BGI
IGI		X		X*	IGI
AGI			X	X*	AGI
* The FOI knowledge test does not have to be retaken, if previously passed.					

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F. Substitution of Credit. Check the applicant's documentation to determine if the FOI knowledge test is not needed.

G. Discrepancies. If a discrepancy that cannot be immediately corrected exists in any of the items above, return the application and any documentation to the applicant and proceed as follows:

1) Explain why the applicant is not eligible.

2) Give an adequate explanation of how the applicant may correct the discrepancies.

3) Issue FAA Form 8060-5, Notice of Disapproval of Application, as per Volume 5, Chapter 1, Section 6 (see Figure 5-80).

4) Return the applicant's AKTRs.

5) Complete FAA Form 8710-1.

a) Under the "Aviation Safety Inspector or Technician Report" section on the reverse side of FAA Form 8710-1, check the box labeled "Disapproved."

b) Check the "Ground Instructor Certificate Issued" box and appropriate rating applied.

c) Date, sign, and include your certificate number in the Aviation Safety Inspector or Technician Report section and indicate the acronym (e.g., WP-05) in the "FAA Office" field.

d) Under "Attachments," check the "Notice of Disapproval" box.

6) Forward a copy of FAA Forms 8060-5 and 8710-1 to the Airmen Certification Branch (AFS-760).

H. Applicant Meets Requirements. If an applicant meets all the requirements for a Ground Instructor Certificate, issue FAA Form 8060-4 (Figure 5-81), per Volume 5, Chapter 1, Section 5.

1) Fill in section III of FAA Form 8060-4 as follows:

a) If the person already has a Ground Instructor Certificate, enter the number from the previous Ground Instructor Certificate, or the word "Pending" if no previous certificate was issued in accordance with part 61.

b) If this is an original issuance, enter the word "Pending."

2) Enter "Ground Instructor" in section IX of FAA Form 8060-4. Fill in the appropriate ratings in section XII as follows:

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- For a BGI only, enter "Basic."
- For an IGI only, enter "Instrument."
- For an AGI only, enter "Advanced."
- For a ground instructor with BGI and IGI ratings, enter both "Basic" and "Instrument."
- For a ground instructor with BGI and AGI ratings, enter "Advanced" only.

3) On FAA Form 8710-1, sign and have the applicant sign, in ink. Complete the Aviation Safety Inspector or Technician Report section of FAA Form 8710-1, as appropriate. Once a copy of the Pilot's Bill of Rights (PBR) is presented to the applicant, mark the box stating, "I have personally delivered the Written Notification under the Pilot's Bill of Rights to the applicant." Also mark the "Approved" box, the "Ground Instructor Certificate Issued" box, and the appropriate rating box. Date, sign, include your certificate number, and complete the FAA Office field with the region number (e.g., WP-05).

4) Forward the complete file to AFS-760, including:

- FAA Form 8710-1;
- Superseded Ground Instructor Certificate, if applicable;
- AKTR;
- FAA Form 8060-4; and
- Any additional supporting documentation.

I. PTRS. Complete PTRS in accordance with the PTRS Field Office Manual.

5-680 TASK OUTCOMES. Completion of this task results in either:

- Issuance of a temporary Ground Instructor Certificate or addition of a ground instructor rating, or
- Issuance of an FAA Form 8060-5.

5-681 FUTURE ACTIVITIES.

A. Additional Ratings. Applicant may return for an additional rating.

B. Experience Endorsements. Applicant may return for an experience endorsement (see Figures 5-77 and 5-78).

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Figure 5-77. Recency of Experience Logbook Endorsement for a Ground Instructor Who Is Also a Flight Instructor

[ADAPT FOR USE AS A LETTER IF DESIRED]

I have reviewed the flight instruction records of [*name of ground instructor and ground instructor certificate number*] and certify that he/she meets the recent experience requirements of § 61.217.

[Inspector's signature and date]

Figure 5-78. Recency of Experience Letter for a Ground Instructor Who Is Not a Flight Instructor

FAA letterhead

[Date]

Dear [insert name]:

I have reviewed the ground instruction records of [*name of ground instructor and ground instructor certificate number*] and certify that he/she meets the recent experience requirements of § 61.217.

[Inspector's signature]

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Figure 5-79. FAA Form 8710-1, Airman Certificate and/or Rating Application

TYPE OR PRINT ALL ENTRIES IN INK

Form approved OMB No 2120-0021
Exp. 04/30/2018

U.S. Department of Transportation
Federal Aviation Administration

Airman Certificate and/or Rating Application

I. APPLICATION INFORMATION (Mark 'X' in all the blocks applicable to the certificate or rating for which you are applying):

Certificates

Pilot: ☐ Student ☐ Private ☐ ATP-Restricted ☐ Recreational ☐ Commercial ☐ ATP

Instructor: ☐ Flight ☒ Ground

Ratings

Category and/or Class: ☐ ASE ☐ Helicopter ☐ Gyroplane ☐ AME ☐ Balloon ☐ Airship ☐ Land ☐ Glider ☐ Powered-Lift ☐ Sea

Instrument: ☐ Airplane ☐ Helicopter ☐ Powered-Lift

Ground Instructor: ☒ Basic ☐ Advanced ☐ Instrument

Type Rating: ☐ Added Rating

Other Information/Requests

☐ Initial ☐ Renewal ☐ Reinstatement ☐ Reexamination ☐ Reissuance ☐ Flight Review ☐ Instrument Proficiency Check ☐ Medical Flight Test ☐ Limitation Removal

Specify other: ☐ IPL

A. Name (Last, First, Middle)	B. SSN (U.S. Only)	C. Date of Birth	D. Place of Birth (City and State or (City and Country)
Calahan, Harry, Daniel	DO NOT USE	01/25/1971 MM/DD/YYYY	Magnolia, AR

E1. Residential Address (including City, State, Zip Code, and Country)	E2. Mailing Address (This address will be printed on the permanent airman certificate, if different than block E1.)	F. Citizenship / Nationality	G. Do you read, speak, write, & understand the English language?
44 Magnum Place Prescott, OK 71213		☒ USA ☐ Other specify:	☒ Yes ☐ No

H. Height (inches)	I. Weight (pounds)	J. Hair Color	K. Eye Color	L. Sex
74	190	Brown	Brown	☒ Male ☐ Female

M. Do you hold, or have you ever held an FAA certificate?	M1. Grade of Certificate	M2. Certificate Number	M3. Date Issued
☐ Yes ☒ No			

N. Do you hold a Medical Certificate?	N1. Class of Medical Certificate	N2. Name of Medical Examiner	N3. Date Issued
☐ Yes - FAA ☐ Yes - Foreign ☐ Yes-Military ☒ No			

O. Have you ever been convicted for violation of any Federal or State statutes relating to narcotic drugs, marijuana, or depressant or stimulant drugs or substances? *Do not include alcohol offenses involving motor vehicle mode of transportation as these offenses are covered on the FAA Form 8500-8, Airman Medical Application Form.* ☐ Yes ☒ No

O1. Date of Final Conviction

II. CERTIFICATE OR RATING APPLIED FOR ON BASIS OF:

☒ A. Completion of Test or Activity
1. Aircraft to be used (If flight test required): N/A
2. Total time in this aircraft and/or approved FFS or FTD (hours): a. Flight Time N/A b. As Pilot-in-Command N/A

☐ B. U.S. Military Competence or Experience
1. U.S. Military Service
2. Date Rated in U.S. Military
3. Rank or Grade
4. List Military aircraft for which you have: a. logged pilot time or provided flight instruction (IP) (make and model) b. passed an Instrument Proficiency Check (Pilot or CFI) (make and model)

☐ C Graduate of an Approved Course
1. Training Agency or Training Center: 1a. Name 1b. Location (City and State) 1c. Certification Number 1d. Part 142? ☐ Yes ☐ No
2. Curriculum From Which Graduated (Level, Category, and Class and/or Type Rating)
3. Date

☐ D Holder of Foreign License
1. Country that Issued the Foreign Pilot License
2. Grade of Foreign Pilot License
3. Foreign Pilot License Number
4. Ratings Held on Foreign Pilot License (FAA equivalent only - e.g. ASEL, AMEL, Type rating, etc.)

☐ E. Air Carrier Training Program
1. Name of Air Carrier
2. Date Training Began
3. Accomplished Training Program ☐ Initial ☐ Upgrade ☐ Transition ☐ Recurrent

III. RECORD OF PILOT TIME *(Do not write in the shaded areas)*

	Total	Instruction Received	Solo	PIC and SIC	Cross Country Instruction Received	Cross Country Solo	Cross Country PIC/SIC	Instrument	Night Instruction Received	Night Take-Off/Landing	Night PIC/SIC	Night Take-Off/Landing PIC/SIC	Class Totals	Number of: Flights	Aero-Tows	Ground Launches	Powered Launches
Airplanes				PIC SIC			PIC SIC				PIC SIC	PIC SIC					
Rotorcraft				PIC SIC			PIC SIC				PIC SIC	PIC SIC	Helicopter / Gyroplane				
Powered Lift				PIC SIC			PIC SIC				PIC SIC	PIC SIC					
Gliders				PIC SIC													
Lighter-Than-Air				PIC SIC			PIC SIC				PIC SIC	PIC SIC	Balloon / Airship				
FFS																	
FTD																	
ATD																	

IV. Have you previously received a Notice of Disapproval or been denied for any reason for the certificate AND/OR rating for which you are applying? ☐ Yes ☒ No

V. APPLICANT'S CERTIFICATION: I certify that all statements and answers provided by me on this application form are complete and true to the best of my knowledge and I agree that they are to be considered as part of the basis for issuance of any FAA certificate to me. I have received the Pilot's Bill of Rights Written Notification of Investigation that accompanies this form. I have also read and understand the Privacy Act statement that accompanies this form.

Signature of Applicant: Daniel Harry Calahan

Date MM/DD/YYYY: 05/11/2016

FAA Form 8710-1 (04-16) Supersedes Previous Editions

NSN: 0052-00-682-5007

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Figure 5-79. FAA Form 8710-1, Airman Certificate and/or Rating Application (Continued)

☐ Accepted Student Pilot Application - I have personally reviewed the applicant's information and verified this person meets the eligibility requirements and verified the applicant's identification.

Instructor Action ☐ Rejected Student Pilot Application

☐ Flight Review ☐ Instrument Proficiency Check ☐ Recommendation - *I have personally instructed the applicant and consider this person ready to take the test*

Date	Certified Flight Instructor's Signature *(Print Name and Sign)*	Certificate Number	CFI Certificate Expires

Air Agency's Recommendation

The applicant has successfully completed our _____ course, and is recommended for certificate or rating without further practical test.

Date	Agency Name and Number	Official Signature

Designated Examiner or Airman Certification Representative Report

☐ Accepted-Student Pilot Application ☐ Rejected Student Pilot Application

☐ I have personally reviewed this applicant's pilot logbook and/or training record, and I certify that the individual meets the applicable requirements of 14 CFR Part 61 for the certificate or rating sought.

☐ I have personally reviewed this applicant's graduation certificate, and found it to be appropriate and in order, and have returned the certificate. (Original ATP CTP graduation certificate must be attached)

☐ I have personally tested and/or verified this applicant in accordance with pertinent procedures and standards with the result indicated below.

☐ **I have personally delivered the Written Notification under the Pilot's Bill of Rights to the applicant.**

☐ Approved – Temporary Certificate Issued (Original Attached) ☐ Disapproved – Disapproval Notice Issued (Original Attached)

Location of Test *(Name of Facility or Airport, City, State)*	Duration of Test: Ground / Oral	FFS / FTD	Flight

Certificate or Rating Being Applied For *(Grade, Category, Class and/or Type Rating)*	Type(s) of Aircraft Used	Registration Number(s)

Date	Examiner's Signature *(Print Name & Sign)*	Certificate Number	Designation Number	Designation Expires

Evaluator's Record (*Use for All ATP Certificate(s) and/or Type Rating(s)*)

	Inspector	Examiner	Signature and Certificate Number	Date
Ground / Oral	☐	☐		
Approved FFS/FTD Check	☐	☐		
Aircraft Flight Check	☐	☐		
Advanced Qualification Program	☐	☐		

Aviation Safety Inspector or Technician Report

I have personally tested this applicant in accordance with or have otherwise verified that this applicant complies with, pertinent procedures, standards, policies, and or necessary requirements with the result indicated below. (*The approved box need only checked if the Inspector is the one that issued the temporary airman certificate*)

☒ **I have personally delivered the Written Notification under the Pilot's Bill of Rights to the applicant.**

☒ Approved – Temporary Certificate Issued (Original Attached) ☐ Disapproved – Disapproval Notice Issued (Original Attached)

☐ Accepted - Student Pilot Application ☐ Rejected - Student Pilot Application

Location of Test *(Name of Facility or Airport, City, State)*	Duration of Practical Test: Ground / Oral	FFS / FTD	Flight
Scottdale, AZ	N/A	N/A	N/A

Certificate or Rating Being Applied For *(Grade, Category, Class and/or Type Rating)*	Type(s) of Aircraft Used	Registration No.(s)
Ground Instructor Certificate- Basic	N/A	N/A

Certification Activities:

☐ Examiner's Recommendation Provided/Reviewed ☐ Accepted ☐ Rejected

☐ Application for a Student Pilot Certificate Accepted

☐ Reissue or exchange of pilot, CFI, or G.I. certificate

☐ Change of name, nationality, gender or date of birth

☐ SIC Type Rating issued under § 61.55(b) (Part 91)

☒ Ground Instructor Certificate Issued

☒ Basic ☐ Advanced ☐ Instrument

☐ Flight Instructor Certificate Issued

☐ Initial ☐ Renewal ☐ Reinstatement

Instructor Renewal Based On:

☐ Activity ☐ Training Course

☐ Test ☐ Duties and Responsibilities

☐ Military Instructor Proficiency Check

Certificate or Rating Based on:

☐ Approved FAA Qualification Criteria Not Identified on Page 1 ☐ Military Competency

☐ Foreign License

☐ Special medical test conducted – report forwarded to issuing medical office or AAM-300

☐ Special Test-Reexamination (44709) conducted ☐ Approved ☐ Disapproved

Training Course (FIRC) Name	Graduation Certificate Number	Date of FIRC Graduation Certificate

Date	Inspector's Signature *(Print Name & Sign)*	Certificate Number	FAA Office *(e.g. SO-15, WP-19)*
05/11/2016	Kathleen C. McKay *Kathleen C. McKay*	2569587	WP-07

Attachments:

☐ Certifying Statement

☐ College Transcript (Official)

☐ ATP CTP Graduation Certificate

☒ Knowledge Test Report

☒ Temporary Airman Certificate

☐ Notice of Disapproval

☐ Superseded Airman Certificate

Airman's Identification (ID) *(U.S. driver's license or passport recommended)*	**Applicant Information** *(required if printed on 2 pages)*
Form of ID: AZ Driver's License	Name: Calahan, harry Daniel
ID Number *(If issued by State, include State)*: 6397581	Date of Birth: 01/25/1971
Expiration Date *(must be valid)*: 11/30/2020	Certificate Number: Pending
Telephone Number: 555-111-1234	E-Mail Address: none

☒ Meets FAA Aviation English Language Proficiency ☐ Does Not Meet FAA Aviation English Language Proficiency

REMARKS from Inspector or Examiner:

FAA Form 8710-1 (04-16) Supersedes Previous Edition

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Figure 5-80. FAA Form 8060-5, Notice of Disapproval of Application

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION—FEDERAL AVIATION ADMINISTRATION

NOTICE OF DISAPPROVAL OF APPLICATION

NOTE
PRESENT THIS FORM UPON APPLICATION FOR REEXAMINATION

NAME AND ADDRESS OF APPLICANT	CERTIFICATE OR RATING SOUGHT
Barbra Domer Hosteller 123 Main Street Anywhere, US 12345	Basic Ground Instructor

On the date shown, you failed the examination indicated below:

☐ FLIGHT ☐ ORAL ☐ PRACTICAL

AIRCRAFT USED *(Make and Model)*	FLT. TIME RECORDED IN LOGBOOK		
	PILOT-IN-COMM. OR SOLO	INSTRUMENT	DUAL
n/a	n/a	n/a	n/a

UPON REAPPLICATION YOU WILL BE REEXAMINED ON THE FOLLOWING:

VII. Applicant was found ineligible for a basic ground instructor certificate because of (indicate reasons).

I have personally tested this applicant and deem his performance unsatisfactory for the issuance of the certificate or rating sought.

DATE OF EXAMINATION	SIGNATURE OF EXAMINER OR INSPECTOR	DESIGNATION OR OFFICE NO.
9/30/96	*John L. Hightower*	EAO3

FAA Form 8060-5 (5-80)

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Figure 5-81. FAA Form 8060-4, Temporary Airman Certificate

I. UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION – FEDERAL AVIATION ADMINISTRATION
ii. **TEMPORARY AIRMAN CERTIFICATE**

III. CERTIFICATE NO. 123456789

THIS CERTIFIES THAT IV. Barbra Domer Hosteller

V. 123 Main Street
Anywhere, US 12345

DATE OF BIRTH	HEIGHT	WEIGHT	HAIR	EYES	SEX	NATIONALITY VI.
07/05/54	68IN.	180	Brown	Brown	F	USA

IX. has been found to be properly qualified and is hereby authorized in accordance with the conditions of issuance on the reverse of this certificate to exercise the privileges of

Ground Instructor

RATINGS AND LIMITATIONS
XII. Basic

XIII.

THIS IS ☒ AN ORIGINAL ISSUANCE ☐ A REISSUANCE OF THIS GRADE OF CERTIFICATE

DATE OF SUPERSEDED AIRMAN CERTIFICATE

BY DIRECTION OF THE ADMINISTRATOR

X. DATE OF ISSUANCE 08/14/2004

X. SIGNATURE OF EXAMINER OR INSPECTOR *John I. Hightower NM 03* John I. Hightower

EXAMINER'S DESIGNATION NO. OR INSPECTOR'S REG. NO. 001234567

DATE DESIGNATION EXPIRES

vii. AIRMAN'S SIGNATURE *Barbra Domer Hosteller*

FAA Form 8060-4 (8-79) USE PREVIOUS EDITION

SAMPLE

RESERVED. Paragraphs 5-682 through 5-700.

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VOLUME 5 AIRMAN CERTIFICATION

CHAPTER 3 AIRLINE TRANSPORT PILOT (ATP) CERTIFICATION UNDER TITLE 14 CFR PART 121, 135, OR 91 SUBPART K

Section 2 Oral and Flight Test Events in Airplanes for ATP Applicants Engaged in Operations Under Part 121, 135, or 91 Subpart K

5-826 APPLICABILITY. Volume 5, Chapter 3, Sections 2 through 7 provide inspectors and designated examiners with detailed guidance for the conduct of airline transport pilot (ATP) flight tests conducted in the qualification curriculum segments of Title 14 of the Code of Federal Regulations (14 CFR) parts 121 and 135 training programs. This guidance has been specifically developed to account for the conditions encountered in such programs, particularly for the wide variation in aircraft, flight simulation training devices (FSTD), and educational delivery systems currently used by parts 121 and 135 operators. Inspectors and designated examiners shall observe this guidance while conducting these flight tests instead of the guidance that applies to the testing of applicants trained and tested outside of parts 121 and 135 training programs, where different conditions prevail. This section contains general direction and guidance for the conduct of all airplane flight tests, regardless of whether a test is conducted in an FSTD or in an airplane. Volume 5, Chapter 3, Section 3 contains specific guidance for the conduct of flight tests in an airplane FSTD. Volume 5, Chapter 3, Section 4 contains specific guidance for the conduct of flight tests in an actual airplane. Volume 5, Chapter 3, Sections 5 and 6 contain specific guidance for the conduct of flight tests in a helicopter. Volume 5, Chapter 3, Section 7 contains guidance for the documentation of practical tests.

5-827 ORAL TEST EVENTS. Inspectors and examiners should use the ATP/Type Rating Oral Test—Airplane Job Aid when conducting oral tests for ATP certificates with airplane category ratings or for airplane type ratings being added to ATP certificates (see Figure 5-112, ATP/Type Rating Oral Test Job Aid—Airplane). The topics to be examined are printed on the job aid in an abbreviated form. Most of the topics are self-explanatory; however, a discussion of selected topics for pilot applicants of airplanes requiring a Flight Engineer (FE) follows:

A. FE Station. On airplanes requiring an FE, a pilot applicant must demonstrate knowledge of controls and indicators at the FE's station. The applicant's level of knowledge must be sufficient for safe operation of the airplane if the FE is incapacitated or absent from the flight deck.

B. Takeoff Data. Although the duty of computing takeoff and landing data is usually accomplished by the FE, pilot applicants must be able to complete typical takeoff and landing data computations. These computations must include application of proper corrections (such as a contaminated runway, inoperative antiskid, and minimum equipment list (MEL) or Configuration Deviation List (CDL) penalties).

C. Performance Computations. An applicant must demonstrate the ability to extract aircraft performance data (such as maximum allowable altitude, cruise power settings, and driftdown performance from the aircraft performance charts).

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D. Weight and Balance (W&B). An applicant must demonstrate the ability to compute or validate W&B using the operator's procedures.

5-828 WAIVER AUTHORITY. Title 14 CFR part 61, § 61.157(j) authorizes inspectors and examiners to waive certain events on the flight test. Events that may be waived totally or partially are indicated on the job aids. The following guidance applies to the use of waiver authority:

A. Use of Waiver. The use of waiver authority is not automatic. Inspectors and examiners are cautioned to exercise judgment in the use of this authority. When an applicant demonstrates a high level of performance, inspectors and examiners should make liberal use of the waiver authority. When an applicant's performance approaches minimum acceptable standards, however, none of the events of the flight test should be waived.

B. Waiver Provisions. Inspectors and examiners are cautioned that some waiver provisions apply to portions of a series of events rather than to the whole event (e.g., stall prevention). Other events have specific conditions that must be fully met before waiver authority may be exercised. A discussion of the conditions and limitations of waiver authority is included with the discussion of the specific events in the following paragraphs.

5-829 PREPARATION AND SURFACE OPERATIONS EVENTS. Applicants shall be observed performing interior, exterior, and emergency equipment inspections and performing engine start, taxi, and powerplant checks in accordance with the operator's aircraft operating manual.

A. Exterior Inspection. The exterior inspection is not an extension of the oral phase in which systems knowledge is examined, but rather a demonstration of an applicant's ability to perform appropriate safety checks. Inspectors and examiners shall limit questions to only those necessary for determining if an applicant can recognize when a component is in an unsafe condition. The exterior inspection may be conducted before or after the flight test at the inspector's or examiner's discretion. Many operators have exemptions permitting the exterior preflight test event to be conducted using pictorial means. The exterior inspection may be waived when an FE is a required crewmember. When the exterior inspection is waived, pilot applicants shall be required to complete those flight deck, interior, and emergency equipment inspections defined as the pilot in command's (PIC) responsibility. Inspectors and examiners shall determine whether an applicant inspects these items in accordance with the procedures in the operator's aircraft operating manual.

B. Cabin Inspection. An applicant shall be evaluated on the ability to perform a cabin inspection when this inspection is specified as a PIC responsibility by the operator's aircraft operating manual. Inspectors and examiners should occasionally sample an applicant's knowledge of the location and use of emergency equipment in the cabin, and the operation of cabin doors, even when the cabin inspection is not designated as a flightcrew member responsibility.

C. Flight Deck Preflight Inspection. An applicant shall be required to complete the flight deck preflight checks using the procedures specified in the operator's aircraft operating

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manual and using the appropriate checklists. The proper challenges and responses to the checklist must be used. When the flight test is conducted in an FSTD, it is appropriate for the inspectors or examiners to present minor malfunctions to determine if the applicant is accurately performing the specified checks.

D. Engine Start Procedures. An applicant shall be required to perform an engine start using the correct procedures. When the flight test is conducted in an FSTD, it is appropriate for inspectors and examiners to present an abnormal condition such as a hot-start or malfunctioning air or start valve. The abnormal condition should be carried through to the expected conclusion in line operations for the purpose of evaluating crew coordination and the applicant's proficiency.

E. Taxiing or Sailing. Inspectors and examiners shall evaluate the applicant's ability to safely maneuver the airplane on the surface and to manage outside vigilance while accomplishing flight deck procedures. The applicant must ensure that the taxi path is clear of obstructions, comply with local taxi rules and air traffic control (ATC) instructions, properly use checklists, and maintain control of the crew and airplane.

F. Powerplant Checks. Powerplant checks must be accomplished in accordance with the appropriate checklist and procedures before takeoff. In an FSTD, inspectors and examiners should present appropriate instrument or system malfunctions to determine if the applicant is accurately performing these checks.

5-830 TAKEOFF EVENTS. An applicant shall be required to accomplish each of the following takeoff events. These events may be combined when convenient and practical.

A. Normal Takeoff. A normal takeoff is defined as a takeoff beginning from a standing or rolling start (not from a touch-and-go) with all engines operating normally during the takeoff and initial climb phase.

B. Instrument Takeoff. An instrument takeoff is defined as one in which instrument conditions are encountered or simulated at or before reaching an altitude of 100 feet above airport elevation. In an FSTD, the visibility value should be set to the minimum authorized by the operator's operations specifications (OpSpecs). An applicant shall be evaluated on the ability to control the airplane, including making the transition to instruments as visual cues deteriorate. An applicant must also be evaluated on the planning of the transition to an instrument navigation environment. This event may be conveniently combined with an area departure.

C. Engine Failure on Takeoff (For Multiengine Airplanes). An applicant must demonstrate the ability to maintain control of the airplane and to continue a takeoff with the failure of the most critical powerplant. When the flight test is conducted in an airplane, the failure shall be simulated. The takeoff configuration, airspeeds, and operational procedures must be in accordance with the operator's aircraft operating manual. When the flight test is conducted in two segments (full flight simulator (FFS) and airplane), this event shall be conducted in the FFS segment of the flight test. This event should not be repeated in the airplane portion of the flight test unless an unusual situation occurs.

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1) When the flight test is being conducted in an airplane belonging to the transport and commuter category family, the engine failure shall be introduced at a speed after takeoff decision speed (V_1) and before takeoff safety speed (V_2), and appropriate to the airplane and the prevailing conditions. When either V_1 and V_2, or V_1 and rotation speed (V_R), are identical, the failure shall be introduced as soon as possible after V_1 is passed.

2) When the flight test is conducted in an airplane not in the transport and commuter category family, the engine failure shall be introduced at a speed and altitude that is appropriate for the airplane.

NOTE: Some nontransport multiengine airplanes cannot climb or maintain altitude with an engine out. When conducting a flight test in such an airplane, inspectors and examiners should use their authority to modify this event. For example, an engine failure recognition problem and engine shutdown may be performed at a safe altitude.

D. Rejected Takeoff. A rejected takeoff is a potentially hazardous situation that flightcrews must be trained to handle correctly. As a testing event it must be presented in a realistic and meaningful manner. The event is a test of an applicant's ability to correctly respond to a critical situation and to correctly manage the actions necessary for safeguarding the airplane and passengers once the airplane is brought to a stop.

1) When a flight test is conducted in an FFS, performance parameters should be adjusted to make the takeoff critical. For example, the temperature and airplane weight can be adjusted so that takeoff performance is runway-limited. Another technique is to lower the visibility and make the runway wet, presenting the applicant with a tracking problem. Inspectors and examiners should take care in selecting the malfunction used to induce the reject response. The malfunction should be one that clearly and unequivocally requires rejection of the takeoff. The malfunction should be introduced at a speed that is as close to V_1 as possible, yet still allowing the applicant enough time to perceive and respond to the problem before reaching V_1. It is appropriate for inspectors and examiners to occasionally introduce a problem in a way that leads to an evacuation of the airplane. This event shall not be waived in an FFS.

2) When a flight test is conducted in an airplane belonging to the transport and commuter category family, a rejected takeoff at approximately V_1 can be unsafe and can cause damage to the airplane. Inspectors and examiners are expected to use caution when inducing a rejected takeoff in an airplane for flight test purposes. For this event to be meaningful, it should be introduced at a speed close to V_1. Therefore, inspectors and examiners are authorized to waive this event and should do so when the airplane weight, ambient temperature, and tire limits preclude the event from being conducted in a realistic manner. In other families of airplanes, the rejected takeoff shall be performed at a speed of less than 50 percent of minimum controllable airspeed with the critical engine inoperative (V_{MC}).

3) An applicant must be able to recognize the need to initiate a rejected takeoff, perform the correct procedures in a timely manner, and to bring the airplane to a stop on the runway. Once the airplane or FFS is brought to a stop, appropriate procedures must be initiated. Consideration must be given to the possibility of overheated brakes and fire.

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E. Crosswind Takeoffs. A crosswind takeoff from a standing or rolling start (not a touch-and-go) must be evaluated to the extent practical on all flight tests. When appropriate, a crosswind takeoff may be evaluated simultaneously with other types of takeoffs.

1) When the flight test is conducted in an airplane, inspectors and examiners will usually have very little control over existing meteorological, airport, and traffic conditions. Inspectors and examiners are expected to make a reasonable attempt to evaluate a takeoff on a runway not favorably aligned with the prevailing wind. It will frequently be necessary, however, to evaluate this event with the crosswind component that exists on the active runway.

2) FFSs are capable of realistically duplicating crosswinds. Crosswind takeoffs shall be evaluated on all flight tests conducted in an FFS. The crosswind component entered in the instructor operating station (IOS) shall be between 10 and 15 knots. Occasionally, however, the crosswind components should be in excess of 15 knots, but must not exceed the crosswind component allowed by the operator's aircraft operating manual, or the maximum demonstrated value given in the approved Airplane Flight Manual (AFM). The purpose of testing at such higher crosswind components is to determine whether applicants are being trained throughout the range of the flight envelope. When level A FFSs are used, principal operations inspectors (POI) must determine the maximum values at which the crosswind simulation is realistic.

5-831 CLIMB, EN ROUTE, AND DESCENT EVENTS.

A. Area Departures and Arrivals. The area departure and arrival events should include intercepting radials, tracking, and climbs or descents with restrictions. Whenever practical, a standard instrument departure or standard arrival should be used. Many of the standard procedures, however, are not suitable for the purpose of testing an applicant's abilities. For example, common radar departures are essentially initial-climb instructions for a radar handoff, and provide little opportunity for testing an applicant's ability to set up and use the navigation equipment normally used on an area departure. If a suitable published procedure is not available and circumstances allow, the inspector or examiner should give a clearance that presents the desired tests. Inspectors and examiners should allow applicants to use all installed equipment. The autopilot may or may not be used at the inspector's or examiner's discretion. The applicant's use of navigation equipment, and other crewmembers, and the applicant's ability to adhere to ATC clearances and restrictions shall be evaluated. Inspectors and examiners may waive one, but not both, of these events. Under normal circumstances, one of the two events should be waived.

B. Holding. Inspectors and examiners should give holding clearances with adequate time available for the applicant to identify the holding fix, select the appropriate speed, and plan the entry. Applicants should be allowed to use all aids normally available on the flight deck (such as wind drift readouts). At least the initial entry and one complete turn in the holding pattern should be completed before another clearance is issued. The applicant's performance shall be evaluated in accordance with the holding procedures outlined in the operator's aircraft operating manual, the instructions issued by ATC, and the published holding pattern criteria. Holding airspeed must be as specified by the operator's aircraft operating manual; however, it must not be allowed to exceed the regulatory limit. If the operator's manual requires a speed higher than that allowed by regulation, the applicant must resolve the conflict by requesting

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an amended ATC clearance or by selecting an airplane configuration in which it is safe to comply with the regulatory speed. Inspectors and examiners should waive holding when an applicant's performance on other events has indicated a high degree of proficiency.

C. Steep Turns. This event consists of a level turn in each direction with a bank of 45 degrees, continuing for at least 180 degrees, but not more than 360 degrees. Inspectors and examiners shall direct special attention to an applicant's smoothness, coordination, and orientation. Steep turns may be waived, and should be if an applicant's performance on other events has indicated a high degree of proficiency.

D. Stall Prevention (approaches to stalls). Inspectors and examiners must evaluate the applicant's ability to recognize and recover from an impending stall in three separate airplane configurations: clean configuration, takeoff configuration (except where the airplane uses only a zero-flap takeoff configuration), and landing configuration. At least one impending stall recovery must be performed while in a turn with a bank angle between 15 and 30 degrees. One impending stall should be initiated by commands to the autopilot (if installed). Impending stall recovery in the clean configuration should be evaluated at a high altitude near the airplane's maximum operating altitude. (Refer to the current edition of Advisory Circular (AC) 120-109, Stall Prevention and Recovery Training.)

NOTE: This requirement applies to all airplane types, including those with flight envelope protection and fly-by-wire flight controls. Inspectors and examiners should reference the applicable Flight Standardization Board (FSB) report for recommendations to conduct this maneuver.

1) The inspector or examiner is responsible for establishing the flight conditions associated with the configuration being evaluated. While the pilot may fly the entry profile, the pilot will not be evaluated on the entry. The satisfactory completion of the event is based on the pilot's initiating recovery at the first indication of an impending stall (e.g., buffet, stick shaker, or aural warning) and the accomplishment of the proper recovery procedure.

2) When evaluation of stall prevention is performed in an airplane, the operator's minimum entry and recovery altitudes must be observed. In an FSTD, evaluation of stall prevention may be maneuver-based or scenario-based with an entry altitude consistent with normal operating environments. The entry parameters, including W&B, should be within airplane limitations to ensure adequate performance for recovery from first indication of an impending stall.

3) When the flight test is conducted in an FSTD, inspectors and examiners should occasionally require an applicant to recover from an impending stall at high altitude. Evaluation of stall prevention in various flight regimes should be accomplished to determine whether the operator's training program has adequately prepared applicants for flight in those regimes.

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4) Evaluation of stall prevention must not be based on altitude loss. Pilots must be evaluated on recovering at the first indication of an impending stall, even if it is based on an aural or visual indication that occurs before the stick shaker or stick pusher (if installed), and their timely and effective use of available energy (i.e., altitude and speed) during recovery. The inspector or examiner must consider the variables that are present at the time of the indication of an impending stall and their effect on the recovery. Evaluation criteria are:

- Prompt recognition of impending stall,
- Correct application of the stall recovery procedure, and
- Recovery without exceeding the airplane's limitations.

5) Stall recovery procedures must be in accordance with the operator's aircraft operating manual (if applicable) or AC 120-109. Inspectors and examiners may waive all but one of the impending stall recoveries. This waiver authority should be used when an applicant's performance in other events indicates a high degree of proficiency.

E. Specific Flight Characteristics. This event consists of recovery from flight characteristics specific to the airplane type, such as a Dutch roll or a high rate of descent. These specific flight characteristics, when applicable, are specified in the FSB report for the particular airplane type. Inspectors and examiners shall evaluate an applicant on recognition and recovery from these specific flight characteristics, when applicable. The procedures used for recovery must be those specified in the operator's aircraft operating manual. When applicable, this event may be waived. This event should be waived when the applicant's performance in other events indicates a high degree of proficiency.

5-832 APPROACH EVENTS. The approaches described in this paragraph are required on all flight tests. They may be combined when appropriate.

A. Instrument Landing System (ILS) Approach. Inspectors and examiners shall require applicants to fly a minimum of one normal (all-engines-operative) ILS. In addition, when multiengine airplanes are used, one manually controlled ILS with a powerplant failure is also required. When the flight test is conducted as a two-segment flight test, a manually controlled, normal ILS must be flown in the airplane segment of the flight test.

1) When the operator's aircraft operating manual prohibits raw data approaches, the flight directors (FD) must be used during the manually controlled ILS approach. In this case, a raw data approach is not required to complete the flight test.

2) If the operator's aircraft operating manual permits raw data ILS approaches to be conducted, the operator must provide training in the use of raw data for controlling an airplane during ILS approaches. If the operator's airplanes are equipped with a FD system, the FD must be used on at least one manually controlled ILS approach. While a raw data approach is not required to complete a flight test, inspectors and examiners should occasionally require a raw data approach to determine whether the operator's training program is adequately preparing applicants.

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3) For all raw data and FD ILS approaches flown in an FSTD, inspectors and examiners shall require applicants to use a decision height (DH) of 200 feet above the touchdown zone (TDZ). When raw data is used on ILS approaches in an airplane, inspectors and examiners shall require applicants to use a DH of 200 feet above the TDZ. When the FD is used on ILS approaches in an airplane, inspectors and examiners shall require applicants to use a DH of 100 feet above the TDZ. However, if the applicant has accomplished an ILS using a 200 foot height above touchdown (HAT) in the FSTD segment of the flight test, the published DH shall be used in the airplane portion of the test. The DH shall be determined by barometric altimeter. Inspectors and examiners shall inform applicants that this DH is for flight test purposes only and does not correlate to any minimums used in actual operations. If the flight test is being conducted in actual weather conditions, the DH shall be the published DH. The applicant must be able to track the Localizer (LOC) and glideslope (GS) smoothly and without significant excursion during the final approach segment. The LOC indication shall not exceed ¼-scale deflection at DH. When the ILS indicator is calibrated with the first dot at the ½-scale deflection point and a second dot at the full-scale point, the deflection at DH must not exceed half the distance to the first dot. The GS shall not exceed ½-scale deviation (one dot) at DH.

4) When the operator's airplanes are equipped with autopilot couplers, at least one coupled autopilot ILS approach must be flown. If the autopilot has the capability and the operator is authorized by OpSpecs to conduct automatic landings, the coupled approach shall terminate in either an autolanding or a coupled missed approach. When an autoland is conducted, it shall not be credited as one of the three required manually controlled landings. When the flight test is conducted entirely in an airplane or entirely in an FFS, the autopilot coupled approach may be combined with the normal ILS (all-engines-operative) approach. This combination is permitted because the applicant's ability to manually control an ILS approach is evaluated on the ILS with an engine out.

5) Qualification for Category II (CAT II) and Category III (CAT III) operations are not part of a type rating or ATP flight test. To satisfy the requirements for these types of operations, additional events that are not required for the ATP Certificate or a type rating will normally be required. The qualification checks for these types of operations, however, may be conducted in conjunction with an ATP or type rating test as a convenience to the operator and the applicant. However, if one of these additional events is unsatisfactory, the entire flight test is unsatisfactory. Therefore, the choice of whether to combine these events with the certification flight test is up to the applicant. Inspectors and examiners shall ensure that applicants understand these ground rules before conducting these additional events in conjunction with a certification test.

6) Qualification check requirements for CAT II and CAT III operations, including the required number and types of approaches, are established by the operator's approved training program. If an applicant is simultaneously qualifying for these authorizations during the certification flight test, the approaches discussed in subparagraphs 1)–3) above may be credited toward these requirements when the approach requirements are compatible.

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7) Inspectors and examiners shall use a crosswind component of 8 to 10 knots (not to exceed 10 knots) on at least one of the ILS approaches conducted in an FSTD. The use of this crosswind is to evaluate the applicant's ability to track the LOC and not the applicant's ability to accomplish a crosswind landing.

8) When the flight test is conducted in an FSTD, the Runway Visual Range (RVR) should be set to the minimum value specified for the approach. If the inspector or examiner plans for the applicant to acquire the runway and to continue below DH, the ceiling should be set to a value of approximately 50 feet above HAT (the exact value depends on the characteristics of the specific FSTD). When the flight test is conducted in an airplane, the vision restriction device must remain in use until just before the airplane arrives at the DH used for the flight test.

9) Flightcrew procedures, airplane configuration, and airspeeds must be as specified in the operator's aircraft operating manual. Turbojet airplanes must be stabilized before descending below 1,000 feet above the TDZ.

B. Nonprecision Approaches (NPA). Inspectors and examiners shall require applicants to demonstrate two nonprecision instrument approaches that are authorized in the operator's OpSpecs. The second approach must be based on a different type of Navigational Aid (NAVAID) than the first approach.

1) Inspectors and examiners shall allow the applicant to use any aid normally available on the flight deck, such as the FD and drift and groundspeed readouts. Many operators train their pilots to perform NPAs using the autopilot. At least one NPA must be manually flown on the flight test, except when the operator's manual prohibits manually flown NPAs.

2) When NPAs are conducted in an FSTD, a crosswind component of 10 to 15 knots shall be used on at least one of the NPAs. The purpose of the crosswind component is to test an applicant's ability to track the approach course, not to evaluate crosswind landings. Crosswind landings, however, may be combined with a NPA.

3) In an airplane, the vision restriction device shall remain in use until the airplane arrives at the minimum descent altitude (MDA) and a distance from the runway approximating the required visibility for the approach. In an FSTD, inspectors and examiners shall enter a ceiling of approximately 50 feet higher than the published MDA. A visibility value of approximately ¼ mile greater than the published minimums value shall be used, depending on the characteristics of the particular FSTD.

NOTE: If the approach to be conducted is a lateral navigation (LNAV)/vertical navigation (VNAV) with a published decision altitude (DA), the FSTD visibility should be set to the HAT at the DA, divided by 300 feet (a constant); then add ¼ mile. For example:

To set FSTD visibility where DA = 1000 ft and HAT at DA = 600 ft

Divide 600 ft by 300 ft = 2 (miles visibility)

Add ¼ mile visibility

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Set FSTD visibility at 2¼ miles

This setting permits the flightcrew to acquire the approach lights visually before reaching the published DA, and precludes an unnecessary missed approach when the approach is otherwise satisfactory.

4) When tracking is accomplished by means of an automatic direction finder (ADF) bearing pointer, the tolerance is ±5 degrees of the final approach course. When tracking a LOC signal, the tolerance is a ¼-scale deviation (½-dot). When tracking a very high frequency omni-directional range station (VOR) signal, the tolerance is a ¼-scale deviation of the course deviation indicator (CDI). The reason for these tolerances is terrain. Also, at the visual descent point (VDP) or its equivalent, the airplane must be in a position that it can be aligned with the runway without excessive maneuvering. Turbojet airplanes must be stabilized before descending below the MDA or 500 feet, whichever is lower.

C. Circling Approach Maneuver. Operators are not required to train flightcrew members in circling approach maneuvers if the operator's manual prohibits such maneuvers with a ceiling below 1,000 feet and a visibility of less than 3 miles. Inspectors and examiners shall waive this event if the operator does not train flightcrew members for the maneuver. If the operator provides training on the circling maneuver, it may be waived when local conditions beyond the control of the inspector or examiner, such as traffic or available approaches, prevent the maneuver from being conducted in a realistic manner.

1) For the purpose of flight testing, the visual maneuvering portion of a circling maneuver begins at the circling MDA of an NPA and requires a change in heading from the final approach course to the runway heading of at least 90 degrees. The inspector or examiner, however, is authorized to modify this event. For example, when traffic conditions preclude a circling approach, if ATC approval is attained, the visual portion of the event can be entered from a modified visual flight rules (VFR) traffic pattern at a point downwind and abeam the touchdown point.

2) The angle of bank for a circling maneuver should not exceed 30 degrees. The airplane must not descend below MDA until the runway environment is clearly visible to the applicant, and the airplane is in a position for a normal descent to the touchdown point. Turbojet airplanes must be stabilized in the landing configuration before descending below the MDA or 500 feet above touchdown zone elevation (TDZE), whichever is lower.

D. Maneuver To a Landing With 50 Percent of Powerplants Inoperative. Inspectors and examiners shall require an applicant to demonstrate an approach and landing with 50 percent of powerplants inoperative.

1) Inspectors and examiners should introduce this event in a realistic manner. Consideration should be given to the airplane weight, atmospheric conditions, and airplane position. The airplane position, when the engine failure is introduced (second engine in a three- or four-engine airplane) should provide enough room for the applicant to maneuver the airplane. In an FFS, the weight should be adjusted to simulate realistic conditions, but still allow the applicant enough time to exercise judgment. In a three-engine airplane, this event must be

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performed with the center and an outboard engine failed. In a four-engine airplane, both powerplant failures must be on the same side.

2) In two-engine airplanes, the engine-out ILS may be credited simultaneously with this event. In three- and four-engine airplanes, this event should be conducted in visual conditions. A visual pattern should be used rather than a vector to the final approach, so that the applicant's judgment with respect to maneuvering the airplane can be evaluated. When this event is conducted in an FFS, the electronic GS or Visual Approach Slope Indicator (VASI) shall not be made available for the applicant's use. In the airplane, it may not be possible to have the VASI turned off. In daylight conditions, however, inspectors and examiners should request that the VASI be turned off. In an airplane at night, an electronic GS or VASI must be available and used.

NOTE: An approach with a simulated failure of the most critical powerplant must always be performed in the airplane segment of a two-segment flight test. That event is required in the airplane segment, even when a maneuver and landing with 50 percent of powerplants inoperative has already been previously accomplished in an FFS.

E. No-Flap or Partial-Flap Approach. Inspectors and examiners shall require an applicant to perform a no-flap approach in all airplanes except those airplanes that have alternate flap extension procedures and in which the FSB has determined that no-flap approaches are not required. If a no-flap approach is not required, the FSB may still require that a partial-flap approach be accomplished. In this case, inspectors and examiners are only required to evaluate an applicant's demonstration of a partial-flap approach. However, inspectors and examiners may evaluate applicants conducting partial-flap or no-flap approaches any time procedures for such approaches are published in the operator's aircraft operating manual.

1) For either a partial or no-flap approach, the limitations specified for the use of VASI and electronic GS guidance in the 50 percent engine failure maneuver (see subparagraph 5-832D2) above) apply. The approach shall be flown from a visual pattern from at least a downwind position, so that the applicant may be evaluated on planning for the approach. The approach should be presented in a realistic manner. In an FFS, inspectors and examiners shall adjust the landing weight to require an applicant to exercise judgment in matters such as approach speed and runway limitations.

2) When the flight test is conducted in a transport or commuter category airplane, a touchdown from a no-flap or partial-flap approach is not required and shall not be attempted. The approach must be flown to the point that the inspector or examiner can determine whether the landing would or would not occur in the TDZ. In an FFS, the landing must be completed to a full stop so that the applicant's ability to control the airplane and to use correct procedures may be evaluated.

NOTE: The events required in subparagraphs 5-832D and E above should be conducted in an FFS whenever practical. These events should not be repeated in the airplane segment of the flight test unless an unusual situation occurs.

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F. Acceptable Performance for Approach Events. The airspeed and altitude on downwind and base leg, or on an intercept to final approach, must be as specified in the operator's flight manual. The airspeed on final approach must be adjusted for wind and gusts in accordance with the flight manual and must be positively and accurately maintained throughout the approach. The approach angle must be controlled and be appropriate to both the airplane and approach being flown. If a windshear or a ground proximity warning (GPW) should occur, an applicant must respond in a prompt and positive manner. For turbojets, the approach must be stabilized, the airplane in the landing configuration, with a sink rate of less than 1,000 feet per minute (fpm), not later than the following heights:

1) For all straight-in instrument approaches, the approach must be stabilized before descending below 1,000 feet above the airport or TDZ.

2) For visual approaches and landings, the approach shall be stabilized before descending below 500 feet above the airport elevation.

3) For the final segment of a circling approach maneuver, the approach must be stabilized 500 feet above the airport elevation or at the MDA, whichever is lower.

NOTE: Use of the stabilized concept is mandatory for all turbojet airplane operations. It is recommended for all propeller-driven airplanes when conducting operations in instrument flight rules (IFR) weather conditions.

5-833 LANDING EVENTS. A total of three manually controlled landings must be accomplished on all flight tests. When a two-segment FSTD and airplane flight test is conducted, a minimum of three manually controlled landings must be performed in the airplane. If the flight test is conducted in an amphibious airplane, one landing must be on water. The required events are as follows:

A. Normal Landings. A normal landing is defined as a manually controlled landing in the normal landing configuration (as specified in the operator's aircraft operating manual), with normal power available, and without reference to an electronic GS. A normal landing can be accomplished from either a visual pattern or from an NPA.

B. Crosswind Landings. A manually controlled landing with a crosswind must be accomplished on all flight tests. The crosswind landing may be combined with any other landing event.

1) When the flight test is conducted in an airplane, inspectors and examiners usually have little control over existing meteorological, airport, and traffic conditions. As such, an inspector or examiner is expected to make a reasonable attempt to evaluate a landing on a runway not favorably aligned with the prevailing wind. It will frequently be necessary, however, to evaluate this event with the crosswind component currently existing on the active runway.

2) FFSs are capable of realistically duplicating a crosswind for landing. Crosswind landings must be evaluated on all flight tests conducted in FFSs. The crosswind component entered in the IOS shall be between 10 and 15 knots. Occasionally, however, the crosswind components should be in excess of 15 knots, but must not exceed the crosswind component

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allowed by the operator's aircraft operating manual (or the maximum demonstrated value given in the AFM). The purpose of testing at such higher crosswind components is to determine whether applicants are being trained throughout the range of the flight envelope. When level A FFSs are used, POIs must determine the maximum values at which the crosswind simulation is realistic. Crosswind landings should normally be performed from a VFR traffic pattern, but may be accomplished from an NPA.

C. Landing in Sequence from an ILS Approach. On the landing from an ILS approach, the runway environment should become visible to the applicant as close as possible to the DH being used for the flight test. The applicant must complete the landing without excessive maneuvering and within the TDZ. The approach angle must not be erratic, excessively steep, or shallow in the visual segment.

D. Accuracy Landings (single-engine only). The accuracy landing event consists of three approaches and spot landings from an altitude of 1,000 feet or less, with the engine throttled and an approach requiring a 180 degree change of heading. ("Throttled" means that as power is reduced, it shall not again be increased above that point until after touchdown.) Touchdown must be in a normal landing attitude and configuration, beyond but within 200 feet of a designated point. One of the three landings must be from a forward slip. Although circular approaches are acceptable, two 90-degree turns with a straight base leg are preferred. This event is not required if the applicant holds a commercial pilot certificate.

E. Rejected Landing. The rejected landing shall be initiated from a point approximately 50 feet above the runway. This event may be combined with an instrument missed approach.

F. Engine-Out Landing. One landing with the most critical powerplant inoperative must be evaluated. When a two-segment flight test is conducted, this event must be performed in the airplane. When conducted in an airplane, the engine failure shall be simulated.

G. Landing With 50 Percent of Powerplants Inoperative. A landing with 50 percent of powerplants inoperative must be evaluated. In a three-engine airplane, the event must be performed with the center and one outboard engine inoperative. In a four-engine airplane, both powerplant failures must be on the same side. When this event is conducted in an airplane, the engine failures shall be simulated.

H. No-Flap or Partial-Flap Landings. No-flap or partial-flap landings are not required to complete the flight test. When the flight test is conducted in a transport category airplane in actual flight, a touchdown from a no-flap or partial-flap approach is not required and shall not be attempted. The approach must be flown to the point that the inspector or examiner can determine whether the landing would or would not occur in the TDZ. In an FFS, the landing should be completed to a full stop so that the applicant's abilities to control the airplane and use correct procedures under abnormal circumstances may be evaluated. For example, the airplane might have a pitch-up tendency with spoiler extension in the no-flap or partial-flap landing configuration.

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I. Acceptable Performance for Landing Events. Landings must be in the TDZ, at the correct speed for the airplane, without excessive float, and on the runway centerline (RCL). The rate of descent at touchdown must be controlled to an acceptable rate for the airplane involved. Side load on the landing gear must not be excessive, and positive directional control must be maintained through the rollout. Management of spoilers and thrust reversers must be in accordance with the operator's aircraft operating manual.

5-834 MISSED APPROACH EVENTS. Missed approaches from two separate instrument approaches are required to complete the flight test. At least one missed approach must be flown through the entire missed approach procedure, unless traffic or ATC restrictions prevent completing the entire procedure. One missed approach is required from an ILS. When the flight test is conducted in a multiengine airplane that has a single-engine climb capability, one missed approach should be accomplished with the most critical powerplant inoperative. The engine-out and ILS missed approaches may be combined; however, to complete the flight test, at least two missed approaches are required. When the flight test is a two-segment flight test, the engine-out missed approach should be accomplished in the FSTD segment.

A. Flight Test Not in Transport or Commuter Category Airplane. When a flight test is conducted in an airplane that does not belong to the transport or commuter category family, airplane performance may be critical. Inspectors and examiners should use their authority to modify the event. For example, a missed approach may be combined with a simulated powerplant failure at a safe altitude.

B. Flight Test in a Three- or Four-Engine Airplane. A missed approach from an approach with 50 percent of powerplants inoperative is not required to complete the flight test for three- and four-engine airplanes. However, when procedures for 50 percent of powerplant-inoperative missed approaches are published in the operator's aircraft operating manual, inspectors and examiners may evaluate the event to determine if applicants are being trained to proficiency in the event. When this event is conducted in a three-engine airplane, the center and one outboard engine must be inoperative. When this event is conducted in a four-engine airplane, two engines on the same side must be inoperative. When the missed approach event is conducted in an airplane, the engine failures shall be simulated.

C. Flight Test in an FSTD. When a flight test is conducted in an FSTD, inspectors and examiners should make use of the IOS environmental and fault panels to induce the missed approach decision. For example, many FSTDs have provisions to offset the LOC so that the airplane is not in a position to continue the approach below DH.

D. Criteria for Initiation of Missed Approach. Applicants must promptly execute the missed approach procedure if the runway environment is not acquired at DH on an ILS approach. If the runway environment is not in sight on an NPA, or if the airplane is not in a position to land at the missed approach point, the applicant must initiate a missed approach. Should conditions prevent continuation of any type of approach at any point, the applicant must initiate a missed approach. For example, a missed approach above DH might be required when an instrument failure flag appears. A missed approach is required if the airplane is below DH or MDA and cannot be properly aligned with the runway or if the applicant loses sight of the runway environment. An applicant must adhere to the published missed approach or the instructions

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given by ATC and observe the procedures and limitations in the operator's aircraft operating manual. An applicant must properly use the available aids and other crewmembers when making the transition back to the instrument navigation environment.

5-835 NORMAL AND ABNORMAL PROCEDURES. Inspectors and examiners shall require an applicant to demonstrate the proper use of as many of the airplane's systems and devices as necessary to determine if the applicant has a practical knowledge of the use of these systems. Evaluation of normal and abnormal procedures can usually be accomplished in conjunction with other events and does not normally require a specific event to test the applicant's use of the airplane's systems and devices. An applicant's performance must be evaluated on the maintenance of airplane control, the ability to recognize and analyze abnormal indications, and the ability to apply corrective procedures in a timely manner. Systems to be evaluated include, but are not limited to, the following:

- Anti-icing and deicing systems;
- Autopilot systems;
- Automatic or other approach system aids;
- Stall warning devices, stall avoidance devices, and stability augmentation devices;
- Airborne Radar (AR) devices; and
- Any other available systems, devices, or aids, such as flight management systems (FMS).

5-836 EMERGENCY PROCEDURE EVENTS. An applicant must be able to competently operate all installed emergency equipment and to correctly apply the procedures specified in the operator's aircraft operating manual.

A. Powerplant Failures. Inspectors and examiners may introduce malfunctions requiring an engine shutdown at any time during the flight test. This provision is not intended as authority to require an unrealistic number of failures, but to permit such failures at times when they are most appropriate. Powerplant failures should be limited to those necessary for determining an applicant's proficiency. An applicant must promptly identify the inoperative engine and initiate correct action while maneuvering the airplane safely. If the airplane is not capable of maintaining altitude with an engine inoperative, the applicant is expected to maintain the best engine-out climb speed while descending. Smooth application of flight controls and proper trim are required.

B. Other Emergency Procedures. Inspectors and examiners should sample as many of the following events as necessary for determining whether an applicant is proficient in identifying and responding to emergency situations:

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- Fire in flight;
- Smoke control;
- Rapid decompression;
- Emergency descent (with and without structural damage);
- Hydraulic and electrical system failure or malfunctions (if safe and appropriate);
- Landing gear and flap systems failure or malfunctions;
- Navigation or communications equipment failure; and
- Any other emergency procedures outlined in the operator's aircraft operating manual or training program.

5-837 STANDARDS OF ACCEPTABLE PERFORMANCE. The ATP Certificate is the highest grade of pilot certificate awarded. An applicant for this certificate must possess a degree of piloting skills beyond that required for lower grades of certificates. The applicant must be the master of the airplane, the crew, and the situation throughout the airplane's operational envelope. Inspectors and examiners shall sample an applicant's ability to safely and practically operate the airplane throughout the range of the approved operational envelope. For example, an ATP applicant would be expected to be able to maintain 180 knots to the marker, configure the aircraft, and establish a stabilized approach before descending below 1,000 feet above ground level (AGL) while smoothly tracking the GS and LOC.

A. Manipulative Skills. The manipulative skill standards for the ATP Certificate are the most rigorous of all pilot certificates issued. The skills requirement for the ATP Certificate and for other certificates differs not in the tolerances allowed but in the degree of mastery required. The applicant for an ATP Certificate must demonstrate the ability to operate the airplane smoothly under a complex set of circumstances. The applicant's performance must be such that the inspector or examiner is never seriously in doubt of the successful outcome of each event of the flight test. The determination of whether an applicant's performance is acceptable or not is derived from the experience and judgment of the inspector or examiner. It is imperative that inspectors and examiners be fair and consistent when making their determinations. For example, weather, airplane responsiveness, traffic, and other factors beyond an applicant's control may cause the applicant to deviate briefly during the accomplishment of a maneuver. In the case of turbulence, the applicant is expected to adhere to the procedures for adjusting the target speed as specified in the operator's aircraft operating manual. In such a situation, an applicant who makes a determined effort, is generally successful in maintaining close control, and does not deviate to the extent safety is compromised, should be considered to have met the standard.

B. Flight Management Skills. The term "pilot-in-command" implies that the pilot is the leader of a crew and bears the final responsibility for the safe conduct of the flight. This standard, more than any other, distinguishes the successful applicant for an ATP Certificate from those holding other grades of certificates. The ATP flight test must not be limited to a simple demonstration of a series of events. An ATP applicant must demonstrate a mastery of complex problems, good judgment, situational awareness, Crew Resource Management (CRM), and leadership skills.

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Figure 5-112. ATP/Type Rating Oral Test Job Aid—Airplane

THE ORAL TEST

[ ] A. Knowledge of aircraft systems:

[ ]	Hydraulic	[ ]	Electrical
[ ]	Pneumatic	[ ]	Powerplants
[ ]	Flight instruments	[ ]	Flight controls
[ ]	Landing gear, wheel	[ ]	Autopilot, F/D
[ ]	EFIS, FMS	[ ]	Navigation systems
[ ]	Fuel	[ ]	Propellers
[ ]	Pressurization	[ ]	Air conditioning

[ ] B. Knowledge of, and ability to, compute performance data, takeoff, landing, and cruise performance

[ ] C. Knowledge of the flight engineer station

[ ] D. Weight and balance

[ ] E. Ability to perform or state immediate action items

[ ] F. Knowledge of, and ability to, state operating limitations

[ ] G. Knowledge of MEL

RESERVED. Paragraphs 5-838 through 5-855.

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VOLUME 5 AIRMAN CERTIFICATION

CHAPTER 5 TITLE 14 CFR PART 65—AIRMEN OTHER THAN FLIGHT CREWMEMBERS

Section 2 Certificate Airframe and/or Powerplant Mechanic/Added Rating

5-1131 PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

A. Maintenance: 3501, 3508.

B. Avionics: 5501, 5508.

5-1132 OBJECTIVE. This section provides guidance for certificating applicants for mechanic certificates and ratings. All inspectors (Airworthiness or Avionics) who review these documents must hold a mechanic certificate with both an Airframe and Powerplant (A&P) rating. Aviation safety technicians (AST) who review these documents must hold a mechanic certificate with either an airframe or powerplant rating; however, review by an authorized AST is limited to the rating that he or she holds.

5-1133 JOINT SERVICES AVIATION MAINTENANCE TECHNICIAN CERTIFICATION COUNCIL (JSAMTCC) A&P CERTIFICATION PROGRAM.

A. Military Certification. A recent Federal Aviation Administration (FAA)/JSAMTCC plan provides for military applicant certification integrity by completely specifying the applicant's military training and experience in a level of detail that exceeds the minimum standards set forth in Title 14 of the Code of Federal Regulations (14 CFR) part 65, § 65.77(b) for Aviation Maintenance Technician Schools (AMTS). Authorized persons in the applicant's branch of service must certify this training and/or experience and record it on the joint service Form CG-G-EAE-2, FAA Certification Performance of Job Tasks (see Figure 5-136). The U.S. Coast Guard (USCG) has used this form to certify eligibility for A&P certification for many years, and the Department of Defense (DOD) has now adopted it as a standard form for personnel certification.

B. Eligibility. The appropriate office in each of the joint services will then use the data on Form CG-G-EAE-2 to issue Form CG-G-EAE-4, Certificate of Eligibility (see Figure 5-137), to each qualifying applicant. The applicant may then present the completed Certificate of Eligibility and the FAA Certification Performance of Job Tasks form to a Flight Standards District Office (FSDO) as evidence that he/she qualifies for testing authorization under § 65.77. This certificate will serve the same qualification function as a Certificate of Completion or Graduation from a 14 CFR part 147 AMTS.

C. Advisory Body. The Aircraft Maintenance Division (AFS-300) formally recognizes the JSAMTCC as the functional advisory body to each respective U.S. Military Service's Aviation Maintenance Division and the FAA.

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1) The military services and JSAMTCC remain primarily responsible for the integrity of the program within the referenced JSAMTCC Policy and Procedures Manual (PPM).

2) The JSAMTCC developed the PPM in cooperation with AFS-300 to ensure the contained procedures are well defined and adhered to by all branches of service.

3) Changes to the JSAMTCC PPM are subject to acceptance by the Manager of AFS-300, and oversight of the program shall be maintained at that level.

4) Military applicants that have not completed the JSAMTCC program may still be evaluated for authorization to take the mechanic knowledge test based on documented experience and military occupational specialty (MOS), Air Force Specialty Code (AFSC), or Navy Enlisted Code (NEC) codes, as authorized in § 65.77. However, when evaluating military experience, aviation safety inspectors (ASI) and ASTs are not to accept MOSs, AFSCs, or NECs "carte blanche" as qualifications to accepting experience of § 65.77. Even though the MOSs suggest authorization, the applicant must have verifiable experience in 50 percent of the subject areas listed for the rating sought (refer to part 147 appendices B, C, and D) in order to be eligible.

5-1134 ELIGIBILITY REQUIREMENTS. Applicants for a mechanic certificate must meet the requirements of part 65 subparts A and D. (For the certification of foreign applicants physically located outside the United States as per § 65.3, see Volume 5, Chapter 5, Section 3, Certificate Foreign Applicants Located Outside the United States for Part 65 Mechanic Certificates/Ratings).

A. Age Restrictions. An applicant under 18 years of age may take the tests, but do not issue a mechanic certificate until the applicant's 18th birthday.

B. Language Requirements. All applicants must be able to read, write, speak, and understand English. Refer to the current edition of Advisory Circular (AC) 60-28, English Language Skill Standards Required by 14 CFR parts 61, 63, and 65, which states for all certification testing, the applicant needs to read a section of a technical manual, and then write and explain his/her interpretation of the reading. (An appropriate technical manual in this sense means an Airplane Flight Manual (AFM), maintenance manual, or other publication, as appropriate for the certificate or rating sought.)

C. Testing Periods. Once the tests have begun, applicants must pass all the required tests within a 24-month period.

5-1135 EXPERIENCE REQUIREMENTS. Section 65.77 requires the applicant to have documented practical experience in maintaining airframes and/or powerplants. At least 18 months of practical experience appropriate to the rating requested is required. For a certificate with both ratings, the requirement is at least 30 months of experience concurrently performing the duties appropriate to both ratings. If the applicant has not met the required 30 months concurrently performing the duties appropriate to both ratings, calculate each rating separately using the 18-month requirement for each.

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NOTE: Applying for ratings separately will result in no less than 36 months total requirement for both ratings.

A. Practical Experience. The practical experience must provide the applicant with basic knowledge of and skills in the procedures, practices, materials, tools, machine tools, and equipment used in aircraft construction, alteration, maintenance, and inspection.

B. Evaluating Military Experience. With exception to the JSAMTCC A&P certification program experience gained from the military, work as an airframe or powerplant mechanic, or work on an experimental, amateur-built aircraft will receive evaluations on its own merits to determine whether it fulfills the experience requirements. When evaluating military experience, ASIs and ASTs are not to accept MOSs, AFSCs, or NECs "carte blanche" as qualifications to experience as per § 65.77. Even if the MOS suggests authorization for the airframe, powerplant, or both A&P certificates, the inspector will only endorse FAA Form 8610-2, Airman Certificate and/or Rating Application, after ensuring, by a thorough interview and detailed review of records, that the person qualifies under § 65.77.

C. Expectations. There is no expectation that an applicant be highly proficient in overhauls, major repairs, or major alterations in the minimum 18 months of experience.

D. Powerplant Tests. Powerplant tests will include questions and projects on propellers that the applicant must successfully complete regardless of his or her experience.

E. Part-Time Practical Experience. During the evaluation of part-time practical aviation maintenance experience, the applicant must document an equivalent of 18 months for each rating individually, or 30 months of experience for both ratings. This is based on a standard work-week that has 8 hours per day for 5 days per week, or a 40 hour work-week, or a total of approximately 160 hours per month. The time is cumulative, but the days, weeks, and months are not required to be consecutive. The practical experience must be documented.

F. Foreign Applicants. For foreign applicants located in the United States, all of the requirements for a citizen of the United States apply. This includes applicants who come to the United States just to take the mechanic test. For those located outside the United States, see Volume 5, Chapter 5, Section 3. The following are types of documents that will be acceptable to establish the required record of time and experience:

1) A detailed original statement from a Civil Aviation Authority (CAA) of the country in which he/she gained the experience.

2) A detailed statement from an advisor of the International Civil Aviation Organization (ICAO) that will validate the applicant's experience.

3) If the CAA refuses to provide this information, the inspector will take appropriate action to determine that the experience is valid.

NOTE: "Appropriate action" is whatever the inspector deems appropriate to determine that the experience is valid (e.g., review supporting documentation

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presented to satisfy authorization) without expending an excessive amount of time or resources on behalf of the applicant.

4) Foreign military experience is acceptable experience towards authorization to take the knowledge test based on the context of § 65.77. The applicant must present verifiable documentation from the foreign military or government substantiating the military work experience. Review the current editions of AC 65-2, Airframe and Powerplant Mechanics Certification Guide, and AC 65-30, Overview of the Aviation Maintenance Profession, for guidance.

NOTE: If the applicant shows only foreign military work experience on aircraft that are not manufactured to U.S. standards, that is not an issue; the experience still has to meet the requirements of § 65.77.

G. Programs without Approval. Applicants who have not graduated from an FAA-approved AMTS or JSAMTCC A&P certification program must present documents from an employer, coworker, or other sources satisfactory to the Administrator to establish the required record of time and experience.

1) Applicants will document a proportionate amount of experience directly applicable to the certificate and ratings sought. The applicant must have verifiable experience in 50 percent of the subject areas listed for the rating sought (refer to part 147 appendices B, C, and D) in order to be eligible.

2) The FAA inspector must evaluate the documents submitted to determine the applicants' eligibility for a test authorization.

3) There is no expiration for this eligibility.

H. Applications Based on Military Experience. Applicants who have not graduated from a FAA-approved AMTS or JSAMTCC A&P certification program and are applying based on military experience must prove that their military aviation experience, gained in 50 percent of subject areas, meets the requirements of part 147.

1) To help speed the review process, the applicant may supply the following documentation to the FAA:

a) A valid and positive form of picture identification, such as a U.S. driver's license, passport, or military identification.

b) A properly completed DD Form 214, Certificate of Release or Discharge from Active Duty, which lists the total time in service and the MOS codes assigned to the applicant. (For current MOS, AFSC, or NEC codes, see Figure 5-135, Military Operational Specialty Codes.)

c) A letter from the applicant's executive officer, maintenance officer, or classification officer that certifies the applicant's length of military service, the amount of time

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the applicant worked in each MOS, the make and model of aircraft and/or engine on which the applicant acquired the practical experience, and where he/she obtained the experience.

d) Training records showing the type of aviation schools the applicant attended and/or a record of on-the-job training (OJT). Active duty military, selective guard, and reserve members are eligible for a transcript.

2) Time spent in training or in an MOS, AFSC, or NEC for supervision and/or inspection does not count toward the 18 or 30 months of practical experience required in § 65.77. Only actual hands-on experience is acceptable.

3) The JSAMTCC A&P certification program permits military applicants to receive authorization to take the A&P Knowledge Test upon presentation of a military Certificate of Eligibility (see Figure 5-137) and FAA Certification Performance of Job Tasks form (see Figure 5-136).

4) As required by the JSAMTCC A&P certification program process, the applicable branch of service will provide military technicians with an individual FAA Certification Performance of Job Tasks. Upon the completion of the program and validation of all signed tasks, military technicians will issue an official Certificate of Eligibility by the participant's branch of service along with a signed copy of the FAA Certification Performance of Job Tasks.

5) Sample copies of the FAA Certification and Performance of Job Task and the Certificate of Eligibility are in Figures 5-136 and 5-137, respectively. On the certificate, the seal affixed in the lower-right corner is gold in color, and it carries a raised, embossed stamp from the applicant's training organization.

6) The military experience must be directly applicable to the certificate and ratings sought.

7) There is no expiration for this eligibility.

8) Advise applicants that the authorization to test is only valid for testing by Designated Mechanic Examiners (DME) exercising privileges within the geographic area served by the FSDO/International Field Office (IFO) granting the authorization. Additional FAA approval is necessary if the applicant wishes to test with a DME in another district. The DME must gain permission from their FSDO/IFO by any written means to conduct a test for an applicant authorized in block V from an inspector from another geographical location.

5-1136 ORAL AND PRACTICAL SKILL TEST PREREQUISITES. Applicants for a mechanic certificate and/or added rating(s) must meet the applicable knowledge and skill test requirements of § 65.79.

A. Test Reports. Applicants for the oral and practical tests must present a valid airman test report (with raised, embossed seal) from a computer test center to show proof of successful completion of all sections of the knowledge test. The appropriate knowledge tests are the Aviation Mechanic General (AMG) Aviation Mechanic Airframe (AMA), and Aviation Mechanic Powerplant (AMP), depending on the rating sought. Section 65.71(a)(3) and (b)

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requires the passage of all of the prescribed tests, which include the knowledge, oral, and practical skill tests, within a 24-month period.

1) Under the Pilot's Bill of Rights (PBR), applications for airman certificates, ratings, or inspection authorizations involve FAA investigations of an individual's qualifications to hold the airman certificate, rating, or inspection authorization for which the individual has applied. Because such investigations are not for the purpose of determining whether a violation exists, the inspector does not issue a Letter of Investigation (LOI), and therefore only some of the written notifications under the PBR apply. Any individual who applies for an airman certificate, rating, or inspection authorization must receive and acknowledge receipt of the written notification of investigation at the time of the application (see Figure 5-137G, Sample Written Notification to an Airman Applicant). The signed acknowledgment of receipt of the written notification must be retained with the individual's application.

2) Graduates of an approved part 147 AMTS must complete two originals of FAA Form 8610-2 when applying for oral and practical tests.

3) Individuals applying based on civilian or military experience must present two originals of FAA Form 8610-2 at the Flight Standards Field Office (FSFO). Complete sections I, II, and III. The applicant must sign and date section IV. An Airworthiness ASI who holds a mechanic certificate with an A&P must sign and date section V.

B. Part 147 Certificated Students. Under § 65.80, when an AMTS student certificated under part 147 shows an FAA inspector that he/she has made satisfactory progress at the school and is prepared to take the oral and practical tests prescribed by § 65.79, that student may take those tests during the final subjects of his/her training.

1) The AMTS must show that a student is in the final phase of training, has made satisfactory progress, and is ready for the test. The authorized school official will complete section IIE(1) and (2) of FAA Form 8610-2 before administering the oral and practical tests. The reviewing ASI in the district office will fill out section IIF(1) through (4), ensuring that the expiration date is not later than the anticipated graduation date as shown in section IID(4).

2) In completing FAA Form 8610-2, the student will show the school's name and location, school certificate number, the student's curriculum, and the expected graduation date.

3) After completion of FAA Form 8610-2, ensure that the "Remarks" section on the reverse side of the application indicates the airman's identification (e.g., U.S. driver's license number and current expiration date). Verify that the DME has completed the "Results of Oral and Practical Tests" and the "Designated Examiner's Report" portions, accordingly. Verify the "FAA Inspector's Report" is complete in its entirety, including approval date, signature, and the FSFO number.

NOTE: The FSFO needs to review applications made under § 65.80, "hold for age," and disapproved applications. These applications must have the "FAA Inspector's Report" portion completed.

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5-1137 ORAL AND PRACTICAL SKILL TEST ADMINISTRATION.

A. Standardized Test Procedures. The current edition of FAA Order 8900.2, General Aviation Airman Designee Handbook, provides standardized procedures for conducting and processing mechanic oral and practical tests. Inspectors and examiners conducting the tests must use this handbook to ensure a satisfactory standard of competency by applicants for mechanic certificates.

B. FAA Form 8610-2. The only acceptable evidence of having passed a required oral or practical test is FAA Form 8610-2. In the "Results of Oral and Practical Tests" portion on the reverse side, the form must indicate either that the applicant has passed, with a 24-month expiration date, or that the applicant has failed, listing the questions and/or projects failed in the remarks section.

C. Retest Applicants. An applicant for a retest must first present a valid airman test report (with raised, embossed seal) from a computer test center, two newly completed FAA Forms 8610-2, and the failed FAA Form 8610-2. If less than 30 days has passed since the last test, the applicant must present a letter from an appropriate source indicating additional instruction received in each subject previously failed. The letter of additional instruction should mention the minimum requirements for the person providing the training. That person must hold an airman certificate with at least the rating the applicant is testing for. The retest must cover all subject areas in the failed, incomplete, or expired section. However, applicants who apply for retest within 60 days to the same DME who gave the failed test may, at the option of the DME, be tested only in the subject areas failed, not completed, or that have expired.

D. Additional Ratings. Applicants for additional rating(s) who have passed the General section of the test need not retake the General section. Proof of passing the General section may be in the form of a current mechanic certificate or FAA Form 8610-2 indicating the previous passage of the section.

5-1138 CHANGE OF ADDRESS/NAME/GENDER/CITIZENSHIP/NATIONALITY/ DATE OF BIRTH.

NOTE: For changes to the name, gender, citizenship/nationality, and birth date on an airman certificate, use FAA Form 8610-2. On the form, section I, section IV, the "FAA Inspector's Report" portion (with the "approved" box marked, and date, signature, and FAA district office number included), and the method of identification shown in the "Remarks" section on the reverse side of the application must be completed. The date the inspector signed the "Inspector's Report" will be the same date on the temporary certificate (see Figure 5-137D, Sample of Completed FAA Form 8610-2 (Name Change)).

A. Change of Address. The holder of an airman certificate issued under part 65 must notify the FAA in writing within 30 days after any change in permanent mailing address. Submit the change of address by using Form AC 8060-55, Change of Address Notification, by letter or through the online services on the Airmen Certification Branch (AFS-760) Web site at

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http://www.faa.gov/licenses_certificates/airmen_certification/. Include a map or directions if you are using a personal mailbox, post office box, or rural route.

B. Change of Name. Apply for a change of name on a certificate in person at an FSDO/IFO.

1) Apply by completing FAA Form 8610-2 as specified in the note under paragraph 5-1138. The appropriate documents verifying the change, such as court order stating name or gender change, copy of marriage license, divorce decree, birth certificate, or other state-approved document upholding the name change, should accompany the application package. Each document must conform to the laws of the state of residence.

2) The applicant's current certificate should accompany the application. Issue the applicant a temporary certificate to use while awaiting the changes.

C. Change of Gender. Apply for a change of gender on a certificate in person at an FSDO/IFO.

1) Apply by completing FAA Form 8610-2 as specified in the note under paragraph 5-1138. The application package should include a court order issued by a court of the United States or its territories stating that the applicant has changed his/her gender, or a statement from a physician or clinical psychologist treating the applicant that contains:

- Identification of the applicant by name and address, or
- Verification that the applicant is undergoing treatment that has altered or will alter the applicant's gender.

2) The applicant's current certificate should accompany the application. Issue the applicant a temporary certificate to use while awaiting the changes.

D. Change of Citizenship/Nationality. Apply for a change of nationality on a certificate in person at an FSDO/IFO.

1) Apply by completing FAA Form 8610-2 as stated in the note under paragraph 5-1138. The application package should include the name and location of the court, the date of naturalization, and the docket number. Under no circumstances will anyone copy the Naturalization papers. In the case of a new rating, a new application is necessary.

2) The applicant's current certificate should accompany the application. The applicant will be issued a temporary certificate to use while awaiting the changes.

E. Change Date of Birth. Apply for a change of birth in person at an FSDO/IFO.

1) Apply by completing FAA Form 8610-2 as specified in the note under paragraph 5-1138. The application package should include appropriate documents verifying the change, such as a birth certificate or other legal document that verifies the date of birth change.

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2) The applicant's current certificate should accompany the application. Issue the applicant a temporary certificate to use while awaiting the changes.

F. Replacement of Certificate. An application for a replacement certificate can be in the form of a letter and can be sent to the following address:

Department of Transportation
Federal Aviation Administration
Airman Certification Branch, AFS-760
P.O. Box 25802
Oklahoma City, OK 73125

1) The letter must be signed, dated, and contain the name in which the certificate was issued, the permanent mailing address (including ZIP code), Social Security Number (SSN) (if any), date and place of birth of the certificate holder, and any available information regarding the grade, number, and date of issue of the certificate and the ratings on it.

2) The letter must be accompanied by a check or money order made payable to the FAA. The fee for a replacement airman certificate is $2 for each reissued certificate.

NOTE: AC Form 8060-55 and AC Form 8060-56, Application for Replacement of Lost or Destroyed, or Paper Airman Certificate(s), as well as an Application for Replacement of Lost or Destroyed Knowledge Test Report(s), and other certification resources, including Airmen Certification's Online Services, are available at http://www.faa.gov/licenses_certificates/airmen_certification/.

5-1139 FALSIFICATION, FRAUDULENT REPRODUCTION, OR ALTERATION OF DOCUMENTS. Persons who falsify, fraudulently reproduce, or alter certificates or other documents required to support the issuance of a certificate are subject to suspension or revocation of any airman or ground instructor certificate held by that person. Remind applicants that Title 18 of the United States Code (18 U.S.C.), § 1001 applies, which states that whoever, in any matter within the jurisdiction of any department or agency of the United States, knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or devise a material fact, or makes any false, fictitious, or fraudulent statements or representations, or makes or uses any false writing or document knowing the same to contain false, fictitious, or fraudulent statements or entries, will be fined under 18 U.S.C. or imprisoned, or both. The paper-to-plastic Notice of Proposed Rulemaking (NPRM) was finalized on February 28, 2008. All mechanics that do not have the new security-enhanced plastic airman certificate must get a replacement by March 31, 2013. After this date, the airman will not be able to exercise the privileges of their paper mechanic certificate.

5-1140 INELIGIBLE APPLICANTS.

A. Suspended Certificate Holders. An airman with a suspended or revoked mechanic certificate may not apply for another rating during the period of suspension/revocation. The inspector must review the suspension/revocation order, which will specify any unique terms regarding its duration. An airman with a revoked mechanic certificate may not reapply for that

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certificate for a period of up to 1 year after the date of revocation. The inspector must review the revocation order if that applicant attempts to apply before 1 year has expired.

B. Denial of Applications. Section 65.12(a) and (b) are grounds for denial of application of a certificate to any person convicted of a drug-related offense within the previous 12 months.

NOTE: Although § 65.12 is titled "Offenses Involving Alcohol or Drugs", General Counsel has determined that § 65.12 does not cover alcohol-related convictions.

NOTE: A conviction that is under legal appeal is not a final conviction.

5-1141 COMPETENCY EXAMINATIONS/REEXAMINATIONS. Title 49 of the United States Code (49 U.S.C.), § 44709 provides for reexamination.

A. Questionable Competency. An airman demonstrating questionable competency while exercising the privileges of the certificate and ratings may be reexamined.

1) Inspectors must consider airman competency as a factor in the following:

- Complaint investigations;
- Surveillance;
- Unairworthy aircraft notice issuance;
- Incident investigations;
- Accident investigations;
- Enforcement investigations; and
- Hearings, both formal and informal.

2) Questions of airman competency may arise from any source.

B. Reexamination Results. Based on the results of a reexamination, the FAA must approve, amend, suspend, or revoke the airman's certificate.

5-1142 COORDINATION REQUIREMENTS. None.

5-1143 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- FAA Order 8080.6, Conduct of Airman Knowledge Tests;
- FAA Order 8900.2, General Aviation Airman Designee Handbook;
- AC 60-28, English Language Skill Standards Required by 14 CFR Parts 61, 63, and 65; and
- AC 65-2, Airframe and Powerplant Mechanics Certification Guide.

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B. Forms:

- FAA Form 8610-2, Airman Certificate and/or Rating Application;
- FAA Form 8060-4, Temporary Airman Certificate;
- AC Form 8060-55, Change of Address Notification (Airmen Certificate Holder);
- AC Form 8060-56, Application for Replacement of Lost, Destroyed, or Paper Airman Certificate(s);
- AC Form 8060-70, Application for Replacement of Lost or Destroyed Knowledge Test Report(s); and
- Computer Airman Test Report (with raised, embossed seal).

C. Job Aids:

- Job Task Analysis (JTA): M3.1.22;
- Figure 5-135, Military Occupational Specialty (MOS) Codes;
- Figure 5-136, FAA Certification Performance of Job Tasks; and
- Figure 5-137, Certificate of Eligibility.

5-1144 PROCEDURES.

A. Review Application. The ASI will check the enhanced Vital Information Database (eVID) and PTRS to determine the status of any existing certificates and to determine if the applicant has made previous attempts to obtain authorization for testing. If the PTRS indicates that the applicant may have been previously denied due to lack of qualification or knowledge, then further research should be performed prior to issuing an authorization. Enter the results of the research in the PTRS comments section when recording the authorization or denial.

1) If the applicant has previously held or currently holds an airman certificate, check the eVID. Obtain a copy of any suspension/revocation order for review. If the applicant is ineligible for a certificate/rating, return the application and take enforcement action under § 65.20, if appropriate.

2) If the applicant is eligible, proceed with the certification.

B. Ensure that the Applicant Meets Requirements for Certificate/Rating.

1) Ensure that the applicant has met the experience requirements. If the applicant is eligible for only one rating, ensure that FAA Form 8610-2 has a line through the rating for which the applicant is not eligible.

NOTE: Refer to FAA Order 8900.2, Chapter 6, Technical Personnel Examiner Program, for examples of completed FAA Form 8610-2.

2) Determine if the applicant can read, write, speak, and understand English.

3) Verify that the applicant is at least 18 years old. If the applicant is under 18 years of age, explain they will not receive a certificate until the applicant's 18th birthday.

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4) The following tasks at the field office:

a) The applicant must present the Certificate of Eligibility, CG-G-EAE-4 (Figure 5-137), photo identification, and FAA Certification Performance of Job Tasks, Form CG-G-EAE-2 (Figure 5-136). It is not a requirement that the inspector review or match MOS codes to the applicant's documentation.

b) An ASI (Airworthiness or Avionics) who holds a mechanic certificate with an A&P rating will review the submitted items.

c) An ASI will have the applicant fill out the PBR acknowledgement (see Figure 5-137G) prior to filling out FAA Form 8610-2.

d) Applicants must complete two original copies of FAA Form 8610-2 with sections I, II, III, and IV filled out. Applicants and the ASI will sign both copies of FAA Form 8610-2 with original signatures. The ASI should also instruct the applicant to retain both originals for testing purposes.

NOTE: Applicants applying based on civil experience must complete section IIIB. Applicants applying based on military experience must complete section IIIA and B. Section III should reflect completion of the FAA/Military Certification of Performance of Job Tasks (JSAMTCC) program along with the issuance control number as recorded on the applicant's Certificate of Eligibility Form CG-G-EAE-4. In addition, the applicant must also list his or her total length of military service in section III (see Figure 5-137E, Sample of Completed FAA Form 8610-2 (JSAMTCC)).

5) The inspector will complete the following tasks:

a) Return original to the applicant.

b) Sign section V of FAA Form 8610-2.

c) Enter PTRS Code "3501 or 5501."

NOTE: Military applicants may still receive evaluations for authorization to take the mechanic knowledge test based on documented experience and MOS codes, as authorized in § 65.77.

C. Proof of Completion. Ensure that the application for oral and practical tests includes proof of successful completion of applicable knowledge tests. Review appropriate airman test report to ensure the passage of all appropriate sections of the knowledge test within a 24-month period.

D. Administering and Passing Tests. Ensure the administration and passing of oral and practical tests. If necessary, administer these tests to the applicant according to Order 8900.2.

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E. Review Oral and Practical Test Results. Verify the successful completion of all applicable sections within a 24-month period.

F. Verify Completed "Inspector's Report." After verifying all information previously mentioned, complete the "Inspector's Report." Check the appropriate boxes, sign, date, and include the FAA district office number. Only mark the "approved" box if the inspector is the one issuing the temporary certificate.

G. Emergency Replacement Certificates. In an emergency, one may issue a Temporary Airman Certificate to replace a lost or destroyed certificate.

1) The following conditions must be met before issuing an emergency replacement certificate:

a) The mechanic must show that an immediate replacement of the lost or destroyed certificate is necessary to start or continue employment.

b) The mechanic must show that it is not possible or feasible to obtain a faxed temporary authority from AFS-760. You can obtain an online request for temporary fax authority at: http://www.faa.gov/licenses_certificates/airmen_certification.

c) The inspector must personally know the mechanic, or they must present, in person, acceptable evidence of identity such as a valid, government-issued identification.

d) Contact AFS-760 for verification of the airman certificate and ratings of the lost or destroyed certificate. To confirm the validity of the airman certificate, contact the Aviation Data Systems Branch (AFS-620).

2) Clearly mark the temporary certificate issued "EMERGENCY FIELD ISSUANCE" and limit it to the reasonable time necessary for the mechanic to obtain a duplicate certificate from AFS-760. Do not issue a temporary certificate for more than 60 days in any case. Copies of Emergency Field Issuance temporary certificates are maintained at the FSDO level. Do not send an Emergency Field Issuance application to AFS-760.

3) An expired temporary certificate may be reissued, provided the inspector contacts AFS-760 to determine why a permanent certificate has not been issued.

4) If the applicant returns to the FSDO to receive a Temporary Airman Certificate because he has become of age or has completed the knowledge tests reports under § 65.80, the applicant must complete the Applicant's Certification on the back of FAA Form 8610-2. The applicant's date must match the date the inspector signed the Temporary Airman Certificate.

5-1145 TASK OUTCOMES.

A. Complete the PTRS Record.

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B. Issue a Certificate/Added Rating in Accordance With Instructions in Order 8900.2.

1) After the applicant has met all the requirements for the certificate/rating, issue FAA Form 8060-4. The applicant must either typewrite this form or fill it out in ink, and the issuing official and the applicant must sign it.

a) No original airman certificates will use the SSN of the applicant as the certificate number. The applicant may still supply their SSN on the application, but the certificate number on the Temporary Airman Certificate will be different. This has been in effect since June 1, 2002. Examiners and inspectors will always use the word "pending" in the "Certificate No." block on the Temporary Airman Certificate.

b) Examiners and inspectors should issue and handle FAA Form 8060-4 as follows:

1. No person other than a Flight Standards inspector or properly designated examiner may issue these forms.

2. Do not issue FAA Form 8060-4 unless an inspector or an authorized designated examiner has signed it.

3. When an applicant has accomplished the prescribed examinations, the examining official will prepare FAA Form 8060-4 in duplicate with the applicant's name and address plainly typed or printed with ballpoint pen, and sign his name in the appropriate space provided. The examiner will also insert his or her designation number in the space provided.

NOTE: This "valid outside the United States" statement does not pertain to persons who complete their evaluation and/or testing in the United States, and/or work in the United States. In this case, the applicant must be able to read, write, speak, and understand the English language.

4. Ensure that the duplicate copy given to the applicant is legible.

5. Enter the word "PENDING" in the certificate number space if the applicant has never held a permanent numbered certificate. AFS-760 will assign a unique certificate number. Otherwise, enter the permanent certificate number.

NOTE: The reverse side of FAA Form 8060-4 (Conditions of Issuance) states: This is an interim certificate issued subject to the approval of the Federal Aviation Administration pending the issue of a greater duration. As such the use of PENDING during this period is considered tantamount to a digital number for the purposes of meeting the recording requirements of 14 CFR part 43, §§ 43.9 and 43.11, as applicable.

NOTE: On FAA Form 8610-2, when an applicant, such as a foreign applicant, does not have an SSN, then the application will have the word "none" in the SSN

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block. If an applicant does not wish to provide an SSN, the applicant will use the words "Do Not Use" in the SSN block on the application.

2) For a reissuance, continue to show the previously assigned certificate number in block III. A reissued certificate may use a U.S. SSN as the certificate number if the airman wishes to retain that number as the certificate number. If a U.S. SSN appears on the application, enter the SSN without dashes or spaces immediately above the applicant's date of birth.

a) Fill out FAA Form 8610-2.

b) When the applicant passes a section, check the "Pass" block and indicate the 24-month expiration date. Complete the "FAA Inspector Report" portion of FAA Form 8610-2. Sign the form with the office identifier and date.

NOTE: The inspector's signature in the "FAA Inspector's Report" portion on the back of the application indicates that the inspector has only reviewed the form for completeness if he or she checks "Examined this applicant's papers." If the inspector actually gave the test, he or she checks the "Personally Tested" block. The signature is not an endorsement of the applicant's eligibility.

c) Give the applicant the other signed original of FAA Form 8610-2 with instructions to keep it until they receive the permanent certificate.

3) Complete and submit to AFS-760 an application file with the following:

a) A typewritten, original FAA Form 8060-4, signed by the issuing inspector/examiner.

b) The original copy of FAA Form 8610-2 with completed sections I, II, III, IV, and V (as appropriate). For retests, also send a copy of FAA Form 8610-2, completed and signed in section V, by the inspector who originally authorized the test.

c) Airman test report or valid Computer Airman Test Report (with a raised, embossed seal) from the Computer Testing Center (CTC).

d) A document certifying additional instruction from a holder of an airman certificate, with at least the rating the applicant is testing for, if the applicant retook the oral and/or practical test within 30 days of the original test.

e) AC Form 8060-1, FAA Airmen Certificate, when adding a rating.

f) Copies of test planning sheets (DME/Designated Parachute Rigger Examiner (DPRE)).

NOTE: FSDOs are no longer required to keep copies of the test planning sheets in the designee's FSDO file. The office may choose to retain a copy of the test planning sheet in the designee's file.

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g) Send certification files via mail to AFS-760 (see address in subparagraph 5-1138F) as soon as possible to permit the necessary review and processing to take place before the expiration of the temporary certificate.

C. Deny a Certificate/Added Rating. When the applicant fails any required section of the oral or practical test or does not complete the test, accomplish the following:

1) Complete the "FAA Inspector's Report" portion of FAA Form 8610-2 on the reverse side of the application. Check and complete all appropriate block(s) in the "FAA Inspector's Report." Ensure that the application is completed in sections I, II, III, IV, and V, as appropriate.

2) Send to AFS-760.

3) Return the duplicate copy to the applicant as a record of the sections passed or failed.

4) Return other documents to the applicant, as appropriate.

D. Retest After Failure.

1) Conduct knowledge retest (per Order 8080.6).

2) Conduct oral and practical retest.

a) The oral and practical retests must cover all the subject areas in the failed section, as indicated on the application. The DME who issued the failure and/or incomplete test may examine applicants in the subject areas failed on the previous test only if they apply for retest within 60 days.

b) If the applicant fails again, complete FAA Form 8610-2 only for the sections included in the retest. The examiner or inspector must return a valid airman test report (with a raised, embossed seal) from the CTC presented by an unsuccessful applicant for the oral/practical retest to the applicant with the second original of FAA Form 8610-2.

E. Investigate Discrepancies. Investigate all indications or reports of falsification, fraudulent reproduction, or alteration of airman certification documents and applications.

5-1146 FUTURE ACTIVITIES. Conduct routine surveillance.

Figure 5-135. Military Occupational Specialty Codes

Following are the updated, new, and the older military operational specialty (MOS) codes for the U.S. Army, Air Force, Navy, Marine Corps, and Coast Guard enlisted personnel. Use the new codes for active duty time after January 1990. The older codes are still valid for persons wishing to credit their military aviation maintenance experience toward meeting the requirements of the FAA Airframe and Powerplant (A&P) mechanic certificate.

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U.S. AIR FORCE
CURRENT AS OF: 15 OCTOBER 2012

CURRENT MOS (AFSC) CODE	PREVIOUS MOS (AFSC) CODE	TITLE	CREDITABLE EXPERIENCE
NOTE: Some Air Force Specialty Codes (AFSC) may have an alphabetical suffix, known as "Shredout." The shredout identifies specialization in a specific aircraft or system. (Example: 2A353M.) The shredout has no bearing toward creditable experience.			
2A251	2A354, 2A351, 32656, 32657, 32658, 45251, 45253	Special Operations Forces/Personnel Recovery (SOF/PR) Integrated Communication, Navigation, and Mission Systems Journeyman	Airframe
2A271	2A374, 2A371, 32676, 32677, 32678, 45271, 45273	Special Operations Forces/Personnel Recovery (SOF/PR) Integrated Communication, Navigation, and Mission Systems Journeyman	Airframe
2A252	2A354, 2A351, 32656, 32657, 32658, 45251, 45253	Special Operations Forces/Personnel Recovery (SOF/PR) Integrated Instrument and Flight Control Systems Journeyman	Airframe
2A272	2A374, 2A371, 32676, 32677, 32678, 45271, 45273	Special Operations Forces/Personnel Recovery (SOF/PR) Integrated Instrument and Flight Control Systems Craftsman	Airframe
2A253	2A354, 2A351, 32656, 32657, 32658, 45251, 45253	Special Operations Forces/Personnel Recovery (SOF/PR) Integrated Electronic Warfare Systems Journeyman	Airframe
2A273	2A374, 2A371, 32676, 32677, 32678, 45271, 45273	Special Operations Forces/Personnel Recovery (SOF/PR) Integrated Electronic Warfare Systems Craftsman	Airframe
2A300	32900, 43200, 45100, 45200, 45400	Fighter/Remotely Piloted Aircraft Chief Enlisted Manager	Airframe and/or Powerplant. ASI evaluation required to determine appropriate rating(s).

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Figure 5-135. Military Occupational Specialty Codes (Continued)

U.S. AIR FORCE
CURRENT AS OF: 15 OCTOBER 2012

CURRENT MOS (AFSC) CODE	PREVIOUS MOS (AFSC) CODE	TITLE	CREDITABLE EXPERIENCE
2A353	43151, 45254	Tactical Aircraft Maintenance Journeyman	Airframe and Powerplant
2A373	43171, 45274	Tactical Aircraft Maintenance Craftsman	Airframe and Powerplant
2A354	2A351, 32656, 32657, 32658, 45251, 45253	Fighter Aircraft Integrated Avionics Journeyman	Airframe
2A374	2A371, 32676, 32677, 32678, 45271, 45273	Fighter Aircraft Integrated Avionics Craftsman	Airframe
2A355	2A352, 32656, 32657, 32658, 45252	Advanced Fighter Aircraft Integrated Avionics Journeyman	Airframe
2A375	2A372, 32676, 32677, 32678, 45272	Advanced Fighter Aircraft Integrated Avionics Craftsman	Airframe
2A357	2A353, 43151, 45254	Tactical Aircraft Maintenance (5th Generation) Journeyman	Airframe and Powerplant
2A377	2A373, 43171, 45274	Tactical Aircraft Maintenance (5th Generation) Craftsman	Airframe and Powerplant
2A358	2A353, 43151, 45254	Remotely Piloted Aircraft Maintenance Journeyman	Airframe and Powerplant
2A378	2A373, 43171, 45274	Remotely Piloted Aircraft Maintenance Craftsman	Airframe and Powerplant
2A390	32690, 32691, 32692, 32699, 43191, 43199, 45292, 45299	Fighter/Remotely Piloted Tactical Aircraft Superintendent	Airframe and/or Powerplant. ASI evaluation required to determine appropriate rating(s).
2A500	2A300, 32900, 43200, 45100, 45200, 45400	Airlift/Special Mission Aircraft Maintenance Chief Enlisted Manager	Airframe and/or Powerplant. ASI evaluation required to determine appropriate rating(s).
2A551	43151, 43152, 43153, 45353, 45750, 45752	Airlift/Special Mission Aircraft Maintenance Journeyman	Airframe and Powerplant
2A571	43171, 43172, 43173, 45373, 45770, 45772	Airlift/Special Mission Aircraft Maintenance Craftsman	Airframe and Powerplant
2A552	43150, 45751	Helicopter/Tiltrotor Aircraft Maintenance Journeyman	Airframe and Powerplant

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Figure 5-135. Military Occupational Specialty Codes (Continued)

U.S. AIR FORCE
CURRENT AS OF: 15 OCTOBER 2012

CURRENT MOS (AFSC) CODE	PREVIOUS MOS (AFSC) CODE	TITLE	CREDITABLE EXPERIENCE
2A572	43170, 45771	Helicopter/Tiltrotor Aircraft Maintenance Craftsman	Airframe and Powerplant
2A553	2A154, 2A157, 2A451, 2A452, 2A453, 32152, 32351, 32352, 32353, 32550, 32551, 32554, 32850, 32851, 32852, 32853, 32854, 45351, 45352, 45551, 45552, 45554, 45651, 45753	Mobility Air Forces Electronic Warfare Systems Journeyman	Airframe
2A573	2A174, 2A177, 2A471, 2A472, 2A473, 32172, 32371, 32372, 32373, 32570, 32571, 32574, 32870, 32871, 32872, 32873, 32874, 45371, 45372, 45571, 45572, 45574, 45671, 45773	Mobility Air Forces Electronic Warfare Systems Craftsman	Airframe
2A554	2A551, 43151, 43152, 43153, 45353, 45750, 45752	Refuel/Bomber Aircraft Maintenance Journeyman	Airframe and Powerplant
2A574	2A571, 43171, 43172, 43173, 45373, 45770, 45772	Refuel/Bomber Aircraft Maintenance Craftsman	Airframe and Powerplant
2A590	2A490, 32390, 32391, 32591, 32894, 32899, 32900, 43190, 43191, 43199, 45390, 45599, 45791, 45793, 45799	Airlift/Special Mission Aircraft Maintenance Superintendent	Airframe and/or Powerplant. ASI evaluation required to determine appropriate rating(s).

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Figure 5-135. Military Occupational Specialty Codes (Continued)

U.S. AIR FORCE
CURRENT AS OF: 15 OCTOBER 2012

CURRENT MOS (AFSC) CODE	PREVIOUS MOS (AFSC) CODE	TITLE	CREDITABLE EXPERIENCE
2A600	32900, 43200, 45200, 45400	Aircraft Systems Chief Enlisted Manager	May qualify for Airframe or Powerplant. ASI evaluation required to determine appropriate rating.
2A651	42652, 42653, 43152, 45450	Aerospace Propulsion Journeyman	Powerplant
2A671	42672, 42673, 43172, 45470	Aerospace Propulsion Craftsman	Powerplant
2A691	42692, 42693, 43192, 45490	Aerospace Propulsion Superintendent	Powerplant
2A654	42353, 45453	Aircraft Fuel Systems Journeyman	Airframe
2A674	42373, 45473	Aircraft Fuel Systems Craftsman	Airframe
2A655	42354, 45454	Aircraft Hydraulic Systems Journeyman	Airframe
2A675	42374, 45474	Aircraft Hydraulic Systems Craftsman	Airframe
2A656	42350, 42351, 45255, 45455, 45456	Aircraft Electrical & Environmental Systems Journeyman	Airframe
2A676	42370, 42371, 45275, 45475, 45476	Aircraft Electrical & Environmental Systems Craftsman	Airframe
2A690	42390, 45295, 42396, 45492, 45493, 45494, 45495, 45496	Aircraft Systems Superintendent	May qualify for Airframe. ASI evaluation required.
2A753	42751, 42755, 45852	Aircraft Structural Maintenance Journeyman	Airframe
2A773	42771, 42775, 45872	Aircraft Structural Maintenance Craftsman	Airframe
2A755	2A753, 42751, 42755, 45852	Low Observable Aircraft Structural Maintenance Journeyman	Airframe
2A775	2A773, 42771, 42775, 45872	Low Observable Aircraft Structural Maintenance Craftsman	Airframe
2A790	42792, 42799, 45891, 45899	Aircraft Fabrication Superintendent	May qualify for Airframe. ASI evaluation required.

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Figure 5-135. Military Occupational Specialty Codes (Continued)

U.S. AIR FORCE
CURRENT AS OF: 15 OCTOBER 2012

CURRENT MOS (AFSC) CODE	PREVIOUS MOS (AFSC) CODE	TITLE	CREDITABLE EXPERIENCE
2A851	2A553, 2A154, 2A157, 2A451, 2A452, 2A453, 32152, 32351, 32352, 32353, 32550, 32551, 32554, 32850, 32851, 32852, 32853, 32854, 45351, 45352, 45551, 45552, 45554, 45651, 45753	Mobility Air Forces Integrated Communication, Navigation, and Mission Systems Journeyman	Airframe
2A871	2A573, 2A174, 2A177, 2A471, 2A472, 2A473, 32172, 32371, 32372, 32373, 32570, 32571, 32574, 32870, 32871, 32872, 32873, 32874, 45371, 45372, 45571, 45572, 45574, 45671, 45773	Mobility Air Forces Integrated Communication, Navigation, and Mission Systems Craftsman	Airframe
2A852	2A553, 2A154, 2A157, 2A451, 2A452, 2A453, 32152, 32351, 32352, 32353, 32550, 32551, 32554, 32850, 32851, 32852, 32853, 32854, 45351, 45352, 45551, 45552, 45554, 45651, 45753	Mobility Air Forces Integrated Instrument and Flight Control Systems Journeyman	Airframe

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Figure 5-135. Military Occupational Specialty Codes (Continued)

U.S. AIR FORCE
CURRENT AS OF: 15 OCTOBER 2012

CURRENT MOS (AFSC) CODE	PREVIOUS MOS (AFSC) CODE	TITLE	CREDITABLE EXPERIENCE
2A872	2A573, 2A174, 2A177, 2A471, 2A472, 2A473, 32172, 32371, 32372, 32373, 32570, 32571, 32574, 32870, 32871, 32872, 32873, 32874, 45371, 45372, 45571, 45572, 45574, 45671, 45773	Mobility Air Forces Integrated Instrument and Flight Control Systems Craftsman	Airframe
2A951	2A553, 2A154, 2A157, 2A451, 2A452, 2A453, 32152, 32351, 32352, 32353, 32550, 32551, 32554, 32850, 32851, 32852, 32853, 32854, 45351, 45352, 45551, 45552, 45554, 45651, 45753	Bomber/Special Integrated Communication, Navigation, and Mission Systems Journeyman	Airframe
2A971	2A573, 2A174, 2A177, 2A471, 2A472, 2A473, 32172, 32371, 32372, 32373, 32570, 32571, 32574, 32870, 32871, 32872, 32873, 32874, 45371, 45372, 45571, 45572, 45574, 45671, 45773	Bomber/Special Integrated Communication, Navigation, and Mission Systems Craftsman	Airframe

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Figure 5-135. Military Occupational Specialty Codes (Continued)

U.S. AIR FORCE
CURRENT AS OF: 15 OCTOBER 2012

CURRENT MOS (AFSC) CODE	PREVIOUS MOS (AFSC) CODE	TITLE	CREDITABLE EXPERIENCE
2A952	2A553, 2A154, 2A157, 2A451, 2A452, 2A453, 32152, 32351, 32352, 32353, 32550, 32551, 32554, 32850, 32851, 32852, 32853, 32854, 45351, 45352, 45551, 45552, 45554, 45651, 45753	Bomber/Special Integrated Instrument and Flight Control Systems Journeyman	Airframe
2A972	2A573, 2A174, 2A177, 2A471, 2A472, 2A473, 32172, 32371, 32372, 32373, 32570, 32571, 32574, 32870, 32871, 32872, 32873, 32874, 45371, 45372, 45571, 45572, 45574, 45671, 45773	Bomber/Special Integrated Instrument and Flight Control Systems Craftsman	Airframe
2A953	2A553, 2A154, 2A157, 2A451, 2A452, 2A453, 32152, 32351, 32352, 32353, 32550, 32551, 32554, 32850, 32851, 32852, 32853, 32854, 45351, 45352, 45551, 45552, 45554, 45651, 45753	Bomber/Special Electronic Warfare and Radar Surveillance Integrated Avionics Journeyman	Airframe

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Figure 5-135. Military Occupational Specialty Codes (Continued)

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CURRENT MOS (AFSC) CODE	PREVIOUS MOS (AFSC) CODE	TITLE	CREDITABLE EXPERIENCE
2A973	2A573, 2A174, 2A177, 2A471, 2A472, 2A473, 32172, 32371, 32372, 32373, 32570, 32571, 32574, 32870, 32871, 32872, 32873, 32874, 45371, 45372, 45571, 45572, 45574, 45671, 45773	Bomber/Special Electronic Warfare and Radar Surveillance Integrated Avionics Craftsman	Airframe

U.S. ARMY
CURRENT AS OF: 15 OCTOBER 2012

CURRENT MOS CODE	PREVIOUS MOS CODE	TITLE	CREDITABLE EXPERIENCE
15B10/30	68B10/30	Aircraft Powerplant Repairer	Powerplant
15D10/30	68D10/30	Aircraft Powertrain Repairer	Powerplant
15E		Unmanned Aircraft Systems Maintainer	Airframe and Powerplant
15F10/30	68F10/30	Aircraft Electrician	Airframe
15G10/30	68G10/30	Aircraft Structural Repairer	Airframe
15H10/30	68H10/30	Aircraft Pneudraulics Repairer	Airframe
15J10/30	68J10/30	Aircraft Armament/Missile Systems Repairer	Airframe
15K40	68K40	Aircraft Components Repairer Supervisor	Airframe
15M10/30	67N10/30	UH-1 Helicopter Repairer	Airframe and Powerplant
15N10/30	68N10/30	Avionics Mechanic	Airframe
15R10/40	67R10/40	AH-64 Attack Helicopter Repairer	Airframe and Powerplant
15R10/40	67Y10/40	AH-1 Attack Helicopter Repairer	Airframe and Powerplant
15S10/40	67S10/40	OD-58D Helicopter Repairer	Airframe and Powerplant
15T10/40	67T10/40	UH-60 Helicopter Repairer	Airframe and Powerplant
15U10/40	67U10/40	CH-47 Helicopter Repairer	Airframe and Powerplant
15V10/30	67V10/30	Observation/Scout Helicopter Repairer	Airframe and Powerplant
15X10/30	68X10/30	AH-64 Armament/Electrical Systems	Airframe

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Figure 5-135. Military Occupational Specialty Codes (Continued)

U.S. ARMY
CURRENT AS OF: 15 OCTOBER 2012

CURRENT MOS CODE	PREVIOUS MOS CODE	TITLE	CREDITABLE EXPERIENCE
15Y10/30	68Y10/30	AH-64 Longbow Armament/Electrical Systems	Airframe
15Z50	67Z50	Aircraft Maintenance Senior Sergeant	Airframe and Powerplant
151A		Aviation Maintenance Officer	Airframe and Powerplant
67G10/40	67G10/40	Utility Airplane Repairer	Airframe and Powerplant
67H10/40	67H10/40	Observation Aircraft Repairer	Airframe and Powerplant

U.S. NAVY
CURRENT AS OF: 15 OCTOBER 2012

CURRENT MOS (NEC) CODE	PREVIOUS MOS (NEC) CODE	TITLE	CREDITABLE EXPERIENCE
AD-6410		F-110 Turbofan Jet Engine First Degree Repair/IMA Technician	Powerplant
AD-6415		TF-30 Turbofan Jet Engine First Degree Repair/IMA Mechanic	Powerplant
AD-6416		J-52 Turbojet Engine First Degree/IMA Mechanic	Powerplant
AD-6417		T-400 Turboshaft Jet Engine First Degree Repair/IMA Mechanic	Powerplant
AD-6418		T-56 Turboprop Engine and 54H60 Series Propeller First Degree/IMA Mechanic	Powerplant
AD-6419		T-58 Turboshaft Jet Engine First Degree/IMA Mechanic	Powerplant
AD-6420		F-404 Turbofan Jet Engine First Degree/IMA Mechanic	Powerplant
AD-6421		TF-34 Turbofan Jet Engine First Degree/IMA Mechanic	Powerplant
AD-6422		Test Cell Operator/Maintainer	Powerplant
AD-6423		T-56-425/427 Turboprop Engine and Propeller IMA Mechanic	Powerplant
AD-6424		T-64 Turboshaft Jet Engine First Degree/IMA Mechanic	Powerplant
AD-6425		F414-GE-400 Turbofan Jet Engine Third Degree/IMA Mechanic	Powerplant
AD-6426		T-700 Turboshaft Jet Engine First Degree/IMA Mechanic	Powerplant
AD-6428		Helicopter Rotors/Related Components IMA Mechanic	Powerplant
AM-7232		Advanced Composite Structural Repair IMA Technician	Airframe

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Figure 5-135. Military Occupational Specialty Codes (Continued)

U.S. NAVY
CURRENT AS OF: 15 OCTOBER 2012

CURRENT MOS (NEC) CODE	PREVIOUS MOS (NEC) CODE	TITLE	CREDITABLE EXPERIENCE
8206		C-130 Flight Mechanic	Airframe and/or Powerplant. ASI evaluation required to determine appropriate rating(s).
8209		C-40A Crew Chief	Airframe and/or Powerplant. ASI evaluation required to determine appropriate rating(s).
8235		E-6B Flight Engineer	Airframe and/or Powerplant. ASI evaluation required to determine appropriate rating(s).
8245		C-20/C-37 Crew Chief	Airframe and/or Powerplant. ASI evaluation required to determine appropriate rating(s).
8250		C-9 Crew Chief	Airframe and/or Powerplant. ASI evaluation required to determine appropriate rating(s).
8251		P-3 Flight Engineer	Airframe and/or Powerplant. ASI evaluation required to determine appropriate rating(s).
8252		C-130 Flight Engineer	Airframe and/or Powerplant. ASI evaluation required to determine appropriate rating(s).
NOTE: The following NECs are aircraft specific and awarded to individuals advancing from the AD (Powerplant), AM (Structures), AE (Electronics) or AT (Avionics). Only applicants who have held an AM or AD rating should be considered for the Airframe and/or Powerplant rating. The ASI must determine if the applicant held an AM or AD rating. If so, the ASI can determine through the interview process whether the applicant meets the qualifications for the Airframe and/or Powerplant.			
8303		CH/MH-53E Systems Organizational Maintenance Technician	Airframe or Powerplant
8305		C2/E2 Systems Organizational Maintenance Technician	Airframe or Powerplant
8306		E2C Group II Systems Organizational Maintenance Technician	Airframe or Powerplant

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Figure 5-135. Military Occupational Specialty Codes (Continued)

U.S. NAVY
CURRENT AS OF: 15 OCTOBER 2012

CURRENT MOS (NEC) CODE	PREVIOUS MOS (NEC) CODE	TITLE	CREDITABLE EXPERIENCE
8310		C-9B Systems Organizational Maintenance Technician	Airframe or Powerplant
8313		C-40A Systems Organizational Maintenance Technician	Airframe or Powerplant
8314		C-20G Systems Organizational Maintenance Technician	Airframe or Powerplant
8318		C-130 Systems Organizational Maintenance Technician	Airframe or Powerplant
8319		P-3 Systems Organizational Maintenance Technician	Airframe or Powerplant
8332		EA-6B Systems Organizational Maintenance Technician	Airframe or Powerplant
8335		F-14B/D Systems Organizational Maintenance Technician	Airframe or Powerplant
8341		F/A-18 E/F Systems Organizational Maintenance Technician	Airframe or Powerplant
8342		F/A-18 Systems Organizational Maintenance Technician	Airframe or Powerplant
8343		E-6A Systems Organizational Maintenance Technician	Airframe or Powerplant
8345		F-14 Systems Organizational Maintenance Technician	Airframe or Powerplant
8347	8346/S-3A	S-3B Systems Organizational Maintenance Technician	Airframe or Powerplant
	8351	A-4 Systems Organizational Maintenance Technician	Airframe or Powerplant
	8370	SH-2G Systems Organizational Maintenance Technician	Airframe or Powerplant
	8375	H-2 Systems Organizational Maintenance Technician	Airframe or Powerplant
8361	New Rating	UAV Systems Organizational Maintenance Technician	Airframe or Powerplant
8378		H-60 Systems Organizational Maintenance Technician	Airframe or Powerplant
8379		H-46 Systems Organizational Maintenance Technician	Airframe or Powerplant
8380		UH-1N Systems Organizational Maintenance Technician	Airframe or Powerplant
8392		C-20 Systems Organizational Maintenance Technician	Airframe or Powerplant
8805		C2/E2 Systems Organizational Maintenance Technician	Airframe or Powerplant

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Figure 5-135. Military Occupational Specialty Codes (Continued)

U.S. NAVY
CURRENT AS OF: 15 OCTOBER 2012

CURRENT MOS (NEC) CODE	PREVIOUS MOS (NEC) CODE	TITLE	CREDITABLE EXPERIENCE
8806		E-2C Group II Systems Organizational Maintenance Technician	Airframe or Powerplant
8819		P-3 Systems Organizational Maintenance Technician	Airframe or Powerplant
8832		EA-6B Systems Organizational Maintenance Technician	Airframe or Powerplant
8835 (AD Only)		F-14B/D Systems Organizational Maintenance Technician	Powerplant
8841		F/A-18 E/F Systems Organizational Maintenance Technician	Airframe or Powerplant
8842		F/A-18 Systems Organizational Maintenance Technician	Airframe or Powerplant
8843		E-6A Systems Organizational Maintenance Technician	Airframe or Powerplant
8845		F-14 Systems Organizational Maintenance Technician	Airframe or Powerplant
8847		S-3 Systems Organizational Maintenance Technician	Airframe or Powerplant
8877		H-3 Systems Organizational Maintenance Technician	Airframe or Powerplant
8878		H-60 Systems Organizational Maintenance Technician	Airframe or Powerplant
Old Codes			
AD		Aviation Machinist Mate	Powerplant
ADJ		Aviation Machinist Mate	Powerplant
ADR		Aviation Machinist Mate	Powerplant
AM		Aviation Structural Mechanic	Airframe
AME		Aviation Structural Mechanic	Airframe
AMH		Aviation Structural Mechanic	Airframe
AMS		Aviation Structural Mechanic	Airframe

U.S. MARINE CORPS
CURRENT AS OF: 15 OCTOBER 2012

CURRENT MOS CODE	PREVIOUS MOS CODE	TITLE	CREDITABLE EXPERIENCE
6062		Aircraft Intermediate Hydraulic/Pneumatic Mechanic	Airframe
6092		Aircraft Intermediate Level Structures Mechanic	Airframe
6112		Helicopter Mechanic CH-46	Airframe and Powerplant

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Figure 5-135. Military Occupational Specialty Codes (Continued)

U.S. MARINE CORPS
CURRENT AS OF: 15 OCTOBER 2012

CURRENT MOS CODE	PREVIOUS MOS CODE	TITLE	CREDITABLE EXPERIENCE
6113		Helicopter Mechanic CH-53	Airframe and Powerplant
6114		Helicopter Mechanic A/UH-1	Airframe and Powerplant
6116		Tiltrotor Mechanic MV-22	Airframe and Powerplant
6122		Helicopter P/P Mechanic T-58	Powerplant
6123		Helicopter P/P Mechanic T-64	Powerplant
6124		Helicopter P/P Mechanic T-400/T-700	Powerplant
6132		Helicopter/Tiltrotor Dynamic Comp Mechanic	Airframe
6152		Helicopter Airframe Mechanic CH-46	Airframe
6153		Helicopter Airframe Mechanic CH-53	Airframe
6154		Helicopter Airframe Mechanic UH/AH-1	Airframe
6156		Tiltrotor Airframe Mechanic MV-22	Airframe
6172		Helicopter Crew Chief CH-46	Airframe and Powerplant
6173		Helicopter Crew Chief CH-53	Airframe and Powerplant
6174		Helicopter Crew Chief UH-1	Airframe and Powerplant
6176		Tiltrotor Crew Chief MV-22	Airframe and Powerplant
6212		Fixed-Wing Aircraft Mechanic AV-8/TAV-8	Airframe and Powerplant
6213		Fixed-Wing Aircraft Mechanic EA-6	Airframe and Powerplant
6214		Unmanned Aerial Vehicle Mechanic UAV	Airframe and Powerplant
6216		Fixed-Wing Aircraft Mechanic KC-130	Airframe and Powerplant
6217		Fixed-Wing Aircraft Mechanic FA-18	Airframe and Powerplant
6218		Fixed-Wing Aircraft Mechanic F-35B	Airframe and Powerplant
6222		Fixed-Wing Aircraft P/P Mechanic F-402	Powerplant
6223		Fixed-Wing Aircraft P/P Mechanic J-52	Powerplant
6227		Fixed-Wing Aircraft P/P Mechanic F-404	Powerplant
6252		Fixed-Wing Aircraft A/F Mechanic AV-8/TAV-8	Airframe

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Figure 5-135. Military Occupational Specialty Codes (Continued)

U.S. MARINE CORPS
CURRENT AS OF: 15 OCTOBER 2012

CURRENT MOS CODE	PREVIOUS MOS CODE	TITLE	CREDITABLE EXPERIENCE
6253		Fixed-Wing Aircraft A/F Mechanic EA-6	Airframe
6256		Fixed-Wing Aircraft A/F Mechanic KC-130	Airframe
6257		Fixed-Wing Aircraft A/F Mechanic FA-18	Airframe
6258		Fixed-Wing Aircraft A/F Mechanic F-35B	Airframe
6276	6232/6242	Fixed-Wing Aircraft Crew Chief KC-130	Airframe and Powerplant

U.S. COAST GUARD
CURRENT AS OF: 15 OCTOBER 2012

CURRENT MOS (RATING) CODE	PREVIOUS MOS (RATING) CODE	TITLE	CREDITABLE EXPERIENCE
AMT		Aviation Maintenance Technician	Airframe and Powerplant
AMT	AD	Aviation Machinist Mate	Airframe and Powerplant
AMT	AE	Aviation Electricians Mate	Airframe and Powerplant
AMT	AM	Aviation Structural Mechanic	Airframe and Powerplant
AET		Avionics Electrical Technician	Airframe and/or Powerplant. ASI evaluation required to determine appropriate rating(s).
AET	AE	Aviation Electricians Mate	Airframe and/or Powerplant. ASI evaluation required to determine appropriate rating(s).

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Figure 5-136. FAA Certification Performance of Job Tasks

FAA CERTIFICATION PERFORMANCE OF JOB TASKS

Applicant's Last Name:	First Name:	MI:	Last Four SSN:
Doe	John	E.	2011

1. **Military Job Classification:**

2A571 Airlift/Special Mission Aircraft Maintenance Craftsman

2. **Military Job Classification Description:**

1. Specialty Summary. Maintains aircraft, support equipment, forms and records. Performs and supervises flight chief, expediter, crew chief, repair and reclamation, quality assurance and maintenance support functions. Related DoD Occupational Subgroup: 160000.

2. Duties and Responsibilities:
2.1. Performs sortie generation, ground handling, and servicing operations. Performs aircraft inspections such as preflight, thru-flight, postflight, hourly postflight, special inspections, and isochronal inspections. Advises on problems, maintenance, servicing, and inspection of aircraft and realted aerospace equipment. Uses technical data to diagnose and solve maintenance problems on aircraft systems. Interprets and advises on maintenance procedures and policies to repair aircraft and related equipment.
2.2. Inspects, troubleshoots, and maintains aircraft structures, engines, hydraulic, and other related systems, components, and equipment. Removes and installs aircraft and engine components. Conducts operational checks and repairs components and systems. Performs ground engine operation. Adjusts, aligns, and rigs aircraft systems. Accomplishes weight and balance functions. Supervises and performs aircraft jacking, lifting, and towing operations.
2.3. Supervises and performs aircraft, engine, and component inspections. Interprets inspection findings and determines adequacy of corrective actions. Inspects and checks components for clearances, tolerances, proper installation, and operation. Performs pre-use inspections and operates powered and non-powered aerospace ground equipment. Inspects and identifies aircraft corrosion for prevention and repair. Reviews maintenance forms, aircraft records, automated maintenance data systems, and historical reports to ensure complete documentation. Inventories and maintains alternate mission equipment. Inventories and maintains aircraft equipment.
2.4. Coordinates maintenance plans and schedules to meet operational requirements. Supervises and assists in launching and recovering aircraft. Reviews maintenance data collection summaries to determine trends and production effectiveness. Performs crash recovery duties. Performs staff and supervisory management functions.

3. **This CG-G-EAE-2 Form is not complete and cannot be presented to the FAA Flight Standards District Office (FSDO) to gain authorization for testing under Title 14, CFR Part 65.77 without the official CG-G-EAE-4 Form, *Certificate of Eligibility*, signed and issued by the FAA-Approved Signature Authority from the technician's branch of service, and carrying the authentic raised embossed seal from the issuing organization.**

3.1. FAA-Approved Signature Authority for the CG-G-EAE-4 Form, *Certificate of Eligibility*:
US Air Force: Community College of the Air Force (CCAF)
US Army: 128th Aviation Brigade
US Coast Guard: Aviation Technical Training Center (AMT RTMC)
US Marine Corps: Center for Naval Aviation Technical Training (CNATT)
US Navy: Center for Naval Aviation Technical Training (CNATT)

4. The Unit-Level Approving Official's signature on the CG-G-EAE-2 Form verifies John E. Doe has successfully satisfied the established FAA requirements of practical aircraft maintenance experience for the FAA Mechanic Certificate with (Circle one) Airframe/Powerplant/Airframe and Powerplant ratings per Title 14, CFR, Part 65.77, including 322 months of combined practical experience while performing the duties within the career field of aviation maintenance.

4.1. Unit-Level Approving Official:
US Air Force: Aircraft Maintenance Officer
US Army: Aircraft Maintenance Officer
US Coast Guard: Engineering Officer
US Marine Corps: Maintenance Officer
US Navy: Maintenance Officer

Unit-Level Approving Official Signature_____Print Name_____

Unit_____Date_____

CG-G-EAE-2 Form (03/12) Page 1 of 1

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Figure 5-137. Certificate of Eligibility

Certificate of Eligibility

SAMPLE

This document certifies that

Master Sergeant John P. Doe

has met the prescribed experience requirements of Federal Aviation Regulation Part 65.77, Certification: Airmen Other Than Flight Crew Members, Subpart D - Mechanics, and is recommended for authorization to be tested for:

FAA Airframe and Powerplant Mechanic

certification. In accordance with FAA Policy and prescribed by the Joint Service Aviation Maintenance Technician Certification Council, this certificate was duly signed and validated on 2 February 2012.

Estel Breeding Jr., GS-12, DAF
Director, Credentialing Programs
Community College of the Air Force
Maxwell-Gunter AFB, AL 36114-3011
(334) 649-5020

Authorizing Official, Rank, Branch of Service
Duty Title, Duty Location, Phone Number

CG-G-EAE-4 (12/05)

Issuance Control Number: USAF12009

Signature

2 February 2012
Date

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Figure 5-137D. Sample of Completed FAA Form 8610-2 (Name Change)

Name, Nationality/Citizenship, Date of Birth, or Gender Change

Front Side: Sections I & IV must be completed by the applicant.

Back Side: The Inspector must check the approved box and date and sign the Inspector's Report.

Indicate ID information either in Remarks or as an attachment.

The documentation reflecting the changes must be attached, unless the Inspector gave a statement in the Remark Section. I.e. "I have viewed the marriage license, etc.

It would be helpful if the Inspector would annotate in the Remark Section, "Name change", etc., or somewhere on the application.

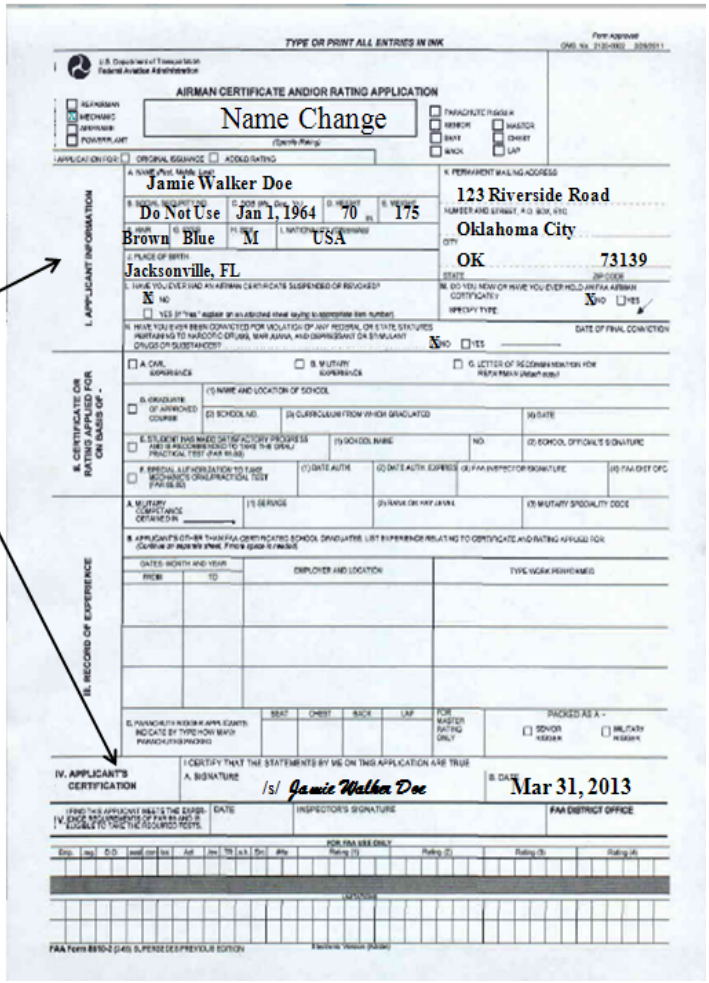

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Figure 5-137E. Sample of Completed FAA Form 8610-2 (JSAMTCC)

JSAMTCC Program

If based on JSAMTCC, the type of Service (1), rank or pay level (2) and Specialty Code (3) should be shown in Section IIIA.

The applicant must list his or her total length of military service. (Month and Year is acceptable)

For JSAMTCC applicants, Section III must reflect completion of the FAA/Military Certification of Performance of Job Tasks program along with the Control number recorded on the Certificate of Eligibility Form.

Section IV must be signed and dated by the applicant.

Section V will be completed on all JSAMTCC applications by an FAA Inspector (No AST's unless they hold an A&P).

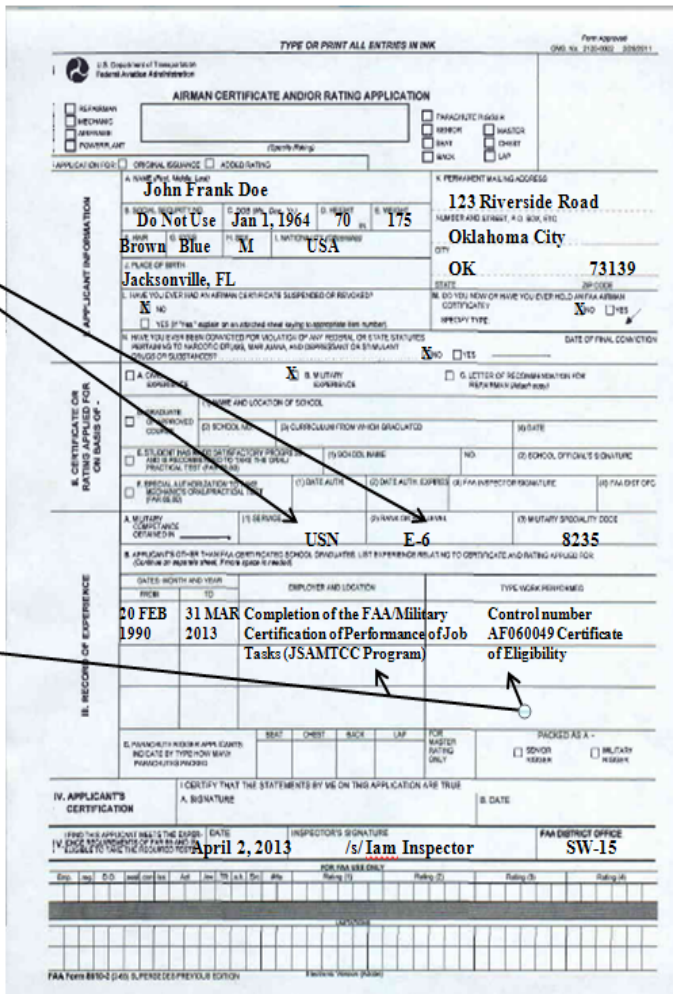

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Figure 5-137G. Sample Written Notification to an Airman Applicant

NOTE: The italicized portions are mandatory and must not be changed.

PILOT'S BILL OF RIGHTS WRITTEN NOTIFICATION OF INVESTIGATION

The information you submit on the attached FAA Form [insert form number and the title of the airman certificate application] will be used by the Administrator of the Federal Aviation Administration as part of the basis for issuing an airman certificate, rating, or inspection authorization to you under Title 49, United States Code (USC) section 44703(a), if the Administrator finds, after investigation, that you are qualified for, and physically able to perform the duties related to the certificate, rating, or inspection authorization for which you are applying. Therefore, in accordance with the Pilot's Bill of Rights, the Administrator is providing you with this written notification of investigation of your qualifications for an airman certificate, rating, or inspection authorization:

The nature of the Administrator's investigation, which is precipitated by your submission of this application, is to determine whether you meet the qualifications for the airman certificate, rating, or inspection authorization you are applying for under Title 14, Code of Federal Regulations (CFR) parts 61, 63, or 65.

Any response to an inquiry by a representative of the Administrator by you in connection with this investigation of your qualifications for an airman certificate, rating, or inspection authorization may be used as evidence against you.

A copy of your complete airman file is available to you upon your written request addressed to:

Federal Aviation Administration
Airmen Certification Branch, AFS-760
P.O. Box 25082
Oklahoma City, OK 73125-0082

[The following acknowledgment would be on a separate sheet that the FAA would retain with the application]

ACKNOWLEDGMENT OF RECEIPT OF
PILOT'S BILL OF RIGHTS WRITTEN NOTIFICATION

I acknowledge that I received the Pilot's Bill of Rights Written Notification of Investigation at the time of this application.

_____ DATE: _____
Signature of Applicant MM/DD/YYYY

RESERVED. Paragraphs 5-1147 through 5-1165.

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VOLUME 5 AIRMAN CERTIFICATION

CHAPTER 5 TITLE 14 CFR PART 65—AIRMEN OTHER THAN FLIGHT CREWMEMBERS

Section 5 Certificate Repairman for Experimental Aircraft Under 14 CFR § 65.104

5-1216 PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

A. Maintenance: 3510.

B. Avionics: 5510.

5-1217 OBJECTIVE. This section provides guidance for the issuance of Repairman Experimental Aircraft Builder Certificates and the cancellation of surrendered certificates.

5-1218 GENERAL. Title 14 of the Code of Federal Regulations (14 CFR) part 65, § 65.104 says the Federal Aviation Administration (FAA) issues Repairman Experimental Aircraft Certificates for individual builders of aircraft certificated under the 14 CFR part 21 experimental category for the purpose of performing conditional inspections. Part 21, § 21.191(g) defines an "amateur-built aircraft" as an aircraft "the major portion of which has been fabricated and assembled by persons who undertook the construction project solely for their own education or recreation." These repairmen certificated under §§ 65.104 and § 65.107 are in no way associated with repairmen certificated under § 65.103.

A. Primary Builder. The FAA may only certificate the primary builder of each amateur-built aircraft as a repairman. As such, the primary builder is privileged to perform condition inspections of the same scope as 14 CFR part 43 appendix D.

B. Aircraft Manufacturing Companies. Aircraft manufacturing companies that produce experimental aircraft are not eligible for Repairmen Certificates for amateur-built aircraft.

5-1219 ELIGIBILITY REQUIREMENTS.

A. Residency and Age. The applicant must be a U.S. citizen or an individual admitted for permanent residence in the United States. The applicant must also be at least 18 years of age, and the primary builder of the aircraft.

1) When a club, school, or partnership builds an aircraft, the FAA considers only one individual (such as the class instructor or designated project leader) for issuance of a Repairman Certificate for that aircraft.

2) An individual working alone who applies for a Repairman Certificate must build the majority of the aircraft in order to be eligible for the certificate.

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B. Requisite Skill. The FAA will consider applicants to have the requisite skill to determine whether the aircraft is in a condition for safe operation when at least one of the conditions below applies:

1) The airworthiness inspector has knowledge that the individual builder constructed the aircraft. The inspector may accept information from another airworthiness inspector involved in the original aircraft certification and familiar with the builder's expertise.

NOTE: The current edition of Advisory Circular (AC) 20-27, Certification and Operation of Amateur-Built Aircraft, notes that amateur builders have adopted the practice of calling upon a person having expertise with aircraft construction techniques, such as Experimental Aircraft Association (EAA) technical counselors, to inspect components and conduct other inspections as necessary. This practice has been highly successful in ensuring construction integrity. Therefore, FAA inspectors may use EAA technical counselors as resources in verifying the builder's expertise.

2) The applicant presents satisfactory evidence, such as the aircraft construction logbook.

3) The applicant proves to the satisfaction of the inspector an ability to perform condition inspections and an ability to determine whether or not the aircraft is in a condition for safe operation.

5-1220 PRIVILEGES AND LIMITATIONS. The builder of a certificated experimental aircraft, who also holds a Repairman Certificate for that aircraft, may perform the condition inspections required by the operating limitations. The certificate holder will perform condition inspections in the same scope as in part 43 appendix D. The Repairman Certificate will identify the aircraft by make, model, serial number, and certification date using the eight-digit (MM/DD/YYYY) format.

A. Operating Limitations. During the aircraft certification process, the FAA issues operating limitations, as required by 14 CFR part 91, § 91.319, to ensure an adequate level of safety.

B. Annual Condition Inspection. The operating limitations require that a repairman, appropriately rated repair station, or the holder of an FAA Mechanic Certificate with airframe and powerplant ratings, inspect the subject aircraft annually.

5-1221 RECIPROCAL ACCEPTANCE BETWEEN CANADA AND THE UNITED STATES. U.S. or Canadian amateur-built aircraft that are acceptable under the provisions of § 21.191(g) or appropriate for certification in Canada under Canadian Aviation Regulation (CAR) section 549.01 are allowed free reciprocal access between Canada and the United States.

A. Streamlined Special Flight Authorization (SFA) for Canadian Amateur-Built Aircraft. To qualify for this authorization, pilots must hold at least a Canadian private pilot license (PPL) and agree to abide by the terms of the authorization. See the following Web site to

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agree to the terms for the authorization: https://www.faa.gov/aircraft/gen_av/ultralights/sfa/media/amateur.pdf.

B. Operating U.S. Amateur-Built Aircraft in Canada. Similarly, Transport Canada (TC) authorizes U.S. amateur-built aircraft to operate in Canada under the terms of its Standardised Validation of a Special Airworthiness Certificate-Experimental, for the purpose of operating a U.S.-Registered amateur-built aircraft in Canadian airspace. To find the Canadian terms that authorize U.S. amateur-built aircraft to operate in Canada, refer to https://www.faa.gov/aircraft/gen_av/ultralights/sfa/media/tcauth.pdf.

5-1222 SURRENDER OF CERTIFICATE. Certificate holders should surrender Repairman Certificates whenever the aircraft is destroyed. However, if the aircraft is sold, the repairman may elect to retain the certificate in order to perform condition inspections on the aircraft for the new owner. Forward surrendered certificates, with a brief statement of reasons for surrender, to:

FAA - Mike Monroney Aeronautical Center
Airmen Certification Branch, AFS-760
P.O. Box 25082
Oklahoma City, OK 73125

NOTE: The certificate holder cannot transfer the certificate to the new owner.

5-1223 COORDINATION REQUIREMENTS. This task may require coordination with other airworthiness aviation safety inspectors (ASI) familiar with the applicant's skill and knowledge.

5-1224 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- AC 20-27, Certification and Operation of Amateur-Built Aircraft.
- AC 65-23, Certification of a Repairman (Experimental Aircraft Builders).
- FAA Order 8130.2, Airworthiness Certification of Products and Articles.

B. Forms:

- FAA Form 8610-2, Airman Certificate and/or Rating Application.
- FAA Form 8060-4, Temporary Airman Certificate.

C. Job Aids. None.

5-1225 PROCEDURES.

A. Verify the Applicant's Eligibility. Ensure that:

1) The applicant is at least 18 years of age.

2) The applicant meets the requirements of § 65.104.

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3) The applicant proves to the satisfaction of the inspector an ability to perform condition inspections and an ability to determine whether the aircraft is in a condition of safe operation.

4) A positive form of picture identification that includes the applicant's signature, such as a current U.S. driver's license, passport, or U.S. military identification, is presented in person at the time of application and temporary certificate issuance. In addition, the applicant must provide an address where the applicant currently resides. An applicant can use a post office box, rural route, Aviation Maintenance Technician School (AMTS) address, personal mailbox, commercial mail drop, or other mail drop as the applicant's preferred mailing address; however, the applicant must also furnish a physical residential address, a map or written directions to the applicant's physical address, 911 address, or Global Positioning System (GPS) coordinates. This information must be included with the application.

5) In special cases where the applicant resides on a boat, the applicant includes the applicable name of the boat and the dock/slip number. If the applicant resides in a recreational vehicle (RV), the applicant should include the applicable tag number and registration number.

6) ASIs should record the identification method in the "Remarks" section on the back of FAA Form 8610-2 and ensure that the applicant meets the minimum age and citizenship requirements. Attach applicable map or directions to the applicant's residence to FAA Form 8610-2, if required.

B. Review Applications. Ensure that the applicant checks the box for "Repairman Certificate" and indicates the rating he or she seeks (i.e., the applicant checks the box for "Repairman" at the top of the form and writes underneath, in the space for "Specify Rating," the words "Experimental Aircraft Builder"). Complete the "FAA Inspector's Report" portion on the reverse side of FAA Form 8610-2 and ensure that you have checked the "Approved" box. The date of issuance (using the eight-digit (MM/DD/YYYY) format) on the temporary Airman Certificate must be the same eight-digit date shown in the Inspector's Report.

NOTE: See Table 5-5, Instructions for Completing FAA Form 8610-2 (Experimental Aircraft Builder), for specific instructions.

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Table 5-5. Instructions for Completing FAA Form 8610-2 (Experimental Aircraft Builder)

NOTE: The applicant can omit section II.

Section I – Applicant Information:
A. Name: First, Middle, Last – Applicant must enter his/her legal name. B. Social Security Number – Disclosure of the Social Security number is optional; however, *item B cannot be left blank*. Enter a U.S. Social Security number, "DO NOT USE," or "NONE." C. DOB – Applicant must enter his/her date of birth using the eight-digit (MM/DD/YYYY) format. D. Height – Applicant must enter his/her height in inches. E. Weight – Applicant must enter his/her weight in pounds. F. Hair – Applicant must spell out his/her hair color. Acceptable colors are bald, brown, black, blond, gray, white, and red. G. Eyes – Applicant must spell out his/her eye color. Acceptable colors are brown, black, blue, hazel, gray, and green. H. Sex – Enter M for male or F for female. I. Nationality (Citizenship) – The applicant enters the country in which he/she maintains citizenship. If dual citizenship, enter one on the application and the certificate will show the other as a limitation on the certificate (e.g., "Dual citizenship includes Canada."). J. Place of Birth – The applicant enters the city and state if born in the United States. If the city is unknown, enter the county and state. If the applicant was born outside the United States, enter the name of the city and country, or province and country. If the applicant was not born in a city and country or a province and country, enter that information in the "REMARKS" area. K. Permanent Mailing Address – The applicant enters the number and street, city, state, and ZIP Code. NOTE: A post office address is not acceptable for the purpose of applying for an Airman Certificate, unless the applicant resides on a rural route, a boat, or in some other manner that requires the use of a post office box, rural route, or a personal mailbox for an address. If the applicant uses a P.O. Box, rural route, personal mailbox, or business address as the preferred mailing address, the applicant must furnish a map or written directions to his/her residence or furnish the actual residence address. NOTE: These directions are not required for Army Post Office (APO)/Fleet Post Office (FPO)/Diplomatic Post Office (DPO) type addresses. L. Have you ever had an Airman Certificate suspended or revoked? – The applicant must check either the YES box or the NO box. (A student pilot certificate is a pilot certificate.) M. Do you now or have you ever held an FAA Airman Certificate? – The applicant must check either the YES box or the NO box. If YES, specify the type of certificate held.

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Section I – Applicant Information:
N. Have you ever been convicted for violation of any Federal or state statutes pertaining to narcotic drugs, marijuana, and depressant or stimulant drugs or substances? – The applicant must check either the YES box or the NO box. If YES, the applicant must give the "DATE OF FINAL CONVICTION" using the eight-digit (MM/DD/YYYY) format. Refer to § 65.12.
Section II – Certificate or Rating Applied for on Basis of:
This section is not required for an Experimental Repairman certificate.
Section III – Record of Experience:
The applicant annotates the "MAKE," "MODEL," "SERIAL NO.," and the "CERTIFICATION DATE OF AIRCRAFT" (using the eight-digit (MM/DD/YYYY) format) under "TYPE WORK PERFORMED" box. NOTE: This section must match exactly what is shown on the airman temporary or risk return from AFS-760.
Section IV – Applicant's Certification:
Item A – Signature. The applicant signs FAA Form 8610-2 as he/she normally signs his/her name above or beside his/her typed or printed name. For verification purposes, the inspector will require the applicant to provide identification showing a photograph (e.g., a current driver's license, current military identification, current passport, etc.). Record the name and number of the document used for verification in the "REMARKS" section and expiration date using the eight-digit (MM/DD/YYYY) format, if applicable. NOTE: If the applicant uses a driver's license as the verification method, the "REMARKS" section must include the state that issued the license and expiration.

NOTE: AFS-760 no longer requires that the applicant fill out the "Applicant's Certification" section, box A or B, on the reverse side of FAA Form 8610-2 for a Repairman Certificate unless the date of issue on the temporary certificate and the applicant's certification in block IV are not the same date. If the dates differ, boxes A and B must be completed to correspond with the temporary issue date.

NOTE: The temporary certificate FAA Form 8060-4 provided to the applicant may be completed in dark ink and handwritten; however, the temporary certificate provided to AFS-760 must be typed.

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5-1226 TASK OUTCOMES.

A. Complete the PTRS Record.

B. Issue Certificate. When you have determined that the applicant meets all the requirements for certification, approve the application by signing it. Complete FAA Form 8060-4 in duplicate.

NOTE: The inspector's approval date (using the eight-digit (MM/DD/YYYY) format) must be the same date as shown on the temporary Airman Certificate.

1) Give the applicant a copy of FAA Form 8060-4. Both the applicant and the inspector must sign this form. You can give a handwritten signed temporary certificate to the airman; however, you must send a typed temporary certificate to AFS-760.

2) In Item III, type the word "Pending." As of June 2002, all original certificates will be assigned a unique certificate number. Enter "Pending" if original. Do not give a Social Security number as a certificate number.

3) In Item IX, type the word "Experimental Repairman."

4) In Item XII, type the following: "Make, Model, Serial Number, and Certification Date (using the eight-digit (MM/DD/YYYY) format) of Aircraft." Ensure this matches section III on FAA Form 8610-2.

5) Check the box for an original issuance or the box for a reissuance of certificate, whichever is applicable.

6) If an exchange, ensure the certificate shows the date (using the eight-digit (MM/DD/YYYY) format) of the superseded certificate.

7) In Item X, ensure the date (using the eight-digit (MM/DD/YYYY) format) of issuance is the same as the inspector's approval date (using the eight-digit (MM/DD/YYYY) format) in the "Inspector's Report" section.

8) In Item X, ensure the inspector printed his or her name, signed his or her name, and provided the region identifier and FAA district office identification.

9) Complete the "FAA Inspector's Report" section on the reverse side of FAA Form 8610-2. Ensure that you have marked the "Approved" box, and have filled out the approval date (same date as the temporary certificate), inspector's signature, and the FAA district office. Ensure you have annotated the airman's current identification method in the "Remarks" section (e.g., Oklahoma driver's license #12345678, expires 12/31/2019).

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NOTE: If the FAA Form 8610-2 is on a two-page application form (duplex printing was not used), ensure the airman's name, certificate number (pending) and date of birth (using the eight-digit (MM/DD/YYYY) format) is annotated on the second page.

10) Send FAA Form 8610-2 and the original typed FAA Form 8060-4 to AFS-760.

C. Deny Certificate. If you disapprove the application, return it to the applicant with a letter explaining the denial.

D. Change of Name/Nationality/Date of Birth/Gender. If surrendering the certificate due to name, nationality, date of birth (using the eight-digit (MM/DD/YYYY) format), or gender change, the applicant must first make an appointment with an FAA inspector. The inspector will positively identify the applicant and review all court documents reflecting the change. The applicant must complete FAA Form 8610-2 (sections I and IV). (See Volume 5, Chapter 5, Section 2, for additional details). On approval, the inspector will issue a temporary certificate to the applicant. The date (using the eight-digit (MM/DD/YYYY) format) of issuance on the temporary certificate must be the same date (using the eight-digit (MM/DD/YYYY) format) the inspector signed on his or her report.

E. Reconstruction of Lost Certification Files.

1) A copy of the original FAA Forms 8610-2 and 8060-4, with signature on both forms, is required. If no copy exists, provide the information that appeared on the original application on a new FAA Form 8610-2 and FAA Form 8060-4, complete with new signatures, but with the original dates using the eight-digit (MM/DD/YYYY) format (applicant and inspector).

2) In the upper right-hand block of the application, place the wording "Reconstructed File" in red ink.

3) Forward all information regarding the certification file to: FAA, Attn: Airmen Certification Branch (AFS-760), P.O. Box 25082, Oklahoma City, OK 73125.

NOTE: You do not need to mail an emergency field issue temporary certificate with the reconstructed file package. You can maintain these at the Flight Standards District Office (FSDO)/certificate-holding district office (CHDO).

5-1227 FUTURE ACTIVITIES. You may consider enforcement action against the repairman if he or she maintains the aircraft in a manner contrary to the maintenance requirements contained in its operating limitations.

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Figure 5-138A. Sample Temporary Airman Certificate (Experimental Repairman)

I. UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION
II. TEMPORARY AIRMAN CERTIFICATE

III. CERTIFICATE NO.
PENDING

THIS CERTIFIES THAT
IV. Julie Huey Battery
V. 1825 Airy Road
Wannabee, MD 55555

DATE OF BIRTH	HEIGHT	WEIGHT	HAIR	EYES	SEX	NATIONALITY VI.
05/14/1983	69 IN	180	Blonde	Blue	F	USA

IX. has been found to be properly qualified and is hereby authorized in accordance with the conditions of issuance on the reverse of this certificate to exercise the privileges of

Experimental Repairman

RATINGS AND LIMITATIONS
XII. Make Celier
Model Xenon II

SAMPLE

XIII. Serial No. 1899
Certification Date of Aircraft 11/05/2015

THIS IS ☒ AN ORIGINAL ISSUANCE ☐ A REISSUANCE OF THIS GRADE OF CERTIFICATE

DATE OF SUPERSEDED AIRMAN CERTIFICATE

BY DIRECTION OF THE ADMINISTRATOR

X. DATE OF ISSUANCE
11/05/2015

X. SIGNATURE OF EXAMINER OR INSPECTOR
/s/ Jimmy I Inspector

EXAMINER'S DESIGNATION NO. OR INSPECTOR'S REG. NO.
(INSERT NUMBER)

DATE DESIGNATION EXPIRES
(NONE)

VII. AIRMAN'S SIGNATURE /s/ Julie Battery

FAA Form 8060-4 (8-79) USE PREVIOUS EDITION

Electronic Forms (PDF)

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Figure 5-138B. Sample Application Form (Experimental Aircraft Builder)

TYPE OR PRINT ALL ENTRIES IN INK

Form Approved
OMB. No. 2120-0022 08/31/2014

U.S. Department of Transportation
Federal Aviation Administration

AIRMAN CERTIFICATE AND/OR RATING APPLICATION

☒ REPAIRMAN
☐ MECHANIC
☐ AIRFRAME
☐ POWERPLANT

Experimental Aircraft Builder
(Specify Rating)

☐ PARACHUTE RIGGER
☐ SENIOR ☐ MASTER
☐ SEAT ☐ CHEST
☐ BACK ☐ LAP

APPLICATION FOR: ☒ ORIGINAL ISSUANCE ☐ ADDED RATING

I. APPLICANT INFORMATION

A. NAME (First, Middle, Last): Julie Huey Battery

B. SOCIAL SECURITY NO.: None

C. DOB (Mo., Day., Yr.): 05/14/1983

D. HEIGHT: 69 IN.

E. WEIGHT: 180

F. HAIR: Blond

G. EYES: Blue

H. SEX: F

I. NATIONALITY (Citizenship): USA

J. PLACE OF BIRTH: Bearclaw, MT

K. PERMANENT MAILING ADDRESS: 1825 Airy Road

NUMBER AND STREET, P.O. BOX, ETC.: Wannabee

CITY: MD

STATE: 55555

ZIP CODE

L. HAVE YOU EVER HAD AN AIRMAN CERTIFICATE SUSPENDED OR REVOKED?
☒ NO
☐ YES (If "Yes," explain on an attached sheet keying to appropriate item number).

M. DO YOU NOW OR HAVE YOU EVER HELD AN FAA AIRMAN CERTIFICATE? ☒ NO ☐ YES
SPECIFY TYPE:

N. HAVE YOU EVER BEEN CONVICTED FOR VIOLATION OF ANY FEDERAL OR STATE STATUTES PERTAINING TO NARCOTIC DRUGS, MARIJUANA, AND DEPRESSANT OR STIMULANT DRUGS OR SUBSTANCES? ☒ NO ☐ YES → DATE OF FINAL CONVICTION

II. CERTIFICATE OR RATING APPLIED FOR ON BASIS OF -

☐ A. CIVIL EXPERIENCE
☐ B. MILITARY EXPERIENCE
☐ C. LETTER OF RECOMMENDATION FOR REPAIRMAN (Attach copy)

☐ D. GRADUATE OF APPROVED COURSE
(1) NAME AND LOCATION OF SCHOOL
(2) SCHOOL NO.
(3) CURRICULUM FROM WHICH GRADUATED
(4) DATE

☐ E. STUDENT HAS MADE SATISFACTORY PROGRESS AND IS RECOMMENDED TO TAKE THE ORAL/PRACTICAL TEST (FAR 65.80)
(1) SCHOOL NAME
NO.
(2) SCHOOL OFFICIAL'S SIGNATURE

☐ F. SPECIAL AUTHORIZATION TO TAKE MECHANIC'S ORAL/PRACTICAL TEST (FAR 65.80)
(1) DATE AUTH.
(2) DATE AUTH. EXPIRES
(3) FAA INSPECTOR SIGNATURE
(4) FAA DIST OFC.

III. RECORD OF EXPERIENCE

A. MILITARY COMPETANCE OBTAINED IN →
(1) SERVICE
(2) RANK OR PAY LEVEL
(3) MILITARY SPECIALITY CODE

B. APPLICANTS OTHER THAN FAA CERTIFICATED SCHOOL GRADUATES. LIST EXPERIENCE RELATING TO CERTIFICATE AND RATING APPLIED FOR. (Continue on separate sheet, if more space is needed).

DATES: MONTH AND YEAR FROM	TO	EMPLOYER AND LOCATION	TYPE WORK PERFORMED
			Aircraft Make-Celier Model-Xenon II
			Serial NO-1234 Certification Date Of Aircraft 11/05/2015

C. PARACHUTE RIGGER APPLICANTS: INDICATE BY TYPE HOW MANY PARACHUTES PACKED

SEAT	CHEST	BACK	LAP

FOR MASTER RATING ONLY

PACKED AS A -
☐ SENIOR RIGGER ☐ MILITARY RIGGER

IV. APPLICANT'S CERTIFICATION

I CERTIFY THAT THE STATEMENTS BY ME ON THIS APPLICATION ARE TRUE

A. SIGNATURE: /S/ Julie Huey Battery

B. DATE: 11/05/2015

V. I FIND THIS APPLICANT MEETS THE EXPERIENCE REQUIREMENTS OF FAR 65 AND IS ELIGIBLE TO TAKE THE REQUIRED TESTS.

DATE

INSPECTOR'S SIGNATURE

FAA DISTRICT OFFICE

FOR FAA USE ONLY

Emp.	.reg.	D.O.	.seal	.con	iss.	Act	.lev	.TR	.s.h.	.Src	#rte	Rating (1)	Rating (2)	Rating (3)	Rating (4)

LIMITATIONS

FAA Form 8610-2 (2-85) SUPERSEDES PREVIOUS EDITION Electronic Forms (Adobe)

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Figure 5-138B. Sample Application Form (Experimental Aircraft Builder) (Continued)

Results of Oral and Practical Tests

MECHANIC				
I. GENERAL - Airframe and powerplant				
ORAL TEST	PASS ☐	EXPIRATION DATE:	FAIL ☐	
QUES. NO.				
PRACTICAL TEST	PASS ☐	EXPIRATION DATE:	FAIL ☐	
PROJ. NO.				
II. AIRFRAME STRUCTURES				
ORAL TEST	PASS ☐	EXPIRATION DATE:	FAIL ☐	
QUES. NO.				
PRACTICAL TEST	PASS ☐	EXPIRATION DATE:	FAIL ☐	
PROJ. NO.				
III. AIRFRAME SYSTEMS AND COMPONENTS				
ORAL TEST	PASS ☐	EXPIRATION DATE:	FAIL ☐	
QUES. NO.				
PRACTICAL TEST	PASS ☐	EXPIRATION DATE:	FAIL ☐	
PROJ. NO.				
IV. POWERPLANT THEORY AND MAINTENANCE				
ORAL TEST	PASS ☐	EXPIRATION DATE:	FAIL ☐	
QUES. NO.				
PRACTICAL TEST	PASS ☐	EXPIRATION DATE:	FAIL ☐	
PROJ. NO.				
V. POWERPLANT SYSTEMS AND COMPONENTS				
ORAL TEST	PASS ☐	EXPIRATION DATE:	FAIL ☐	
QUES. NO.				
PRACTICAL TEST	PASS ☐	EXPIRATION DATE:	FAIL ☐	
PROJ. NO.				

PARACHUTE RIGGER			
TYPE	SEAT	PASS ☐	FAIL ☐
	BACK	PASS ☐	FAIL ☐
	CHEST	PASS ☐	FAIL ☐
	LAP	PASS ☐	FAIL ☐
		PASS ☐	FAIL ☐

REMARKS

Maryland Driver's License
#4UR123456
Expires 12/31/2018

Page 2 Julie Huey Battery
DOB 05/14/1983

DESIGNATED EXAMINER'S REPORT

I have personally tested this applicant in accordance with pertinent procedures and standards, and

I HAVE INDICATED THE RESULT AS: ☐ APPROVED *(Temporary Certificate Issued)* ☐ APPROVED *(Temporary Certificate **NOT** Issued)* ☐ DISAPPROVED ☐ FAR 65.80 - ORAL/PRACTICAL PASSED

ATTACH-MENTS: ☐ REPORT OF WRITTEN TEST ☐ SUPERSEDED CERTIFICATE ☐ LETTER ☐ FAA FORM 8610-2 ☐ TEMPORARY CERTIFICATE ☐ SEAL SYMBOL CARD

DATE TEST COMPLETED	EXAMINER'S SIGNATURE	DESIGNATION NO.

APPLICANT'S CERTIFICATION

THIS BLOCK MUST BE COMPLETED BY THE APPLICANT AT THE TIME OF ISSUANCE OF TEMPORARY CERTIFICATE (FAA FORM 8060-4)

A. HAVE YOU EVER HAD AN AIRMAN CERTIFICATE SUSPENDED OR REVOKED? . . . . . ☒ NO ☐ Yes If "Yes," explain on an attached sheet.

B. HAVE YOU EVER BEEN CONVICTED FOR VIOLATION OF ANY FEDERAL OR STATES STATUTES PERTAINING TO NARCOTIC DRUGS, MARIJUANA, DEPRESSANT OR STIMULANT DRUGS OR SUBSTANCES? . . . . . ☒ NO ☐ YES → DATE OF FINAL CONVICTION

I CERTIFY THAT THE STATEMENTS BY ME ARE TRUE.

A. SIGNATURE /S/ Julie Huey Battery B. DATE 11/05/2015

FAA INSPECTOR'S REPORT

I HAVE -
☒ EXAMINED THIS APPLICANT'S PAPERS.
☐ PERSONALLY TESTED THIS APPLICANT IN ACCORDANCE WITH PERTINENT PROCEDURES AND STANDARDS.

WITH THE INDICATED RESULT -
☒ APPROVED
☐ DISAPPROVED

PARACHUTE SEAL SYMBOL ASSIGNED _____
☐ ANSWER SHEET GRADED (Military Competency)

DATE	INSPECTOR'S SIGNATURE	FAA DISTRICT OFFICE
11/05/2015	/s/ Jimmy I Inspector	SO-27

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RESERVED. Paragraphs 5-1228 through 5-1245.

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VOLUME 5 AIRMAN CERTIFICATION

CHAPTER 5 TITLE 14 CFR PART 65—AIRMEN OTHER THAN FLIGHT CREWMEMBERS

Section 10 Title 14 CFR Part 65 Aircraft Dispatcher Certificate

5-1361 GENERAL. This section provides inspectors, designated examiners, regional specialists, all flight standards division managers and district office managers with the necessary direction, guidance, and procedures for conducting aircraft dispatcher certification.

5-1362 DESIGNATION OF DISTRICT OFFICES AND INSPECTORS.

A. District Office Designation. Each regional flight standards division (RFSD) shall designate, in writing, one or more district offices to conduct aircraft dispatcher practical tests (combined oral and practical) and to issue aircraft dispatcher certificates. The designated district offices should be located where there is the greatest public demand for aircraft dispatcher certificates in the region. The number and location of designated district offices will vary according to the requirements of individual regions. Those district offices not designated for this purpose will not have to maintain the capability to conduct the aircraft dispatcher practical tests.

B. Inspector Designation. The manager of a district office designated for conducting aircraft dispatcher tests shall designate, in writing, specific inspectors to conduct such tests. The district office manager shall ensure that these designated inspectors are appropriately trained, obtain aircraft dispatcher certificates, and have access to the appropriate test materials. In addition to aircraft dispatcher certification duties, these designated inspectors shall serve as regional resources for: the surveillance of flight dispatch, flight-following, and flight-locating facilities; any related training programs; and, for the evaluation of aircraft dispatcher examiner candidate qualifications.

C. Operators with Large Dispatch Sections. Certificate managers who are responsible for Title 14 of the Code of Federal Regulations (14 CFR) part 121 operators with large dispatch sections should designate, train, and certificate at least one inspector (preferably an assistant principal operations inspector (POI)) to conduct dispatcher certification for the assigned part 121 operator. In addition to obtaining an aircraft dispatcher certificate, this designated inspector should be required to observe the operator's dispatch system in operation, attend the operator's dispatcher training program, and become an expert in the operator's dispatch practices and training programs.

5-1363 ELIGIBILITY FOR WRITTEN TEST. There are no prerequisites for the aircraft dispatcher written examination. The written examination may be taken before an applicant meets either the minimum age requirement or any of the experience requirements for the certificate. The applicant's qualifications do not have to be reviewed by an inspector and the applicant does not have to complete a Federal Aviation Administration (FAA) Form 8060-7, Airman's Authorization for Written Test, before taking the written test. Applicants with inadequate preparation or qualifying experience, or who are under 21 years of age, should be discouraged from taking the test.

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5-1364 ELIGIBILITY FOR THE PRACTICAL TEST. With the exception of the age requirement, inspectors and examiners shall ensure that applicants meet all eligibility criteria for the aircraft dispatcher certificate before administering a practical test to the applicant. The inspector or examiner should review the eligibility criteria with applicants as follows:

A. Age. An applicant may take the practical test before meeting the minimum age requirement. Those applicants who are under 21 years of age should be discouraged from taking the practical test.

B. Written Test Results. Each applicant must present an FAA Form 8080-2, Airman Written Test Results, showing satisfactory results.

C. Application. Each applicant must complete and sign an FAA Form 8400-3, Application for an Airman Certificate and/or Rating. Instructions for completing the application are on the District Office Job Aid Disk (JAD). A signature is not required in the instructor's recommendation block unless the applicant has qualified for the test on the basis of having graduated from a 14 CFR part 65 approved school or on the basis of having performed the duties of a dispatcher under the supervision of a dispatch instructor.

D. Experience. Applicants must provide documentary evidence of meeting the experience requirements. Acceptable documentary evidence includes, but is not limited to: letters from employers, logbooks, military service records, graduation certificates and employment records. Part 65, § 65.57 specifies the following as acceptable minimum experience requirements:

1) Applicants may have been active for 2 of the last 3 years in scheduled part 121 or 135 air carrier flight operations or in scheduled military aviation. Inspectors and examiners may accept other flight operations experience that is clearly equivalent in nature and duration, however good judgment should be used when determining equivalent experience. For example, an applicant could not count 2 years experience as a crop duster toward the experience requirement for the certificate because the experience was not gained in air transport operations. A careful evaluation must be made by inspectors for experience in either a part 135 on-demand operation, a part 121 supplemental operation, or an unscheduled military operation. An applicant must be able to show exposure to elements required by the dispatcher function, such as using computer flightplans, and flight-release and flight-following procedures. An individual performing the flight-release function for a part 121 supplemental operator, for example, would be eligible to qualify for the certificate. The required experience for the aircraft dispatcher certificate may have been acquired in any of the following capacities:

- Pilot member of a flightcrew.
- Radio operator (flight or ground).
- Flight navigator.
- Meteorologist.
- Dispatcher or assistant dispatcher.
- FAA aviation safety inspector.

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2) Applicants who have been active in air traffic control (ATC) as a certified tower operator for 2 of the last 3 years are eligible.

3) Applicants who have acquired the necessary experience specified in previous subparagraphs 1 and 2 and which total 2 of the past 3 years are eligible.

4) Applicants who have performed the duties of a dispatcher for 1 of the past 2 years under the direct supervision of a certified dispatcher are eligible.

5) Applicants who have graduated from a dispatcher training course approved under part 65 appendix A, are eligible for the first 90 days after graduation.

5-1365 PRACTICAL TEST. An applicant for an aircraft dispatcher certificate must demonstrate the knowledge and practical skills necessary to dispatch aircraft operated under both domestic and flag rules. The oral examination is conducted simultaneously with the practical test.

A. Dispatch of Actual Flight. If possible, the aircraft dispatcher practical test should include the dispatch of an actual flight. In this case, the applicant should arrive at the dispatch center with the inspector or designated examiner conducting the test. The applicant should then become familiar with the situation and receive a briefing from the aircraft dispatcher being relieved. The inspector or designated examiner conducting the test should then observe the applicant dispatch one or more flights. The flight release information must then be checked and signed by one of the operator's certified aircraft dispatchers before it can be presented to the pilot-in-command (PIC) of the flight. An inspector shall not sign the flight release. A designated examiner may sign the release, but only if the designated examiner is employed by the operator, is current in the operator's procedures, and has successfully completed a competency check within the past 12 months. The applicant and the inspector or designated examiner should then move from the dispatch center to another location where questions can be asked and discussed without impeding the workflow at the dispatch center.

B. Simulated Dispatch of a Flight. The practical test may also include the simulated dispatch of a flight. In a simulated scenario, the inspector or designated examiner conducting the practical test, shall act as the dispatcher being relieved and shall brief the applicant on the simulated dispatch situation and scenario. The applicant shall then be required to perform an analysis and prepare a release as if an actual flight was being released.

C. Development of Practical Test Scenarios.

1) Each district office designated to conduct aircraft dispatcher certification shall develop at least three practical test scenarios and acquire the materials necessary for their presentation. The scenarios and materials shall be revised when necessary to ensure they reflect contemporary practices.

2) When a private individual (other than an FAA inspector) is to be designated as an aircraft dispatcher examiner, the candidate for designation shall prepare a minimum of three practical test scenarios and shall acquire the materials necessary for their presentation.

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The inspector evaluating the candidate shall ensure that the scenarios and materials prepared by the candidate are realistic and effective.

D. Evaluation Criteria. During the practical test, the applicant for an aircraft dispatcher certificate must demonstrate the following required abilities:

- Ability to read weather reports and forecasts, analyze weather over a large geographical area, and describe the expected impact on the area and specified terminals within the area for a period representing a typical dispatch shift.
- Familiarity with operations specifications and the ability to determine weather minimums and the operations authorized for an actual or simulated operator.
- Ability to select an alternate airport.
- Ability to read and use charts, when required.
- Ability to extract the necessary data to compute fuel requirements and airplane load capability from the aircraft performance manual.
- Ability to extract the required performance data from the aircraft flight manual and ensure that the aircraft is being operated within those limitations.
- Ability to prepare a dispatch release that meets regulatory requirements for the planned flight.
- Knowledge of, or demonstrated ability in, extracting a flightplan from a computerized flight-planning service; reading the flightplan; and cross-checking it for input errors.
- Sufficient understanding of aircraft systems to interpret a minimum equipment list (MEL) and to make performance adjustments as required by the MEL. (For example, the inspector or examiner conducting the test could inform the applicant that a brake has been capped or that the anti-skid is inoperative on a specific flight. The applicant should be able to determine the resulting performance limitations.)
- An understanding of international flight operations and operations in North Atlantic High Level Airspace (NAT HLA). (The inspector conducting the test should quiz the applicant on the procedures for obtaining track messages and for filing a flightplan over the track. The applicant should be familiar with the procedures used on the track system.)
- Knowledge of, or demonstrated ability in, contacting a flight en route.
- Knowledge of driftdown both in over-water and two-engine domestic situations.
- Knowledge of flight and duty time regulations.
- Knowledge of currency requirements.
- Knowledge of centralized air traffic flow control procedures.
- Ability to respond as a dispatcher to an emergency or contingency problem, such as diversion to an alternate airport or an engine failure at ETP (equal time point).

NOTE: If the problem the applicant is given does not include planned redispatch procedures, the inspector must discuss these procedures with the applicant.

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E. Location and Procedures. The preferred location for conducting the practical test is an actual dispatch center where the necessary data and materials are available. The practical test may, however, be conducted in the flight standards district office (FSDO) or in other locations, such as classrooms. When the applicant has been prepared for the test in an operator's dispatcher training program, the applicant should use the operator's procedures.

F. Materials and Data. The inspector or designee administering the practical test shall use real data or shall realistically simulate actual problems using data, such as weather reports, NOTAMs, OpSpecs, airport facility directories, and sets of navigation charts and track messages. Applicants must provide the following materials:

- FAA-approved Airplane Flight Manual for an aircraft of more than 30 passenger seats or 7,500 pounds payload capacity, which contains the approved performance data.
- Minimum equipment list (MEL) for the aircraft to be dispatched.

5-1366 SUCCESSFUL APPLICANTS. When an applicant has successfully completed the practical test, inspectors and examiners shall accomplish the following, according to the applicant's age.

A. Applicants 23 Years of Age or Older. Successful applicants who have completed all requirements for the aircraft dispatcher certificate and are 23 years of age or older are entitled to a temporary certificate. Inspectors and examiners shall complete the paperwork as follows:

1) The inspector or examiner shall prepare an FAA Form 8060-4, Temporary Airman Certificate, in duplicate (see Volume 5, Chapter 1, Section 5 (Issuance of Temporary Certificates), paragraph 5-112 for instructions on completing this form) and then give a copy of the temporary certificate to the applicant.

2) The inspector or examiner shall mark the applicable square on FAA Form 8400-3, Application for an Airman Certificate and/or Rating, and date and sign the form on Block 8.

3) The inspector or examiner shall complete FAA Form 8000-36, PTRS Data Sheet (see Volume 5, Chapter 1, Section 6, Issuance of Notices of Disapproval of Application, paragraph 5-133 for instructions).

4) The inspector or examiner shall attach the following documents to the application form:

- Original copy of FAA Form 8060-4, Temporary Airman Certificate.
- AC Form 8080-2, Airman Written Test Report.
- FAA Form 8060-5, Notice of Disapproval of Application (if applicable).
- FAA Form 8000-36, PTRS Data Sheet.

5) Inspectors shall forward the certification paperwork to their supervisors. Examiners shall forward the package to the designated FSDO.

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B. Applicants Less than 23 Years of Age. Successful applicants who are under 23 years of age shall be issued a letter of aeronautical competency containing the statement that the applicant has met all of the requirements for an aircraft dispatcher certificate except for age (see Figure 5-139 for a sample letter). Once an applicant presents proof of having reached age 23, the applicant may exchange the letter of aeronautical competency for a temporary certificate at any FSDO. In such a case, inspectors and examiners shall complete the paperwork as follows:

1) The inspector or examiner shall mark the applicable square on FAA Form 8400-3, Application for an Airman Certificate and/or Rating, and date and sign the form on Block 8.

2) The inspector or examiner shall complete the letter of aeronautical competency in duplicate and give the original letter to the applicant.

3) The inspector or examiner shall complete FAA Form 8000-36, PTRS Data Sheet (see Volume 5, Chapter 1, Section 6, paragraph 5-133 for instructions).

4) The inspector or examiner shall attach the following documents to the application form:

- Copy of the letter of aeronautical competency.
- AC Form 8080-2, Airman Written Test Report.
- FAA Form 8060-5, Notice of Disapproval of Application (if applicable).
- FAA Form 8000-36, PTRS Data Sheet.

5) Inspectors shall forward the certification paperwork to their supervisors. Examiners shall forward the paperwork to the designated FSDO.

5-1367 UNSUCCESSFUL APPLICANTS. If an applicant's practical test is unsatisfactory, inspectors and examiners shall accomplish the following:

A. The inspector or examiner shall complete FAA Form 8060-5, Notice of Disapproval of Application, in duplicate, and give the duplicate to the applicant (Volume 5, Chapter 1, Section 6, paragraph 5-132 for instructions).

B. The inspector or examiner shall inform the applicant to retain AC Form 8080-2, Airman Written Test Report, and have the applicant complete FAA Form 8400-3, Application for an Airman Certificate and/or Rating, by marking the appropriate square and dating and signing block 8.

C. The inspector or examiner shall complete FAA Form 8000-36, PTRS Data Sheet (see Volume 5, Chapter 1, Section 6, paragraph 5-133 for instructions).

D. The inspector or examiner shall attach the original FAA Form 8060-5, Notice of Disapproval of Application, and the FAA Form 8000-36, PTRS Data Sheet, to the FAA Form 8400-3, Application for an Airman Certificate and/or Rating. Inspectors shall forward the certification paperwork to their supervisors. Examiners shall forward the paperwork to the designated FSDO.

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5-1368 SUPERVISORY RESPONSIBILITY. Supervisors shall review the certification packages submitted by inspectors and examiners for completeness and accuracy. The Program Tracking and Reporting Subsystem (PTRS) data sheet should be removed from the package and either retained in the district office or destroyed after the computer input has been completed. The FSDO shall then forward the package to the Airmen Certification Branch (AFS-760).

Figure 5-139. Sample Letter of Aeronautical Competency—Successful Applicant for Aircraft Dispatcher Certificate Under 23 Years of Age

District Office Letterhead

This memorandum is evidence that:

___(Name of Applicant)_____has successfully completed the necessary written, oral, and flight tests for an aircraft dispatcher certificate, however, the applicant has not reached 23 years of age. The applicant may obtain a temporary airman certificate from any flight standards district office upon presenting the following:

1. Proof of being at least 23 years old
2. A current application form
3. This letter

Inspector Signature_____

Inspector Name_____

Date_____

District Office Number Office Location

_____ _____

RESERVED. Paragraphs 5-1369 through 5-1385.

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VOLUME 5 AIRMAN CERTIFICATION

CHAPTER 12 TITLE 14 CFR PART 141 PILOT SCHOOL

Section 4 Examining Authority

5-1846 PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

A. Original Issuance: 1558

B. Additional Issuance: 1558

C. Flight Test Examining Authority: 1558.

5-1847 OBJECTIVE. Determine whether a pilot school applying for flight test examining authority meets the requirements outlined in Title 14 of the Code of Federal Regulations (14 CFR) part 141 subpart D. Successful completion of this task results in either issuance or denial of examining authority to that pilot school.

5-1848 GENERAL. A pilot school may request flight test examining authority for a course of training. Part 141, § 141.65 states that a pilot school holding examining authority may recommend a person who graduated from its course for the appropriate pilot, flight instructor, or ground instructor certificate or rating without taking the Federal Aviation Administration (FAA) certification test. If a school does not hold flight test examining authority, final pilot certification is conducted by an FAA aviation safety inspector (ASI) or a Designated Pilot Examiner (DPE).

5-1849 ELIGIBILITY. Only the holder of an Air Agency Certificate for a pilot school (not a provisional pilot school) is eligible for an examining authority. In addition to meeting the requirements of part 141 subparts A through C, a pilot school must meet the provisions of § 141.63 within the preceding 24 calendar-months.

A. Title 14 CFR Requirements for Initial Approval. A pilot school must meet the following prerequisites to receive initial approval for examining authority:

1) The school must complete the application for examining authority on a form and in a manner prescribed by the Administrator.

2) The school must hold a pilot school certificate and rating issued under part 141.

3) The school must have held the rating in which examining authority is sought for at least 24 consecutive calendar-months preceding the month of application for examining authority.

4) The training course for which examining authority is requested may not be a course that is approved without meeting the minimum ground and flight training time requirements of part 141.

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5) Within 24 calendar-months before the date of application for examining authority, that school must meet the following requirements:

a) The school must have trained at least 10 students in the training course for which examining authority is sought, and recommended those students for a pilot, flight instructor, or ground instructor certificate or rating.

b) At least 90 percent of those students must have passed the required practical or knowledge test, or any combination thereof, for the pilot, flight instructor, or ground instructor certificate or rating on the first attempt; and that test must have been given by an ASI or an examiner who is not an employee of the school.

B. Title 14 CFR Requirements for Renewal. To retain approval of its examining authority, a pilot school must meet the following requirements:

1) The school must complete the application for renewal of its examining authority on a form and in a manner prescribed by the Administrator.

2) The school must hold a pilot school certificate and rating issued under part 141.

3) The school must have held the rating for which examining authority is sought for at least 24 calendar-months preceding the month of application for renewal of its examining authority.

4) The training course for which examining authority is requested may not be a course that is approved without meeting the minimum ground and flight training time requirements of part 141.

C. Expiration of Authority. Examining authority expires concurrently with the Air Agency Certificate on which it is issued; that is, examining authority expires at the end of the 24th calendar-month after the month in which it was issued. Reapplication must be made at least 30 days before the expiration date. Examining authority is routinely renewed at the same time as the pilot school's certificate is renewed, provided the school meets the requirements of part 141 subpart D.

5-1850 INITIATION.

A. Application. Application for examining authority is made in duplicate on FAA Form 8420-8, Application for Pilot School Certification, and is sent to the FAA Flight Standards District Office (FSDO) having jurisdiction over the area in which the school is located. The ASI accepts or denies an application on the basis of eligibility, completeness, or accuracy.

NOTE: When the applicant requests examining authority for flight testing privileges only, the applicant must place the words "Flight Only" on the application immediately after the title of the course(s).

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B. Role of the FSDO.

1) When a pilot school notifies the FAA that it intends to apply for an examining authority for one or more of its approved courses, the jurisdictional FSDO should closely monitor those courses.

2) After receipt of the application, the FSDO should conduct the FAA practical test for at least 50 percent of the graduates of the course for which the school applied for examining authority. The rest of the tests may be conducted by a DPE who is not an employee of the school. The FSDO should accomplish these tests in a timely and practical manner to expedite the issuance of examining authority.

5-1851 INSPECTION. After receiving a correctly completed application for examining authority, the ASI will conduct an inspection of the school to determine if the school continues to meet the requirements for the privilege(s) it already holds. In addition, inspections for specific examining authorities are noted later in this task.

5-1852 EFFECT OF EXAMINING AUTHORITY ON THE STUDENT. Holders of examining authority must be advised that certification stage (end of course) test must not be conducted until all other requirements for the pilot certificate or rating have been met, including the passing of the required knowledge examination within the preceding 24 calendar-months.

A. FAA Form 8710-1. A student completing the approved course applies for a certificate or rating by using FAA Form 8710-1, Airman Certificate and/or Rating Application. After the final flight test, the chief instructor for the examining authority course must enter a recommendation on the reverse side of the application, indicating the name and number of the agency involved and the course completed.

B. Document Submission. The school forwards the student s FAA Form 8710-1, complete training record, and FAA Form 8060-4, Temporary Airman Certificate, to the certificate-holding district office (CHDO). The training record must include documentation of the student's knowledge test score.

C. CHDO Review. The CHDO reviews the student's file and evaluates the training record to determine if the required training has been accomplished. The student's FAA Form 8710-1 must be clearly marked "Certificated" as a graduate of examining authority. After examining and approving all the documents in the file, the CHDO should forward FAA Form 8710-1, knowledge test score documentation, and FAA Form 8060-4 to the Airmen Certification Branch (AFS-760) for issuance of a pilot certificate or rating. The student's training record is returned to the school. If the ASI has doubts concerning the student's training record (i.e., falsification), the matter should be investigated in accordance with Volume 14, Compliance and Enforcement.

D. The Airman Certification Representative (ACR). Some pilot schools have ACRs who issue airman certificates under specific circumstances (see Volume 5, Chapter 12, Section 3, Designate and/or Renew an Airman Certification Representative (ACR) Title 14 CFR Part 141 Schools Only). The ACR prepares and issues the Temporary Airman Certificate to the graduate of a course with examining authority and forwards the student's file to the FSDO for review.

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5-1853 PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. This task requires knowledge of the regulatory requirements of part 141 and FAA policies; and qualification as an ASI (Operations).

B. Coordination. This task requires coordination with the principal operations inspector (POI) and AFS-630, Airmen Testing Standards Branch.

5-1854 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- Parts 1, 61, 91, 141, and other applicable regulations.
- Advisory Circular (AC) 141-1, Pilot School Certification.
- FAA Order 8900.2, General Aviation Airman Designee Handbook.
- Appropriate practical test standards (PTS).
- Training course outline (TCO) for each course for which examining authority is requested.

B. Forms:

- FAA Form 8000-4, Air Agency Certificate (Figure 5-212).
- FAA Form 8420-8, Application for Pilot School Certification (Figure 5-210).

C. Job Aids:

- Sample letters and figures.
- Job Task Analysis (JTA): O2.4.2, O3.4.10, and O3.4.11.

5-1855 GENERAL PROCEDURES.

A. Respond to Initial Inquiry.

1) Advise the school to apply for examining authority by completing FAA Form 8420-8. Give the applicant two copies of FAA Form 8420-8 (see Figure 5-210).

2) Inform the applicant that both copies of FAA Form 8420-8 must be filled out and signed by the appropriate school officials (see Volume 2, Chapter 9, Section 1, Initial Certification or Renewal of a Part 141 Pilot School).

3) Explain the requirements of flight test examining authority.

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B. Open PTRS File.

C. Review Application. Upon receipt of the completed FAA Form 8420-8 application, examine it for completeness and accuracy.

1) When the school requests examining authority for flight testing privileges, confirm that the words "Flight Test Only" are on the application immediately after the title of the course(s).

2) When the school requests examining authority, verify that an "X" is in the appropriate box, beside the title of the course. No other wording is necessary.

3) If the application is inaccurate or incomplete, inform the applicant of the deficiencies. On both copies of FAA Form 8420-8, mark the "Disapproved" box on the front of the application and indicate in the "Remarks" box on the reverse side the specific areas that need correction.

a) Return one copy of the original application to the applicant, and place one copy in the FSDO file on the school.

b) If necessary, provide additional blank applications for resubmission.

4) If the application is acceptable, review the applicant's qualifications.

D. Review Inspection History. Review the FSDO file for information from past inspections. Note any unsatisfactory items that might affect issuance of examining authority.

E. Review Accident/Incident History. Using office procedures, query the Enforcement Information System/Accident and Incident Data System (EIS/AIDS) and note any problems that might affect issuance of flight test examining authority.

F. Examine Qualifications. Based on the information provided in the application, the FSDO file, and the accident/incident history, determine if the applicant meets the requirements of part 141 subpart D.

1) If the applicant is not qualified, inform the applicant of the deficiencies. On both copies of FAA Form 8420-8, mark the "Disapproved" box on the front of the application and indicate in the "Remarks" box on the reverse side the specific areas that need correction.

a) Return one copy of the original application to the applicant, and place one copy in the FSDO file on the school.

b) If necessary, provide additional blank applications for resubmission.

2) If the applicant is qualified, discuss the privileges and limitations of examining authority.

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G. Discuss Privileges and Limitations of Examining Authority. Discuss with the applicant the proposed procedure for complying with part 61, § 61.71(a) and § 141.67 and/or the procedure for use of an ACR.

H. Schedule Inspection. When the application is complete and accurate and the applicant meets the appropriate qualifications, schedule the inspection for a flight test examining authority.

5-1856 FLIGHT TEST EXAMINING AUTHORITY PROCEDURES.

A. Flight Test Examining Authority. Use the following procedures for the flight test examining authority inspection:

1) Verify the qualifications of the chief instructor, the assistant chief instructor (if applicable), and/or the check instructor (if applicable). Refer to §§ 141.35 and 141.36, and/or 141.37 (as appropriate) to ensure the person who will be conducting the final test is appropriately qualified.

2) Inspect training aids, simulators, aircraft, pilot briefing areas, and other facilities for compliance with the school's TCO.

3) Verify that the school has current copies of appropriate PTS.

4) Evaluate the student records to determine if qualifications and standards have been satisfactory and that the syllabus has been followed. Refer to §§ 141.67, 141.77, 141.85, 141.93, 141.95, and 141.101.

5) When observing the chief, assistant chief, or check instructors conduct the final phase check for a certificate/rating for which examining authority is requested, make sure that final phase check is equal in scope and content to the practical test as established by the appropriate PTS.

B. Inspection Satisfactory.

1) If the inspections are satisfactory, prepare and issue the new Air Agency Certificate and list of approved courses.

2) If applicable, designate an ACR. See Volume 5, Chapter 12.

C. Inspection Unsatisfactory. If the applicant does not meet all or any of the required items, advise the applicant in writing of the disapproval and what corrective action the applicant may want to pursue (see Figure 5-211).

1) On FAA Form 8420-8, in the section labeled "For FAA Use Only," mark the "Disapproved" box.

2) On the reverse side of the application, make any necessary comments and sign.

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3) Return one copy of the application and all documents to the applicant. Place one copy of the application in the FSDO file on the school.

5-1857 ISSUING EXAMINING AUTHORITY.

A. Air Agency Certificate. Use the procedures found in Volume 2, Chapter 9, Section 1, paragraph 2-1083, Certification Phase Procedures, to prepare and issue the Air Agency Certificate.

NOTE: For flight examining authority, place the words "Examining Authority Flight Test Only" immediately after the course title.

B. List of Approved Courses. Prepare a new list of approved courses, showing all courses the school is approved to conduct, including the courses with examining authority.

C. Application. On the reverse side of the application, check the "Approved" box. File one copy in the FSDO file.

NOTE: File a copy of each of the documents included in the application package in the FSDO file.

D. Close PTRS file.

E. Enhanced Vital Information Database (eVID). Update the air agency eVID file.

5-1858 TASK OUTCOMES. Completion of this task results in one or more of the following actions:

- Issuance of a new Air Agency Certificate with examining authority and a new list of approved courses.
- A letter denying examining authority.
- A letter confirming voluntary termination of the authorization process.

5-1859 FUTURE ACTIVITIES.

- Conduct surveillance or inspections at appropriate intervals.
- Possibly designate an ACR.

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Figure 5-210. FAA Form 8420-8, Application for Pilot School Certification

US Department of Transportation
Federal Aviation Administration

APPLICATION FOR PILOT SCHOOL CERTIFICATION

Form approved; OMB No. 2120-0009
Use Expires March 1985

CERT NO. *For FAA Use Only*

APPLICANT - Read submittal and signature instructions on reverse.

NAME OF SCHOOL / TELEPHONE NO.	ADDRESS OF PRINCIPAL BUSINESS OFFICE
Carolyn S.Brannon Brannon Aviation	13206 Poplar Tree Road, Fairfax, VA
LOCATION OF MAIN OPERATIONS BASE	**LOCATION OF SATELLITE BASE(S)**
Fairfax Airport, Fairfax, VA	Centerville Airport

APPLICATION IS HEREBY MADE FOR:

☐ Issuance of a Pilot School Certificate and associated ratings to conduct the training courses identified below, and for the approval of these courses *(three copies of each course outline are attached)*; also, examining authority is requested for the courses appropriately checked.

☐ Renewal of a Pilot School Certificate and associated ratings currently numbered _____, which expires on _____ ☐ without changes to the currently approved course outlines, ☐ with addition of course(s) identified below for which approval is requested *(three copies of each course outline is attached)*, including request for examining authority for the course(s) appropriately checked; ☐ with deletion of course(s) identified below from the curriculum.

☒ Amending the current Pilot School Certificate and associated ratings numbered CSB-S-025-A which expires on 11/30/2007 ☐ by adding the course(s) identified below for which approval is requested *(three copies of each course outline are attached)*, including request for examining authority where appropriately checked; ☐ for deletion of the course(s) identified below from the curriculum.

IDENTIFICATION OF TRAINING COURSES

NOTE: Where examining authority for a course is desired, place and "X" in the box adjacent to the course identification.

☒	Private Pilot	☐	
☒	Instrument Rating	☐	
☒	Commercial Pilot	☐	
☐		☐	
☐		☐	
☐		☐	

(If more space is needed, continue on reverse in space provided)

I (WE) certify that I am (we are) familiar with Part 141 of the Federal Aviation Regulations, and, to the best of my (our) knowledge, believe that my (our) school meets the requirements for certification as prescribed therein.

Signature(s) and Title(s): Carolyn S. Brannon
Carolyn S. Brannon
Owner

9/1/2006
Date

FOR FAA USE ONLY

☐ APPROVED - ☐ a Provisional Pilot School Certificate ☐ a Pilot School Certificate, either with associated ratings bearing the number shown above is issued effective _____ and which expires on _____
☐ Renewal ☐ without amendments ☐ with amendments ☐ Amendments

☐ DISAPPROVED

SIGNATURE OF APPROVING OFFICIAL	TITLE	DATE

FAA Form 8420-8 (1-82)

Recommendations of Inspector(s) on reverse

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Figure 5-211. Letter Denying Examining Authority

FAA Letterhead

[Date]

[Name and Address of School]

Dear [Name]:

This letter is to inform you that your application for [knowledge] [flight] examining authority is denied because of the following:

[List specific discrepancies that were reasons for denial of the application.]

Should you wish to reapply for this examining authority or discuss this matter, please contact this office at [telephone number].

[FSDO manager's signature]

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Figure 5-212. FAA Form 8000-4, Air Agency Certificate Showing Flight Test Examining Authority

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

Air Agency Certificate

Number (Enter certification number from original certificate)

This certificate is issued to

(Enter name of school)

whose business address is

(Enter address of main base of operations)

upon finding that its organization complies in all respects with the requirements of the Federal Aviation Regulations relating to the establishment of an Air Agency; and is empowered to operate an approved (Enter the words, Pilot School.)

with the following ratings:

(Enter all authorized ratings; after the ratings with flight test examing authority, enter the words, (Flight Test Only)

This certificate, unless canceled, suspended, or revoked, shall continue in effect (Enter expiration date of original certificate)

By direction of the Administrator

Date issued: (Enter date of original certification)

(Enter date of amendment) (Have district office manager sign)

This Certificate is not Transferable, AND ANY MAJOR CHANGE IN THE BASIC FACILITIES, OR IN THE LOCATION THEREOF, SHALL BE IMMEDIATELY REPORTED TO THE APPROPRIATE REGIONAL OFFICE OF THE FEDERAL AVIATION ADMINISTRATION

Any alteration of this certificate is punishable by a fine of not exceeding $1,000, or imprisonment not exceeding 3 years, or both

FAA Form 8000-4 (1-67) SUPERSEDES FAA FORM 390.

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Figure 5-213. Knowledge Test Approval Form

(SCHOOL LOGO)

Federal Aviation Air Agency Certificate Number:_____

This certifies that:

[Name]
[Address]
[City, State, and Zip Code]

has satisfactorily completed each required stage and the tests for those stages in the program of study as prescribed in part 141 subpart D, Examining Authority. The applicant is issued this document as evidence of meeting the Federal Aviation Administration (FAA) knowledge test requirements for pilot certification.

FINAL EXAMINATION RESULTS:

[Name of Test]
[Date of Test]
[Expiration Date]
[Take Number]
[Grade]

Subject matter knowledge codes for questions that were answered incorrectly. A code may represent more than one incorrect response.

_____

_____

[Signature]_____

[Printed Name],
Chief Instructor
SEAL
School address
Telephone number

RESERVED. Paragraphs 5-1860 through 5-1880.

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VOLUME 6 SURVEILLANCE

CHAPTER 1 PART 91 INSPECTIONS

Section 1 Inspect an Executive/Corporate Operator

6-1 PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

A. Executive Corporate Operator: 1682.

B. Title 14 of the Code of Federal Regulations (14 CFR) Part 125 Deviation Holder: 1683.

6-2 OBJECTIVE. The objective of this task is to determine if an executive corporate operator is complying with Title 14 of the Code of Federal Regulations (14 CFR) parts 61 and 91. Successful completion of this task results in an indication in the district office files of a satisfactory or an unsatisfactory inspection.

6-3 INSPECTION JOB AID.

A. Job Aid for Base Inspection. The Executive/Corporate Operator Inspection Job Aid is provided for the inspector's use in accomplishing this task. This job aid is used when conducting the inspection at the operator's principal base of operations, where pilot records and aircraft are likely to be available for inspection. When inspecting an aircraft and flightcrew at an airport other than the operator's principal base, the inspector should follow the procedures in Volume 6, Chapter 1, Section 4, Conduct a Part 91 Ramp Inspection, and use the job aid found in that task.

B. Design of Job Aid. The job aid is designed for an operations inspector's use. However, if the operations inspector is accompanied by an Airworthiness inspector, then the "Aircrew" section is for the operations inspector's use, and the "Aircraft" section is for the Airworthiness inspector's use.

6-4 GENERAL INSPECTION INFORMATION.

A. Scheduled Inspections. Scheduled inspections are normally done at the operator's principal base of operation.

B. Unannounced Inspections. As opposed to a ramp inspection, which may or may not be planned, an unannounced inspection occurs at the operator's principal base of operations as a result of any one of the following:

- An inability to make contact to schedule an appointment.
- Received complaints.
- Time available either between or after scheduled inspections or planned work.

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C. Availability of Aircraft for Inspection. The inspection should continue even though all aircraft used by the operator are not available for inspection.

D. Aircrew Training Programs and Records. When inspecting aircrew training programs and records, the inspector should consider the following:

1) A specific training program and retention of crew records are not required for executive/corporate operators. However, if the operator has a training program and maintains records, they should be examined.

2) Although pilots designated as Second in Command (SIC) are not always required by 14 CFR, some executive/corporate operators employ SICs. If they are required by 14 CFR, they should be designated by the operator and their qualifications verified during the inspection. The same holds true if SICs are used only as a company policy or requirement.

3) Even though recordkeeping is not required of an executive/corporate operator, many do maintain training records. The inspector should encourage all operators to keep and maintain records to verify compliance with 14 CFR §§ 61.55 and 61.58.

E. Proficiency or Competency Flight Checks. If during the inspection it is determined that a pilot requires a flight check, do not interrupt the inspection to conduct it. Have the operator schedule the flight check with the appropriate district office or a proficiency pilot examiner (PPE).

F. Airworthiness Coordination. If an Airworthiness inspector is not available for the inspection and suspected airworthiness discrepancies are discovered during the inspection, the operations inspector must coordinate with an Airworthiness inspector at the district office to determine the disposition of the discrepancy. This should be accomplished before completing the inspection.

6-5 DISCREPANCIES FOUND DURING INSPECTION.

A. Discontinuation of Inspection. The inspection should be continued unless the inspector discovers a discrepancy that would affect the safety of flight or dispatch of the aircraft and which may result in a violation of 14 CFR.

B. Recording Discrepancies. The inspector must note all discrepancies on the appropriate job aid and discuss them with the operator as soon as possible. The inspector may explain how to correct discrepancies found during the inspection, but the inspector should keep in mind that it is the operator's responsibility to ensure that items are in compliance with 14 CFR.

C. Operator Notification. If the operator accompanies the inspector during the inspection, the inspector must advise the operator of any discrepancies at the completion of the inspection. If the operator is not present during the inspection, the inspector should advise the operator of the discrepancies before departure.

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D. Levels of Deficiency and Appropriate Corrective Action. Following are some examples of various deficiencies that might occur in an inspection and the appropriate action to take for the situation. The actions described are based on two assumptions.

1) First, if a discrepancy is found, the inspection is completed anyway. After inspection, all the deficiencies and recommended corrective actions would be summarized in a note to the file and/or in remarks to the PTRS Data Sheet.

2) Second, an unsatisfactory report often calls for an enforcement investigation. Unsatisfactory reports are usually based on obvious violations found during the inspection. There are intermediate stages between satisfactory and unsatisfactory results, any of which may result in a satisfactory inspection with corrective action.

a) A Spot Correction involves a discrepancy which was noted and corrected during the inspection and which was not a violation. Because it was corrected "on the spot," it may require no further action. An example of a spot correction might be: The inspector does not find a facsimile of an airman certificate for a flightcrew member. The corrective action would consist of the inspector notifying the operator of this discrepancy. During the remainder of the inspection, the operator makes a copy of the airman's certificate and places it in the flightcrew member records. No other corrective action would be necessary if the inspector found that the airman's certificate was valid and that the airman was not used as a flightcrew member until a copy of the certificate was placed in the flightcrew member records. However, the inspector shall mark the PTRS sheet with an "I" to indicate "information." The inspector shall note the discrepancy and the spot correction on the PTRS Data Sheet and/or the job aid.

b) A Followup Action would involve deficiencies or lack of pilot knowledge or skill that do not involve a violation but which require action other than a spot correction. For example, during the inspection the inspector noted that a required copy of the lease agreement was not being carried in the aircraft. However, there was no evidence that the aircraft had been operated without the lease agreement on board the aircraft. The corrective action would consist of the inspector verbally advising the operator that a copy of the lease agreement must be in the aircraft before the aircraft is operated again. At the office the inspector would confirm this in writing to the operator and schedule a followup inspection to determine if the lease agreement had been placed in the aircraft. The inspector shall mark the PTRS Data Sheet with an "F" to indicate a followup action.

c) A blatant violation would be cause for a finding of Unsatisfactory for the inspection. For example, during the inspection the inspector finds that an aircraft has been used for overwater operations, but the required radio equipment for overwater operations (§ 91.511) has not been installed. The inspector shall mark the PTRS Data Sheet with an "E" to indicate the inspection resulted in an enforcement investigation. (See Volume 14, Chapter 1, Section 2, Flight Standards Service Compliance Action Decision Procedure.)

E. Discrepancies Between District Office Files and Operator Files. When a discrepancy is found between office records kept on the operator and records maintained by the operator, the inspector shall determine which set of records is current, approved, and correct. The outdated records must be brought up to date. For example, the operator's records indicate a

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change in the address of the base of operations, of which the FAA was not aware. District office records must be altered to reflect the correct address. The inspector must determine whether an enforcement action is necessary.

6-6 CATEGORY II AND CATEGORY III. For executive/corporate operator with a Category II (CAT II) and/or Category III (CAT III) authorization the following requirements and regulations apply:

A. Pilot in Command. The pilot in command (PIC) of a civil aircraft conducting a CAT II/III operation must hold a current CAT II/III pilot authorization for that type of aircraft (Figure 6-1). The pilot-in-command's authorization allows that aircraft to be operated to the authorized lower minimums.

B. Second in Command. The SIC of a civil aircraft conducting a CAT II/III operation must hold a current instrument rating or a current ATP certificate appropriate for that type of aircraft.

C. Operator. The operator conducting CAT II/III operations should have an approved CAT II/III manual for each specific aircraft by N-number. If the operator does not have a pilot available with the appropriate CAT II/III authorization, that aircraft may not be used in CAT II/III operations.

D. Related Tasks. For additional background on Category II/III authorizations, see Volume 4, Chapter 2, Section 2, Safety Assurance System: Approval of U.S. Operators for Special Authorization Category I and All Category II/III Operations—Parts 91 (Large Aircraft), 91K, 121, 125, and 135 and Volume 5, Chapter 2, Section 21, Conduct a Category II/Catergory III Pilot Flight Check.

6-7 RADIO STATION LICENSE. The Federal Communications Commission (FCC) requires that any communication transmitter installed in an aircraft be licensed. Licenses issued by the FCC expire after five years. When an inspection reveals noncompliance with FCC licensing requirements, the inspector should advise the operator and recommend that the license be renewed. The FAA has no responsibility for advising the FCC of the operator's noncompliance with FCC regulations.

6-8 MAINTENANCE INSPECTIONS.

A. Records of Maintenance Inspections. In the absence of an Airworthiness inspector, the operations inspector should check the appropriate records, when they are available, for required maintenance inspections.

1) Operators seldom carry aircraft and engine logbooks in the aircraft. However, if they do, the logbooks should be checked there as well as at the base of operations.

2) Some operators keep required maintenance information on a computer or on an aircraft status board. When aircraft and engine logbooks are not available (for example, at a satellite base), these records can be examined in lieu of the appropriate logbooks. Computer-stored records must be retrievable by the operator for inspector review.

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B. Required Inspections. If the operator does have records available verifying maintenance, the inspector should check to see if the following required inspections have been accomplished:

- Annual inspection.
- Progressive inspection.
- Approved, continuous inspection program.
- Altimeter system and altitude reporting equipment tests and inspections.
- ATC transponder tests and inspections.

6-9 LEASE AGREEMENTS.

A. Types of Leases. When inspecting lease agreements the inspector must be aware of lease differences. Leases may be "wet" or "dry." A wet lease is one in which the lessor provides both the aircraft and crew. A dry lease is one in which the lessor provides the aircraft only. Some leases may have an expiration or renewal date while others may be terminated at the lessee's or lessor's discretion.

B. Lease Review. The inspector should ensure that the lease covers the actual aircraft being operated and that it is in compliance with § 91.23. (See Volume 3, Chapter 13, Section 6, Process an Aircraft Lease Agreement for Regulatory Compliance Under [14 CFR] § 91.23.)

6-10 VOR EQUIPMENT CHECK. When the inspector is determining if the VOR equipment check has been accomplished, he or she should keep in mind that the record of compliance does not necessarily have to be kept in the aircraft logbook. Some operators may choose to keep a notebook or other record of such checks in the aircraft. If the equipment is being maintained, checked, and inspected under an approved procedure, the inspector should determine what that procedure is and where the records are kept (§ 91.171).

6-11 ELT BATTERY. The emergency locator transmitter (ELT) battery installation and expiration date should be entered in the aircraft logbook. If the logbook is not available, the battery can be examined for the expiration date (§ 91.207).

6-12 GENERAL AIRWORTHINESS. When an inspector checks the aircraft for general airworthiness, he or she should keep in mind that the inspection should not resemble a 100-hour or annual inspection. Rather, it is similar to a pre-flight inspection to check for obvious discrepancies which could affect the safety of flight (§§ 91.403 and 91.405). For example, some obvious discrepancies to check for include fuel or oil leaks, damaged tires, prop seal leaks, broken exhaust hoses, etc.

6-13 AIRCRAFT ELECTRICAL POWER.

A. System Checks Requiring Electrical Power. Electrical power is required when checking various warning or alert devices, such as the aural speed warning device, the seat belt and no smoking signs, and the altitude alert system or device.

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B. Operator Coordination. Before applying power to the aircraft systems, the inspector should coordinate this check with the operator to ensure that no other system will be affected. If possible, all warning or alert devices requiring electrical power should be checked at the same time to minimize the drain on the battery (§§ 91.603 and 91.219). The operation of these systems should be accomplished by the operator or one of the operator's appropriate personnel (e.g., pilot or mechanic).

6-14 SEAT BELT AND "NO SMOKING" SIGNS. Seat belt and "no smoking" signs are not required to be installed, but if they are, they must be operable (§ 91.517).

6-15 OVERWATER OPERATIONS.

A. Different Survival Requirements. The inspector should note that the survival equipment requirements differ depending upon the distance from the nearest shore of the overwater flight (§ 91.509(a) or (b)).

B. Radio Requirement. The radio requirement for overwater operation does not become effective until flying 100 nautical miles or 30 minutes from the nearest shoreline (§§ 91.509 and 91.511).

6-16 PASSENGER BRIEFING CARDS. Passenger briefing cards are not required, but if they are used to supplement an oral briefing they must be available to all passengers and must refer to the specific type and model of airplane (§ 91.519).

6-17 PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. This task requires knowledge of the regulatory requirements of part 91 and FAA policies and qualifications as an Aviation Safety Inspector (Operations).

B. Coordination. This task may require coordination with the airworthiness unit and with the airman records section of AFS-760, Airmen Certification Branch.

6-18 REFERENCES, FORMS, AND JOB AIDS.

A. References.

- Title 14 CFR Parts 1, 61, 63, 67, 121, and 125.
- FCC Part 87.
- Advisory Circular 91-37, Truth in Leasing.
- Order 8720.1, Truth in Leasing Notification (14 CFR § 91.23).
- PTRS Field Office Manual.

B. Forms. FAA Form 8000-36, PTRS Data Sheet.

C. Job Aids. Sample letters and figures.

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6-19 PRE-INSPECTION ACTIVITIES.

A. Method of Inspection. Determine if the inspection is to be unannounced or scheduled with the operator.

1) If the inspection is to be unannounced, review the district office file on the operator.

2) If the inspection is to be scheduled, contact the operator and arrange a mutually agreed upon time and location for the inspection. Specify that it should be a time when required personnel, records, and aircraft will be available. Inform the operator of the required records to have available at the inspection, specifically aircrew and aircraft documents.

B. Review District Office Files. Review office file on the operator. Note on the job aid areas of special emphasis for the following:

- Past inspection reports.
- Discrepancies from previous inspections.
- Complaints.
- Record of flight checks.
- Any followup items from previous inspections.

C. District Office MEL File. Determine if the operator has been issued a Minimum Equipment List (MEL).

D. Review MMEL. If the operator has been issued an MEL, review the appropriate MMEL. Note the current revision number of the MMEL on the job aid. Compare this number with the revision number on the operator's MEL during the inspection.

E. Airworthiness Participation. If possible, coordinate the appointment with an Airworthiness inspector.

F. PTRS. Open PTRS file.

6-20 CONDUCT INSPECTION. Using the executive/corporate operator inspection job aid (Figure 6-2), conduct the inspection as follows:

A. Request Documents to be Reviewed. Request the following documents, which are normally kept at the principal base of operations, from the aircraft operator.

- Aircrew documents (listed on job aid).
- Aircraft documents (listed on job aid).

B. Review Aircrew Documents. (In operator's office.)

1) Inspect facsimiles or other record of airman certificates for flightcrew members. Determine if the ratings and limitations are appropriate for the type of operations being conducted.

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2) Inspect facsimiles or other record of airman medical certificates for flightcrew members. Determine if they are current and the appropriate class. Check for a Statement of Demonstrated Ability, if required on a medical certificate.

3) Inspect flightcrew logbooks (or other reliable records) to determine recency of experience and qualifications of PIC, SIC, and Flight Engineer (FE).

4) If applicable, assess how training is conducted to determine compliance with §§ 61.55, 61.57, and 61.58.

a) If required, check for FAA Form 8410-1, Airman Proficiency/Qualification Check, for the PIC (§ 61.58).

b) If applicable, check for the name and location of any Pilot Proficiency Examiners (PPEs) who administer tests and checks.

5) If applicable, inspect pilot Category II and/or Category III authorization letters for currency (§ 91.189). (See Volume 5, Chapter 2, Section 21.)

6) Note any discrepancies on the job aid, then record aircraft information.

C. Record Aircraft Information. On the job aid record the N-number, make and model, and whether owned or leased for each aircraft used by the operator.

D. Review Aircraft Documents. (In operator's office.)

1) For each aircraft, inspect the aircraft and engine logbooks and maintenance records for compliance with appropriate tests and inspections.

2) If applicable, inspect any Letter of Deviation issued under § 125.3 to determine that it is still appropriate for the aircraft used. (See Volume 2, Chapter 6, Section 3, Evaluate an Application for Deviation Authority under Part 125.)

3) If applicable, inspect lease agreements for compliance with § 91.23 (Figure 6-3). Determine that they are still appropriate for the aircraft used, and that they have not expired (See Volume 3, Chapter 13, Section 6.)

4) Determine that the CAT II and/or CAT III manuals for each aircraft with CAT II and/or CAT III authorization are current and kept at the principal base of operations. (See Volume 4, Chapter 2, Section 2.)

5) If applicable, inspect any Letter of Deviation from North Atlantic High Level Airspace.

E. Inspect Aircraft Documents. (Applies to all aircraft.)

1) Determine that the proper airworthiness certificate is displayed at the cabin or cockpit entrance. Note whether it is visible to passengers and/or crew.

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2) Examine the registration certificate to ensure that it is issued for that specific aircraft. Determine that the N-Number on the certificate is the same as the N-Number on the aircraft. Check that the certificate is issued to the present owner of the aircraft.

3) Check the Radio Station License and note its expiration date. If it has expired, inform the operator of the pertinent FCC requirements.

4) Determine that there is a current and approved Airplane Flight Manual (AFM) on board the aircraft.

5) Determine if there is current weight and balance information in the aircraft by examining the AFM. Compare equipment listed on the weight and balance form to the actual equipment installed. If the actual equipment installed differs from the equipment listed on the weight and balance form, inform the operator that new weight and balance data must be prepared.

6) If applicable, check the MEL to determine that it has:

a) Been issued by N-Number and serial number to the aircraft operator.

b) The current MMEL revision number.

c) A Letter of Authorization from the appropriate district office; check deferred items for placards and dates. (See Volume 4, Chapter 4, Section 2, MEL Requirements for 14 CFR Parts 91, 137, and 142 Operations.)

7) If a Letter of Deviation from part 125 has been issued, ensure that a true copy of it is in the aircraft. Determine that the Letter of Deviation matches the copy at the principal base of operations.

8) If the aircraft is leased, determine that a copy of the lease or contract is being carried in the aircraft. Examine the lease as follows:

a) Note the expiration date on the lease and determine if the lease is still valid.

b) Determine that the lease in the aircraft matches the copy at the principal base of operations.

9) If applicable, determine that a copy of the approved CAT II or CAT III manual is in the aircraft.

10) If the operator has a deviation authorization for NAT HLA operations, determine if the letter is carried on board the aircraft.

11) Determine if pertinent and current aeronautical charts are available.

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12) Ask the operator what type of instrument operations are conducted; for example, ILS, DME, RNAV. Determine if the required radio and navigational equipment is installed for the specific operations conducted.

13) If applicable, determine if a current VOR Equipment Check has been performed.

14) Inspect seats and safety belts for installation and condition.

15) Determine if an ELT (Emergency Locator Transmitter) is installed. Check the expiration date of the battery.

16) Determine general airworthiness of the aircraft by inspecting the aircraft's exterior in a manner similar to a preflight inspection.

F. Additional Inspection Items for Large and Turbine-Powered Multiengine Airplanes Only. In addition to the items in subparagraph E1) through 16), inspect the items listed below as follows:

1) Determine if the aircraft has an emergency checklist available to the flightcrew.

2) Determine if the aircraft has one engine inoperative climb performance data available to the flightcrew.

3) Determine if a flashlight having two D-sized cell batteries, or equivalent, is accessible from the pilot station and is in good working order.

4) If the operator conducts overwater operations, determine that the required radio equipment is installed (§ 91.511).

5) For transport category aircraft only, have the operator demonstrate that the aural speed warning device is in operating condition.

6) Have the operator activate the smoking and safety belt signs. Determine if they are in operable condition. Check their operation from the cockpit and the cabin. If applicable, at this time conduct the altitude alerting system or device check.

7) If the operator uses passenger briefing cards to supplement oral briefings, inspect the cards for location and correct information (§ 91.519).

8) Determine if appropriate emergency equipment is on board the aircraft (§ 91.513).

9) If the operator conducts overwater operations, inspect the following survival equipment for installation and condition:

- Life preservers with approved survivor locator light (for each occupant).
- Life rafts with approved survivor locator light (amount should accommodate the number of occupants of the aircraft).
- Pyrotechnic signaling devices (for each life raft).

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- Emergency radio signaling device.
- Lifeline.
- Appropriately equipped survival kit.

G. Additional Inspection Items for Turbojet Powered Civil Airplanes Only. In addition to the items in subparagraph E1) through 16) and subparagraph F1) through 9), inspect the altitude alerting system or device for installation and operation. Conduct this test at the same time the smoking/safety belt sign and aural speed warning device test is accomplished.

6-21 POST-INSPECTION ACTIVITIES.

A. Inspection Discrepancies. If a discrepancy is discovered during the inspection, enter it on the job aid in the remarks section.

1) Inform the operator of any discrepancy.

2) Advise the operator that he or she may be in violation of 14 CFR if the aircraft is operated without correcting the discrepancy.

B. Review Job Aid. Upon completion of the inspection, review the job aid for any suspected violations. If an enforcement investigation is necessary, see Volume 14, Chapter 1, Section 2.

C. Letter of Correction. If desired, send a followup letter of correction (Figure 6-4) to remind the operator of noted discrepancies. Include a suspense date for correction. Do not close out the PTRS before confirming that corrections have been made.

D. PTRS Report. Complete FAA Form 8000-36.

1) Use the following codes when applicable:

a) PTRS Code 1682 for Executive Corporate Operator.

b) PTRS Code 1683 for a part 125 Deviation Holder.

2) If the aircraft is not based in the inspector's district, forward a copy of the job aid and copies of any correspondence to the appropriate district office.

E. eVID. Update eVID part 91 operator eVID record.

F. Job Aid. File the job aid according to normal office procedures.

6-22 TASK OUTCOMES. Completion of this task results in one or more of the following:

- An indication in district office files of a satisfactory inspection.
- An indication in district office files of an unsatisfactory inspection.
- Inspection results forwarded to the operator's district office of jurisdiction.

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6-23 FUTURE ACTIVITIES.

- Additional programmed or spot inspections.
- Possible enforcement investigation if the investigation reveals a violation of 14 CFR.
- A followup inspection to determine if any noted discrepancies have been corrected.

Figure 6-1. Category II or III Pilot Authorization Letter

FAA LETTERHEAD

DATE

NAME OF APPLICANT
ADDRESS OF APPLICANT

Dear ____:

This certifies that [pilot's name], while holding [type of certificate] pilot certificate number [certificate number], issued [date of certificate issuance], is authorized to act as pilot-in-command of the following type of aircraft during Category II [or III] operations:

- List applicable airplane types, each on a separate line.

  [Insert airplane type] not valid after [enter date of expiration for each airplane].

- Add limitations, if applicable; for example: Limited to minimums of 1,600' RVR, 150' DH [enter expiration date of limitations].

This letter is issued on [enter date] by [enter name of issuing FSDO]. It is valid only when countersigned by [enter name of applicant] on the line provided below.

Signature of the issuing inspector Signature of the Holder

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Figure 6-2. Executive/Corporate Operator Inspection Job Aid

OPERATOR NAME/ADDRESS	INSPECTION LOCATION INSPECTOR NAME	DATE OF INSPECTION

I. AIRCREW INFORMATION						
CERTIFICATES		AIRMAN			MEDICAL	
Name	Pos	Grade	Ratings	Number	Class	Date
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						

INSPECTION ITEMS	REF.	S	U	REMARKS
PILOT LOGBOOKS (if available)	61.55 61.57 61.58			
TRAINING PROGRAM (if applicable)	N/A			
PROFICIENCY CHECKS	61.58			DONE BY: FAA ____ PPE ____
LOCATION _____ NAME _____ DATE _____				
SIC QUALIFICATIONS	61.55			

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II. AIRCRAFT INFORMATION				PAGE TWO
BASIC AIRCRAFT DATA				
N-Number	Make/Model			Owned/Leased (91.54)
1.				
2.				
3.				
4.				
5.				
INSPECTION ITEMS	REF.	S	U	REMARKS
AIRCRAFT LOGBOOKS (if available)	91.409 91.411 91.413 91.417			
LETTER OF DEVIATION SPECIAL AUTHORIZATION (if applicable)	125.3			
LEASE AGREEMENTS (if applicable)	91.23			
CAT II/III AUTHORIZATION (if applicable)	61.3 61.19 61.67 91.189 91.191 91APPA			
MNPS DEVIATION (if applicable)	91.705 91APPC			
III. INSPECT AIRCRAFT	REF.	S	U	REMARKS
Airworthiness Certificate	91.203			
Registration Certificate	91.203			

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III. INSPECT AIRCRAFT (con'd)	Ref.	S	U	REMARKS PAGE THREE
Radio Station License	FCC			
Aircraft Flight Manual	91.9			
MEL (if applicable) VOR Equipment Check	91.213 91.171			Current Revision # _____
Pertinent and Current Aeronautical Charts	91.103 91.503			
Radio/Navigational Equipment	91.205			
Seat/Safety Belts	91.107			
ELT	91.207			
General Airworthiness	91.403 91.405			
Other	N/A			
LARGE AND TURBINE-POWERED MULTIENGINE AIRPLANES ONLY				
Emergency Checklist	91.503			
One-Engine Inop Climb Performance Data	91.503			
Flashlight	91.503			
Radio Equipment for Overwater Operations (if applicable)	91.511			
Aural Speed Warning Device (Transport Category Only)	91.603			
No Smoking and Safety Belt Signs	91.517			
Seat/Safety Belts	91.521			
Passenger Briefing Cards (if used)	91.519			

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III. INSPECT AIRCRAFT (con'd)	Ref.	S	U	REMARKS PAGE FOUR
Emergency Equipment	91.513			
Survival Equipment Overwater Operations	91.509			
TURBOJET ONLY				
Altitude Alert	91.219			

Inspection Results: Satisfactory _____ Unsatisfactory ____
Follow up Letter Required: Yes ___ No ___

REMARKS:

REGION	DISTRICT OFFICE	INSPECTOR'S SIGNATURE

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Figure 6-3. Sample Lease

_____(insert type, model and registration number of airplane, such as Convair 240; N124W) HAS BEEN MAINTAINED AND INSPECTED UNDER _____ (insert 14 CFR part 91 or 121, as appropriate) FROM _____ TO _____ (insert date of execution of lease or contract after the word "to"; then go back 12 months and under part 121 during other parts of the months, the dates and 14 CFR parts under which it was maintained for each period should be specified.)

IT WILL BE MAINTAINED AND INSPECTED UNDER _____ (insert Part 91 or 121, as appropriate) FOR OPERATIONS TO BE CONDUCTED UNDER THIS _____ (insert lease OR contact of conditional sale, whichever is correct).

_____ (insert name and address of individual, company, or corporation) IS CONSIDERED RESPONSIBLE FOR OPERATIONAL CONTROL OF ALL AIRCRAFT INDENTIFIED AND TO BE OPERATED UNDER THIS _____ (insert lease or contract of conditional sale).

AN EXPLANATION OF THE FACTORS BEARING ON OPERATIONAL CONTROL AND THE PERTINENT FEDERAL AVIATION REGULATIONS CAN BE OBTAINED FROM THE NEAREST FAA FLIGHT STANDARDS DISTRICT OFFICE.

I, THE UNDERSIGNED _____ (insert name and address of responsible party) CERTIFY THAT I AM RESPONSIBLE FOR OPERATIONAL CONTROL OF THE AIRCRAFT AND I UNDERSTAND MY RESPONSIBILITIES FOR COMPLIANCE WITH APPLICABLE FEDERAL AVIATION REGULATIONS.

_____	_____
Signature and Title (lessor)	Date and time of execution
_____	_____
Signature and Title (lessor)	Date and time of execution

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Figure 6-4. Sample Letter of Correction

January 9, 1991

Mr. Larry Young
Director of Flight Operations
XYZ Corporation
Yourtown, IA 12345

Dear Mr. Young,

A recent inspection of your flight operation conducted on January 8, 1991 revealed the following discrepancies:

1. M.E.L. Revision—not current	REF. 14 CFR § 91.213
2. Flash Light—Inoperative	REF. 14 CFR § 91.503
3. Passenger Briefing Cards—Insufficient number	REF. 14 CFR § 91.519

Your prompt attention to correcting these items is appreciated. Please respond to this office within 20 days with your corrective action. We appreciate your cooperation. If we may be of further assistance please call 123-4567.

Sincerely,

Michael Old
Aviation Safety Inspector

RESERVED. Paragraphs 6-24 through 6-39.

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VOLUME 6 SURVEILLANCE

CHAPTER 3 PART 125 INSPECTIONS

Section 4 Conduct Part 125 Base Inspection

6-1246 PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

A. Operations:

- Initial Certification: 1353.
- Surveillance: 1616.

B. Airworthiness:

- Initial Certification: 3338.
- Surveillance: 3632.

C. Avionics:

- Initial Certification: 5338.
- Surveillance: 5632.

6-1247 GENERAL. This section contains direction and guidance for Operations, Maintenance, and Avionics inspectors to use for performing base of operations inspections and to ensure that the operator conforms to the regulatory requirements listed in Title 14 of the Code of Federal Regulations (14 CFR) part 125. Base facilities inspections are necessary to verify that the operator is accomplishing those support activities required to originate, turn around, or terminate a flight.

6-1248 OVERVIEW. Part 125, § 125.45 requires that each operator shall allow the Administrator, at any time or place, to make any inspections or tests to determine its compliance with Title 49 of the United States Code (49 U.S.C.) (formerly the Federal Aviation Act of 1958 (FA Act)), 14 CFR, its operating certificate and operations specifications (OpSpecs)/letter of authorization (LOA), or its Letter of Deviation Authority (LODA) to determine or its eligibility to continue to hold its certificate or its LODA.

A. Definition of a Part 125 Operator. A part 125 operator may be a part 125 certificate holder or a part 125 subpart A (A125) LODA holder. The A125 LODA provides relief from the requirements to hold a certificate and OpSpecs for noncommercial operators only. The A125 LODA assures the safety intent of the part 125 operating rule while granting certification relief to corporate and private operators. A125 LODA holders are issued LOAs instead of OpSpecs.

B. Base Inspection. A base inspection is a scheduled activity that consists of a thorough review of the operator's operations, maintenance records, procedures, and aircraft. The frequency of base inspections will depend on the number of aircraft and personnel employed by

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the operator, complexity of areas of the authorized operation, and availability of qualified inspectors. Items such as complaints, compliance action and enforcement history, and requests from certificate-holding district offices (CHDO) dictate the scheduling of surveillance of an operator. Occasionally, Federal Aviation Administration (FAA) headquarters (HQ) will identify special emphasis items.

C. Conduct of Base Inspections (Operations). The CHDO conducts base inspections of all part 125 operators. The district office having geographical jurisdiction over the base's location conducts base inspections of applicants for part 125 certificates.

D. Conduct of Base Inspections (Airworthiness and Avionics). Base facilities inspections are necessary to verify that the operator is maintaining the aircraft in an Airworthy condition and accomplishing the necessary maintenance support activities required to originate, turn around, or terminate a flight.

6-1249 SPECIFIC INSPECTION PRACTICES AND PROCEDURES. Inspectors should use the Part 125 Operations Base Inspection Job Aid (Figure 6-59) during the inspection. This job aid provides inspectors with "reminder" items to check when they evaluate and verify specific policies and procedures. The job aid may not include inspected areas. An inspector should record an inspected area as an "other" item in the respective subject area. Also, there may be items on the job aid that the inspector did not observe and should be left blank. The job aid is designed solely as a reminder and as a means of standardization to ensure that the inspectors conduct station facilities inspections in the same general manner. Inspectors should conduct station facilities inspections by using the procedures that follow.

A. Responsibilities.

1) The CHDO has the responsibility for planning and programming the surveillance and inspections of an operator within its geographical area of responsibility.

2) A district office is also responsible for assisting the CHDO in the conduct of surveillance of operators who are not based within, but who are observed to operate to or from the airports located within, the district office area.

a) When an operator's area of operation extends into other district offices' geographical areas of responsibility, the CHDO will conduct inspection and surveillance with the procedures outlined in this section.

b) Requests for assistance from another district office within the same region will be made directly from district office to district office unless the regions direct otherwise.

3) Generally, the National Program Guidelines (NPG) determine the frequency of inspections; however, the number and frequency of inspections (surveillance) will vary depending on the need for emphasis and where and when more surveillance might be necessary.

6-1250 BASE INSPECTION JOB AID. The job aid in Figure 6-59 is for use in conducting the base inspection at the principal base of operations.

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A. Inspector Responsibilities. The items in the job aid are those that aviation safety inspectors (ASI) generally perform during routine surveillance.

1) The far left column, "14 CFR §," gives the regulation where objective standards are found.

2) For each item, the inspector marks one of the three columns on the right: "SAT" for satisfactory, "UNSAT" for unsatisfactory, or "N/A" for not applicable.

B. Job Aid Explanation. For those items that are not self-explanatory, use the following for objective standards:

1) Section 125.31—Contents of Certificate and Operations Specifications. Refer to the current edition of Advisory Circular (AC) 125-1, Operations of Large Airplanes Subject to Federal Aviation Regulation Part 125, Appendix 2, Operations Specifications, for recommended OpSpecs/LOAs.

2) Section 125.43—Use of Operations Specifications. Ensure that the manual contains applicable OpSpec parts.

3) Section 125.73—Contents. This area refers to the availability, currency, and content of the written guidance required by Federal regulations. The operator's manuals must be available to each employee or contract maintenance provider for use in the performance of their assigned duties and contracted work.

4) Section 125.75—Airplane Flight Manual. The operator may combine this manual with the § 125.71 manual and revise it if approved by the Administrator.

5) Part 125 Subpart D—Airplane Requirements. The certificate holder must comply with §§ 125.91 and 125.93 prior to any aircraft operations.

6) Section 125.207—Emergency Equipment Requirements. If the first aid kit is sealed, visual inspection of contents is not required.

7) Part 125 Subpart K—Flight Release Rules. Review the flight release and load manifest forms for accuracy and each required item for completion. Cross-check the load manifest fuel with fuel required by the release form.

6-1251 STATION FACILITIES INSPECTION REPORT. Inspectors should use the Part 125 Operations Base Inspection Job Aid when recording the inspection in the PTRS and for updating the enhanced Vital Information Database (eVID) subsystem environmental file. Discrepancies observed during the inspection should be documented in the comment section, along with any on-the-spot corrective action taken by the operator. Any recommended corrective actions should also be noted on the report so that the oversight principal inspectors (PI) will have the inspector's views concerning the most effective means of resolving the discrepancies. When applicable, the inspector should indicate an outstanding or above-average base facility on the report to provide an accurate picture of the operator's facility.

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6-1252 PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. This surveillance requires knowledge of regulatory requirements in part 125, FAA policies, and qualification as an ASI (Operations, Maintenance, and Avionics).

B. Coordination. This surveillance requires coordination with all the oversight inspection personnel within the CHDO and possibly the Regional Office (RO).

6-1253 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- AC 125-1, Operations of Large Airplanes Subject to Federal Aviation Regulation Part 125.
- Volume 14, Chapter 1, Section 2, Flight Standards Service Compliance Action Decision Procedure.

B. Forms:

- FAA Form 1360-33, Record of Visit, Conference, or Telephone Call.
- FAA Form 8000-36, Program Tracking and Reporting System Data Sheet.

C. Job Aids:

- Sample letters.
- Part 125 Operations Base Inspection Job Aid (Figure 6-59).
- Inspection Evaluation Report (Figure 6-61).

6-1254 INSPECTION PROCEDURES.

A. Planning for the Inspection. The inspector should carefully plan a base facilities inspection before conducting it. The inspector should review previous inspection reports, identify any areas of weakness previously reported, and review the operator's corrective actions. The inspector conducting the inspection should contact the appropriate PIs to determine if there are any specific areas that may currently need a review or indepth inspection. The inspector should coordinate with the base manager ahead of time to establish a date and time for conducting the inspection (see Figure 6-60, Letter Notifying Operator of Base Inspection).

B. Briefing for the Inspection. Before beginning the inspection, the inspector should request that the base manager (or person in charge) provide an opening briefing on the facility operation, including its assigned personnel and operational procedures. In turn, the inspector should brief the base manager and the staff (if any) on the purpose and scope of the inspection. This discussion should include the following points:

- Purpose of the base facility inspection,
- Introduction of inspectors,

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- The specific areas to be inspected, and
- The proposed time and place of the exit briefing.

1) The Operating Certificate and OpSpecs/LOAs. Determine if they are still relevant to the operator's scope of operation.

2) Procedures and Policies. Determine that any changes continue to show compliance with § 125.73 manual content.

3) Letters of Deviation or Special Authorizations. Determine if they are still appropriate to the operations being conducted.

4) Surveillance Records and Previous Base Inspection Records. Identify the areas of concern and the need for special emphasis.

5) District Office File Material. Any other material in the district office file.

C. Job Aid. Use the Part 125 Operations Base Inspection Job Aid to brief the operator and conduct the base inspection.

D. Base Inspection Findings. Use the Part 125 Operations Base Inspection Job Aid to determine the areas of noncompliance.

E. Debrief The Operator.

1) Advise the operator of any areas of noncompliance found during the inspection, indicating those areas that they need to correct before they can conduct any further operations.

2) Provide a copy of the discrepancies to the operator using Figure 6-61, Inspection Evaluation Report.

F. Formal Notification. Prepare a letter listing the discrepancies (see Figure 6-62, Letter Indicating Discrepancies Discovered During Base Inspection) for the PI's signature. Send the original to the operator and place a copy in the operator's district office file.

G. File the Task Completion Records at District Office. The surveillance completion records include the following:

- Part 125 Operations Base Inspection Job Aid,
- Inspection Evaluation Report,
- Copy of letter of discrepancies, and
- Documentation of discrepancies.

H. Make Appropriate PTRS Entries. Complete FAA Form 8000-36.

6-1255 TASK OUTCOMES. Follow the process contained in Volume 14, Chapter 1, Section 2 to identify the root cause(s) that led to any deviations from rules, standards, or procedures. Resolve findings immediately with the operator if possible, and communicate with

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the principal operations inspector (POI) about any followup action required to validate that the operator has returned the facility to full compliance. Completion of this surveillance results in one of the following:

- A letter listing any discrepancies,
- A completed Part 125 Operations Base Inspection Job Aid, or
- A completed Inspection Evaluation Report.

6-1256 FUTURE ACTIVITIES.

- Followup inspection to verify correction of discrepancies.
- Programmed, routine surveillance and inspection.

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Figure 6-59. Part 125 Operations Base Inspection Job Aid

14 CFR §	Inspect the following items:	SAT	UNSAT	N/A
125.3	**Deviation Authority**			
125.5	**Original Certificate and OpSpecs/LOAs**			
125.7	**True copy of certificate *in each airplane***			
	True copy of letter of deviation, if issued			
125.11	**Does not hold out to the public**			
125.25	**Management Personnel** 1. Description of the duties, responsibilities, and authority of each of its management personnel in the general policy section of its manual. 2. List in the manual the names and addresses of each of its management personnel. **Director of Operations** **Name:**_____ **Address:**_____ _____			
	Designated Person (DP), responsible for the scheduling of inspections required by the manual and for the updating of the approved Weight and Balance (W&B) system on all airplanes. **Name:**_____ **Address:**_____ 3. A description of the maintenance organization must be in the operator's manual when the operator has such an organization. **Other Management Personnel (list)** _____ _____ _____			
125.31	**Certificate contains—** **Holder's name:**_____			

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	Date of Issue:			
	OpSpecs/LOAs contain— **Kinds of operations authorized**			
	Type of airplane and registration number authorized for use			
	Any additional items considered necessary when issued			
125.37	**Duty time limitations**			
125.43	**Complete and separate set of OpSpecs/LOAs**			
14 CFR §	**POLICIES AND PROCEDURES**	**SAT**	**UNSAT**	**N/A**
125.71	**Manual**			
	Copy at principal base of operations			
	Not contrary to 14 CFR or OpSpecs/LOAs			
	Appropriate portions available to ground and maintenance personnel			
	Copies provided to flightcrew			
125.73	**Manual contents** **Date of last revision and number on each page**			
	Management personnel names; assigned area of responsibility; and duties, responsibilities, and authority			
	Procedures for ensuring compliance with airplane W&B limitations			
	Copy of OpSpecs/LOAs or appropriate extracted material			
	Procedures for accident notification			
	Procedures for ensuring Required Inspection Items (RII) have been performed			
	Procedure for reporting and recording mechanical irregularities (Service Difficulty Report (SDR))			

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	Procedures to be followed to determine that irregularities have been corrected or deferred			
	Procedures for release or continuation of flight for required equipment breakdown			
	Procedures for refueling			
	Procedures for pilot in command (PIC) in passenger briefing			
	Flight locating procedures when no flight plan is filed			
	Procedures for ensuring compliance with emergency procedures			
	List of functions assigned required crewmembers during emergencies and emergency evacuation			
	Approved airplane inspection program (Airworthiness)			
	Hazardous materials (hazmat) procedures **Instructions to recognize hazmats**			
	If hazmats are handled, carried, or stored, procedures for: **Accepting for shipment proper documents, compatibility of articles, proper packing, marking, labeling, and instructions for loading and storage**			
	Notification and reporting of incidents			
	Notification of PIC when hazmats are onboard			
	Procedures for the evacuation of persons who may need assistance from another person during an emergency			
	Identity of each person who will give tests and the tests authorized			
	Other procedures and policy instructions concerning the operation			
125.75	**Airplane Flight Manual (AFM)** **Current approved manual or equivalent for each type airplane**			

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	Carried onboard each airplane			
14 CFR §	**SUBPART D—AIRPLANE REQUIREMENTS**	**SAT**	**UNSAT**	**N/A**
125.91	**Current airworthiness certificate**			
	In an Airworthy condition (airworthiness)			
	Empty weight and center of gravity (CG) calculated from actual weighing within preceding 36 months			
125.93	**Airplane limitations**			
SUBPART E—SPECIAL AIRWORTHINESS REQUIREMENTS (AIRWORTHINESS)				
14 CFR §	**SUBPART F—INSTRUMENTS AND EQUIPMENT**	**SAT**	**UNSAT**	**N/A**
125.201	**Instrument and equipment specifically or otherwise required by type certificate (TC) and essential for safe operation are in operating condition**			
	Instrument and equipment required by Airworthiness Directive (AD) are operable unless AD provides otherwise			
	Minimum equipment list (MEL) for airplane			
	MEL LOA from Flight Standards District Office (FSDO) (Supplemental Type Certificate (STC))			
	Airplane records available to PIC include entries describing inoperable instruments and equipment			
	Airplane operated under conditions of the MEL and current LOA if applicable			
125.203	**Radio and navigational equipment**			
	Radio navigational equipment able to receive radio signals from ground facilities for visual flight rules (VFR) over-the-top			
	Under instrument flight rules (IFR) or extended overwater, meets the requirements of § 125.203(c)			
125.205	**Equipment for airplanes operated under IFR meet requirements of § 125.205(a) through (k)**			

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125.206	**Pitot heat indication system complies with 14 CFR part 25, § 25.1326**			
	Operator possesses extension of § 125.206 deadline			
125.207	**Emergency equipment**			
	Airplanes with seating capacity of 20 or more have—			
	One approved first aid kit			
	Dust proof and moisture proof			
	Contains only materials approved by the Administrator or meeting Federal Specifications GGK-391a			
	Accessible to flight attendants (F/A)			
	At takeoff, contains the contents and quantity described in § 125.207(a)			
	Crash axe accessible to crew but not accessible to passengers			
	No smoking and safety belt signs that can be turned on and off by crewmember			
	Additional emergency equipment in part 125, appendix A			
	Emergency equipment requirements per the current rule			
125.209	**Emergency equipment for extended overwater operations**			
	An approved life preserver with a locator light for each passenger or			
	Other than a life preserver, a flotation device which is removable			
	Life rafts to carry all occupants			
	Equipment onboard life rafts meets requirements of § 125.209(a)(2)(i) through (xix)			
	One life raft has a survival emergency locator transmitter (ELT) as per § 125.209(b)			

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125.211	**Seat and safety belts** **An approved seat or berth for each person at least 2 years old**			
	Approved safety belt for separate use by each person at least 2 years old (Note exceptions in § 125.211(a)(2))			
	Complies with § 125.211(b)			
	Sideward facing seats comply with § 25.785(c)			
	Complies with § 125.211(d)			
	Complies with § 125.211(e)			
125.213	**Miscellaneous equipment** **Adequate number of spare fuses (number found in manual)**			
	Windshield wiper or equivalent at each pilot station			
	Appropriate power supply and distribution system			
	Flight instrument power indicator			
	Two independent static pressure systems			
	Doors leading to emergency exits placarded open during takeoff and landing			
	Means for crew to unlock doors leading to passenger compartments			
125.215	**Operating information required** **Cockpit checklists**			
	Before engine start			
	Before takeoff			
	Cruise			
	Before landing			
	After landing			

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	Stopping engines			
	Emergency cockpit checklists **Fuel, hydraulic, electrical, and mechanical systems**			
	Emergency operation of instruments and controls			
	Engine out procedures			
	Other emergency procedures			
	Pertinent aeronautical charts			
	For IFR flight— **En route charts**			
	Terminal area charts			
	Approach and letdown charts			
	One-engine-inoperative (OEI) climb performance data, as per § 125.215(a)(5)			
125.217	**Passenger information** **Passenger information signs meet requirements of § 25.791**			
125.219	**Passenger Medical Oxygen Use —complies with § 125.219(a) through (e)**			
125.221	**Icing conditions operating limitations**			
	Complies with § 125.221(a) through (d)			
125.223	**Weather radar equipment requirements**			
	Weather radar installed			
	Weather radar operating satisfactorily			
	Manual procedures for inoperative radar			
125.226	**A record of digital flight data recorder (DFDR) information does not need to be retained longer than 60 days (§ 125.226(h))**			

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125.227(f)	**In the event of an accident or occurrence requiring immediate notification of the National Transportation Safety Board (NTSB) under Title 49 of the Code of Federal Regulations (49 CFR) part 830, which results in the termination of the flight, the operator shall keep the recorded information for at least 60 days or if requested by the Administrator or the Board, for a longer period.**			
SUBPART G—MAINTENANCE (AIRWORTHINESS)				
14 CFR §	**SUBPART H—AIRMAN AND CREWMEMBER REQUIRMENTS**	**SAT**	**UNSAT**	**N/A**
125.261	**Airman services limitations** **All airman meet requirements of § 125.261(a)**			
125.263	**Airplanes operated with minimum flightcrew required by AFM**			
	Airplanes requiring Flight Engineers (FE)— **One flightcrew member qualified to act as FE in emergency**			
125.265	**FE requirements** **FE crewmembers hold current FE certificate**			
	FE crewmembers meet the 50 hours in 6 months requirement			
125.267	**Flight navigator and long-range navigation equipment** **Operations outside 48 contiguous states and District of Columbia—** **Has a flightcrew member with current flight navigator certificate or**			
	Two independent approved means of long-range navigation			
	Operations requiring flight navigator or long-range navigation equipment indicated in OpSpecs/LOAs			
125.269	**F/As** **Airplanes having more than 19 but less than 51 passengers have one F/A**			

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	Airplanes having more than 50 but than less than 101 passengers have two F/As			
	Airplanes with more than 100 passengers have two F/As plus one additional F/A for every additional 50 passengers			
	Number of F/As specified in OpSpecs/LOAs			
	Complies with § 125.269(c)			
125.271	**Emergency/emergency evacuation duties**			
	Crewmembers assigned necessary functions			
	Functions described in manual			
14 CFR §	**SUBPART I—FLIGHTCREW MEMBER REQUIREMENTS**	**SAT**	**UNSAT**	**N/A**
125.281	**Crewmembers used as PIC hold—** **At least commercial certificate**			
	Appropriate category, class, type rating			
	An instrument rating			
	PIC flight experience— **1,200 hours as pilot**			
	500 hours of cross-country time			
	100 hours of nighttime			
	At least 10 night takeoffs and landings			
	75 hours actual or simulated instrument time, 50 hours of which was actual			
125.283	**Crewmembers used as second in command (SIC) hold—** **At least commercial certificate**			
	Appropriate category and class ratings			
	An instrument rating			

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	For IFR flight meets recent instrument experience requirements for 14 CFR part 61			
125.285	**Recent experience** **Required pilot flightcrew members have at least three takeoffs and landings in type within the preceding 90 days**			
	Crewmembers not meeting § 125.285(a) checked by a check airman			
	Check airman certified crewmember proficiency and qualifications			
125.287	**Pilot testing experience** **Pilots passed 12-month written or oral test**			
	Pilots passed 12-month competency check			
	Instrument proficiency check (IPC) substituted			
	Check airman/inspector has certified the competency of each pilot			
125.289	**F/A testing requirements**			
	F/As have completed 12-month test on subjects indicated in § 125.289(a) through (h)			
125.291	**PIC IPC** **Pilots passed 6-month proficiency check**			
	Letters of competency for each type of precision approach			
	Letters of competency for each type of nonprecision approach or			
	Any other two different types of nonprecision approach			
	Instrument approach procedures (IAP) include— **At least one straight-in approach**			
	At least one circling approach			
	At least one missed approach			

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	Each approach conducted to published minimums			
	IPC consisted of— **Oral or written equipment test**			
	Flight check under actual or simulated conditions			
	PIC checked in all types of airplane in rotation with not more than one flight check in a 6-month period			
	Check airman issued letters of competency **Lists types of instrument approaches**			
	Lists facilities authorized			
125.295	**Check airman authorization** **Check airman still employed**			
	Test results certified by check airman			
125.297	**Approval of airplane simulators and training devices**			
	Each simulator or training device— **Specifically approved for—** **The operator**			
	The type of airplane and variation			
	The maneuvers, procedures, or crewmember functions involved			
	Maintains performance, functional, and other characteristics required for approval			
	Modified to conform to any modification to the airplane			
14 CFR §	**SUBPART K—FLIGHT RELEASE RULES**	**SAT**	**UNSAT**	**N/A**
125.351	**Flight release authority** **Flights started by person authorized to exercise operational control**			
	Flight releases signed by PIC and person with operational control			

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	Airplanes on ground more than 6 hours get new flight release			
125.353	**Facilities and services for additional available information**			
125.355	**Airplanes Airworthy when released**			
125.357	**Communication and navigation facilities on route or route segment equal to those required by § 125.363(a) through (d)**			
125.365	**Alternate airport for departure** **Flight releases specify alternate airport distances from departure—** **Airplanes with two engines, not more than 1 hour at normal cruise with OEI**			
	Airplanes with three or more engines, not more than 2 hours at normal cruise with OEI			
	Alternate airports meet requirements of OpSpecs/LOAs			
	Alternate airports listed on flight release			
125.367	**Alternate airport for destination (IFR or over-the-top)**			
	At least one alternate listed for each destination airport in flight release			
	Flights released with alternates listed			
125.375	**Fuel supply for non-turbine and turboprop airplanes complies with § 125.375(a) through (c)**			
125.377	**Fuel supply for turbine powered airplanes** **Complies with § 125.377(a) through (d)**			
125.379	**Landing minimums for IFR** **Minimum descent altitude (MDA) or decision height (DH) and visibility in OpSpecs/LOAs increased by 100 feet and ½ mile for pilots with 100 hours as PIC in type**			
	Substitutions for 100 hours PIC			
125.381	**Takeoff and landing minimums for IFR**			

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	Complies with § 125.381(a) through (c)			
125.383	**Load manifests** **Load manifests prepared before each takeoff and include—** **Number of passengers**			
	Total weight of loaded airplane			
	Maximum allowable takeoff and landing weight			
	CG limits			
	CG or loaded according to loading schedule			
	Registration number of airplane			
	Origin and destination			
	Names of passengers			
	Load manifest carried by PIC in airplane			
	Copies of load manifests kept for 30 days			
14 CFR §	**SUBPART L—RECORDS AND REPORTS**	**SAT**	**UNSAT**	**N/A**
125.401	**Crewmember records**			
	Current records for each crewmember that show compliance with requirements of part 125			
	Record of release from employment (kept for 6 months)			
	Record of physical or professional disqualification (kept for 6 months)			
	Records kept at principal base of operations or where authorized by Administrator			
	Computer record system (if used)			
125.403	**Flight release contains at least—** **Company or organization name**			
	Make, model, and registration number of airplane used			

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	Date of flight			
	Name and duty assignment of each crewmember			
	Departure airport, destination airports, alternate airports, and route			
	Minimum fuel supply (lbs. or gal.)			
	Statement of type of operation (IFR or VFR)			
	Weather reports, forecasts, or combination attached to each release			
125.405	**Disposition of load manifest, flight release, and flight plans complies with § 125.405(a) through (e) (kept for 30 days)**			
125.411	**Airworthiness release or maintenance record entry.** A. Verify that each PIC reports all mechanical irregularities occurring during flight, and that they are entered in the maintenance log of the airplane at the next place of landing. B. Verify before each flight, that the PIC ascertains the status of each irregularity entered in the log at the end of the preceding flight. C. Verify that each person who takes corrective action or defers action concerning a reported or observed failure or malfunction of an airframe, aircraft engine, propeller, or appliance shall record the action taken in the airplane maintenance log in accordance with part 43 of this chapter. D. Verify that the procedures for keeping copies of the airplane maintenance logs in the airplane are working. E. When an Airworthiness Release Form is prepared, the operator must give a copy to the PIC and keep a record of it for at least 60 days.			
NOTE	**This inspection must be entered into the PTRS.**			

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REMARKS:	
INSPECTOR'S SIGNATURE:	**DATE:**
INSPECTOR'S ORGANIZATION:	**LOCATION OF INSPECTION:**

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Figure 6-60. Letter Notifying Operator of Base Inspection

FAA letterhead

[Operator's name and address]

Dear [operator's name]:

This is to inform you that inspectors from this office will be conducting an inspection of your 14 CFR part 125 principal base of operations on [date] at [time].

Enclosed is a job aid our inspectors will likely be using to conduct the inspection. If you have any questions, please contact this office at [telephone number].

[Principal Operations Inspector's (POI) signature]

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Figure 6-61. Inspection Evaluation Report

1. NAME OF ORGANIZATION	**2. CERTIFICATE NO.**	**3. LOCATION**
4. AREA OR FUNCTION EVALUATED **5. 14 CFR SECTION AND/OR OTHER CONTROLLING DATA** **6. REQUIREMENT OF 14 CFR (EXPLAIN)** **7. FINDING (EXPLAIN NONCOMPLIANCE—WHAT, HOW, WHEN, AND WHERE)** **8. DOCUMENTATION SUBSTANTIATING NONCOMPLIANCE (ATTACH COPY)** **1.**_____ **2.**_____ **3.**_____ **4.**_____		
9. INSPECTOR'S SIGNATURE AND TITLE _____ **DATE:**_____		

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Figure 6-62. Letter Indicating Discrepancies Discovered During Base Inspection

[Operator's name and address]

Dear [operator's name]:

This letter is formal notification of the results of a Base Inspection conducted by personnel of this office on [inspection date] and discussed with you on that date.

The following discrepancies were found and must be corrected:

1.The manual does not contain procedures for ensuring compliance with airplane Weight and Balance (W&B) limitations, as required by 14 CFR part 125, § 125.73(b).

2. Crewmember flight time records required by 14 CFR part 125, § 125.401(a) were not completed for [personnel's names].

The above discrepancies must be corrected not later than 10 days from receipt of this letter. If the discrepancies are corrected prior to the 10 days, please notify this office.

Sincerely,

[Principal Operations Inspector's (POI) signature]

RESERVED. Paragraphs 6-1257 through 6-1270.

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VOLUME 6 SURVEILLANCE

CHAPTER 11 OTHER SURVEILLANCE

Section 5 Surveillance of Sport Parachute Activities

6-2246 PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

A. Operations: 1661, 1696.

B. Maintenance: 3627, 3628, 3631, 3676, 3678, 3694.

C. Avionics: 5627, 5677, 5681, 5694.

6-2247 OBJECTIVE. This section contains surveillance procedures conducted at Drop Zones (DZ) for inspectors when observing sport parachute operations. Sport parachute surveillance usually involves aircraft, pilots, parachute riggers, owners, operators, aircraft mechanics, and parachutists. This does not include surveillance of a parachute demonstration conducted under a Certificate of Authorization (COA) (i.e., sporting events, stadiums, over or into open air assembly of persons or congested areas). See Volume 6, Chapter 11, Section 10, paragraph 6-2378 for surveillance procedures related to these activities.

A. Recommendations. The National Transportation Safety Board (NTSB) findings have raised safety concerns regarding the sport parachute operations industry, which may increase Federal Aviation Administration (FAA) surveillance per current federal regulations. Refer to Title 14 of the Code of Federal Regulations (14 CFR) parts 43, 61, 65, 91, and 105 for legal regulatory requirements.

B. Parachute Operations. Title 14 CFRs noted in this section address issues such as aircraft maintenance, pilot certification, rigger certification, aircraft operations, and inspection recording requirements, including parachute operations. Additionally, aircraft may be subject to the applicability of 14 CFR part 125 (20-seat capacity or more, aircraft weight of 6,000 pounds or above, and performing operations when common carriage is not involved) when operations meet the requirements of part 125.

C. Code of Federal Regulations (CFR) Compliance. This increased surveillance and reporting of sport parachute operations will help determine compliance with the current CFRs that are applicable to sport parachute operations.

6-2248 GENERAL.

A. DZ. A DZ, by definition per part 105, § 105.3, is “any pre-determined area upon which parachutists or objects land after making an intentional parachute jump or drop. The center-point target of a drop zone is expressed in nautical miles from the nearest VOR facility when 30 nautical miles or less; or from the nearest airport, town, or city depicted on the appropriate Coast and Geodetic Survey World Aeronautical Chart or Sectional Aeronautical Chart, when the nearest VOR facility is more than 30 nautical miles from the drop zone.”

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B. Parachute Operation. Parachute operation staff includes owners, operators, pilots, parachute instructors, aircraft mechanics, and parachute riggers.

C. Sport Parachutist Seatbelt Requirements. The FAA does not consider sport parachutists as passengers when evaluating the regulatory compliance status of such operations. However, this does not eliminate the requirement for the use of safety belts set forth in part 91, § 91.107. Parachutists may use the floor of the aircraft as a seat, provided that the person is onboard for the purpose of engaging in sport parachuting and the aircraft is approved for and equipped with floor-mounted seatbelt installations adequate for all passengers.

D. United States Parachute Association (USPA). The sport parachute industry is largely self-regulated with most sport parachute operators belonging to the USPA.

1) The USPA has established a group member program as a way for sport parachute schools, centers, and clubs to provide its affiliates with resources, such as recommended aircraft inspection programs, pilot safety information, and safety procedures.

2) The FAA recognizes the issuance of ratings and licenses by the USPA organization, meeting the requirements of § 105.45.

NOTE: It is not an FAA requirement for parachute operators or individual skydivers to affiliate with any groups or organizations.

E. Aircraft Accident Notification. Per Title 49 of the Code of Federal Regulations (49 CFR) part 800, the NTSB requires notification and reporting of aircraft accidents or incidents under 49 CFR part 830. NTSB investigations involving accident aircraft during sport parachute operations have uncovered numerous safety concerns. The safety concerns listed below include pilot operations, parachute riggers, and aircraft operation and maintenance.

- Lack of use of an approved restraint system by parachutists during flight.
- Inadequate aircraft maintenance and inspections.
- Contaminated fuel.
- Pilot inattention to aircraft Weight and Balance (W&B).
- Aircraft modifications without proper FAA approvals.
- Approved flight manual supplements.
- Pilot certification, flight currency, and training.
- Parachute airworthiness to include compliance with Technical Standard Order (TSO)-C23.
- Aircraft operational placards installed at certification (see Supplemental Type Certificate (STC) or aircraft Type Certificate Data Sheet (TCDS) or pilot's operating handbook (POH)) if required.

6-2249 COORDINATION REQUIREMENTS.

A. Aviation Safety Inspector (ASI) Duties. When performing surveillance on parachute operations, it is helpful to coordinate the inspection with the operator.

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B. District Surveillance. Each Flight Standards District Office (FSDO) should conduct sport parachute surveillance occurring within district boundaries as stipulated in the current edition of FAA Order 1800.56, National Flight Standards Work Program Guidelines. ASIs can perform surveillance as a team, and an ASI experienced in sport parachute activities is recommended as a part of the inspection team when performing parachute operation surveillance.

6-2250 REFERENCES AND JOB AIDS.

A. References (current editions):

- Title 14 CFR Part 65, Subpart F.
- Title 14 CFR Part 91, § 91.409.
- Title 14 CFR Part 105.
- TSO-C23, Personnel Parachute Assemblies and Components.
- Advisory Circular (AC) 105-2, Sport Parachuting.
- FAA-H-8083-17, Parachute Rigger Handbook.

B. Job Aids (current editions):

- TCDS of applicable aircraft.
- FAA Order 8130.2, Airworthiness Certification of Products and Articles.
- FAA Order 8900.1 Volume 4, Chapter 9, Section 1, Perform Field Approval of Major Repairs and Major Alterations.
- USPA Web site: http://www.USPA.org.
- AC 43.9-1, Instructions for Completion of FAA Form 337.
- AC 90-66, Recommended Standard Traffic Patterns and Practices for Aeronautical Operations at Airports Without Operating Control Towers.
- FAA Orders & Notices Web site: https://employees.faa.gov/tools_resources/orders_notices.

6-2251 PROCEDURES.

A. Preparation. Prior to performing the parachute operation inspection, the ASI or ASI teams should be familiar with the following five points as they apply to parachute operations.

1) Aircraft.

- Aircraft maintenance and inspection.
- Aircraft modifications for sport parachute operations in accordance with FAA certification procedures.

NOTE: Modifications include type certificates (TC), STCs, amended TCs, alterations, and field approvals.

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2) Pilots.

- Pilot certification—minimum commercial certificate, medical certification, and recent flight experience.
- Experience levels regarding parachute operations.

3) Parachute Harness and Container.

- Sport parachute harness and reserve parachutes (verify these are labeled per a TSO-C23 specification).
- TSO parachute pack date (refer to § 105.43(b)(1) and (2)).

4) Part 65 Parachute Rigger. Parachute riggers working with the operator: Verify compliance with part 65 subpart F, Parachute Riggers.

5) Parachute Operation. Section 105.3 defines parachute operations as "the performance of all activity for the purpose of, or in support of, a parachute jump or a parachute drop. This parachute operation can involve, but is not limited to, the following persons: parachutist, parachutist in command, and passenger in tandem parachute operations, drop zone or owner or operator, jump master, certificated parachute rigger, or pilot."

B. Inspection Guidance.

1) Aircraft Inspection Programs. Aircraft inspection programs may vary between piston- and turbine-powered aircraft. The inspection program must satisfy applicable requirements of § 91.409. For part 125 aircraft, refer to part 125, § 125.247(e)(1) through (3). A maintenance record review can verify the inspection program used.

2) Modified or Altered Aircraft. Modified or altered aircraft used for sport parachute operations may have an FAA-approved flight manual supplement in the Aircraft Flight Manual (AFM), and/or placarded instructions installed per the applicable TC, STC, or field approval. Some older aircraft using FAA Form 337, Major Repair and Alteration (Airframe, Powerplant, Propeller, or Appliance), field approvals may list only placarded instructions for speed and door operation and may include installed skydiver restraint systems.

3) Pilot in Command (PIC). The PIC of an aircraft performing sport parachute operations for hire must hold at least a commercial pilot's certificate and a second class medical certificate. They must also meet the recent flight experience for the category of aircraft being flown per part 61, § 61.57. Pilots may have received specialized training for sport parachute flight operations. The training experience should include aircraft-type-specific performance data training, preflight performance, postflight inspections, W&B, airport and traffic pattern operations, specific airplane limitations needed to comply with as a result of STC changes or modifications, maintenance reporting procedures of discrepancies and emergency procedures for each aircraft flown. Special attention should be given to ensure that the subject aircraft's W&B limitations are not exceeded under the loading conditions described in 14 CFR part 23, §§ 23.23 and 23.25, or equivalent standard under which the subject aircraft was certificated and

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a current and up-to-date equipment list is available. PIC should be familiar with the maintenance status and requirements of the aircraft.

4) Aircraft Operating with a Door Open or Removed. Aircraft may operate with a door opened or removed, in accordance with the AFM, a TC, amended TC, STC, other FAA approvals. For instructions to attain a door open or removed FAA authorization, see Order 8130.2.

5) Single-Harness Dual-Parachute System. The sport skydiver single-harness dual-parachute system has one main parachute; one reserve parachute, approved per TSO-C23; and a single-person harness and container, TSO-C23 approved. The main parachute must have been packed within 180 days before the date of its use by a certificated parachute rigger, the person making the next jump with that parachute, or a noncertificated person under the direct supervision of a certificated parachute rigger, as required by § 105.43. Refer to § 105.45(a) for parachutist-in-command requirements and operations and § 105.45(b) for tandem parachute system requirements, which includes tandem parachute manufacturers' approved Automatic Activation Devices (AAD).

6) Parachute Rigger. A parachute rigger certificated through part 65, § 65.111 packs the TSO-C23-approved reserve or emergency parachute, and it must have been packed within 180 days of its use, if using synthetic material, or within 60 days if using organic materials. Check the reserve parachute packing card for pack date compliance. References are § 65.131 and § 105.43.

7) One-Time Demonstration Skydive Operation. A one-time demonstration skydive operation may have a FSDO (Aviation Safety Inspector—Operations (ASI-OP))-issued COA, to operate per § 105.21. For demonstration jumps located in certain Class B, C, or D airspaces, a COA may be required. The COA coordinates aircraft operations with the FAA air traffic control (ATC) facility having jurisdiction over the airspace. Refer to § 91.145, if applicable. Refer to § 105.23 for parachute operations into airports.

8) Observe Parachute Packing Operations. If you observe parachute packing operations by a parachute rigger, the person making the next jump, or a noncertificated person under the direct supervision of a certificated parachute rigger, confirm they are working per part 105 subpart C.

9) Aircraft Fuel Supply. Visually verify that the fuel supply used to fuel the operator's aircraft is filtered and changed within the manufacturers' recommended period. Also visually verify the pump or fuel truck can be operated safely, and is properly equipped for aircraft-to-fuel supply bonding.

10) AADs. AADs are used by parachutists for increased parachute operational safety. AADs must be maintained in accordance with the manufacturers' provided instructions for maintenance and inspection. For tandem parachute operations under § 105.45, AADs are mandatory equipment per the CFR, and are approved for use by the parachute manufacturer, not the FAA.

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6-2252 OUTCOME OF THIS SURVEILLANCE.

A. PTRS Input. Inspectors will identify any surveillance and findings by entering "SPORTJUMP" in the "National Use" field of the PTRS record. Use the following PTRS codes, as they apply:

- Ramp (1661, 3627, or 5627);
- Parachute Jumps (1696);
- Spot (3628, 3631, or 5681);
- Aircraft Records (3694 or 5694); and
- Part 65 Rigger, Senior, or Master (3678 or 5677).

B. Inspections. In accordance with Order 1800.56 conduct inspections on each parachute operation/DZ located within the FSDO jurisdiction.

RESERVED. Paragraphs 6-2253 through 6-2265.

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VOLUME 7 INVESTIGATION

CHAPTER 3 INVESTIGATING OCEANIC ERRORS

Section 1 Investigating Oceanic Errors

7-81 GENERAL. This section contains guidance to be used by aviation safety inspectors (ASI) involved with the investigation and reporting of oceanic errors. This section supplements Federal Aviation Administration (FAA) Order 8020.11, Aircraft Accident and Incident Notification, Investigation, and Reporting.

A. Special Areas of Operation (SAO) Specialists. SAO specialists in the AXX-220 branches should be consulted when an oceanic error occurs. It is FAA policy that one of the agency's SAO specialists participates in the investigation of gross navigation errors (GNE). These specialists may also participate in the evaluation of the actions proposed by the operator to preclude the occurrence of similar errors. Notify AFS-400 as soon as possible when determining that actions should be taken to suspend North Atlantic High Level Airspace (NAT HLA) authorization.

B. Applicability.

1) This order contains guidance to be used by aviation safety inspectors (ASI) involved with the investigations and reporting of incidents by Title 14 of the Code of Federal Regulations (14 CFR) parts 91, 91K, 121, 125, and 135 operators and those operating U.S.-registered aircraft flying in any oceanic airspace or by foreign operators operating within U.S. air traffic control (ATC)-controlled oceanic airspace. This section supplements FAA Order 8020.11, Aircraft Accident and Incident Notification, Investigation and Reporting, as well as FAA Order 8900.1, Volume 7, Chapter 1, Section 2, Incident Investigations and Occurrences. The appropriate military branch of service investigates military flights as per the current edition of FAA Order 2150.3, FAA Compliance and Enforcement Program, Chapter 2, paragraph 7f.

2) Oceanic errors reported on FAA Form 8020-17, Preliminary Pilot Deviation Report (Air Traffic Quality Assurance (ATQA)) are considered incidents as defined in FAA Order 8020.11.

3) Oceanic errors reported on FAA Form 7110-82, Oceanic Error Report, without a corresponding Form 8020-17, are considered occurrences according to FAA Order 8900.1, Volume 7, Chapter 1, Section 2.

4) Pilot's Bill of Rights. On August 3, 2012, the Pilot's Bill of Rights (PBR) became effective, requiring the Federal Aviation Administration (FAA) to provide certain written notifications to individuals who are the subject of an investigation relating to a certificate suspension, revocation, or modification action, or the approval or denial of a certificate. Reference should be made to Notice N 8900.230, Requirements for Written Notification During Investigations of Airman Certificate Holders or Applicants, and/or FAA Order 8900.1, Volume 14, Compliance and Enforcement, for all investigative and enforcement issues.

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C. Background.

1) International Civil Aviation Organization (ICAO) working groups composed of representatives of labor, industry, ATC, and state regulators meet regularly to discuss oceanic errors in detail.

2) Oceanic airspace is procedural airspace based on strategic clearances, which means controllers issue oceanic clearances and flightcrews must follow specific navigation, speed, and altitude procedures. Because many oceanic errors occur in the nonradar environment, they tend to be more pronounced and of a longer duration than those within radar coverage. Many times the first indication an air traffic controller will have that an aircraft is flying contrary to its clearance is when the aircraft comes into radar coverage or when an air traffic controller receives a position report by one of the various means, i.e., voice, data link, etc.

3) Oceanic errors present hazards to flight safety and create barriers to future reductions in separation.

D. Definitions. This following are the predominate types of oceanic pilot errors an SAO specialist and/or inspector investigate. FAA investigations focus on errors made by those operating U.S.-registered aircraft flying within any oceanic airspace or by foreign operators operating within U.S. ATC-controlled oceanic airspace:

1) Gross Navigation Error (GNE). Lateral errors of 25 nautical miles (NM) or more from the aircraft's cleared route.

NOTE: The North Atlantic Systems Planning Group (NAT SPG), in its June 2012 conclusion 48/21, reclassified a GNE as a "lateral deviation from a cleared track by 10 Nautical miles (NM) or more." The FAA is examining this new ICAO NAT Region definition for possible adoption.

2) ATC Interventions. An ATC intervention is an event where the controller caught and corrected a lateral deviation before it developed into a GNE. Normally, an out-of- conformance waypoint ("next" or "next +1") in a position report alerts the controller of a pending deviation, which he is able to prevent or alleviate by clarifying the clearance with the flightcrew.

3) Height Errors. Errors of 300 feet or more from an ATC clearance altitude.

4) Time Errors (Estimated Time of Arrival (ETA)/Actual Time of Arrival (ATA) Error). ICAO Annex 2 was amended in 2012 and now specifies a more stringent tolerance: "if the time estimate for the next applicable reporting point, flight information region boundary or destination aerodrome, whichever comes first, is found to be in error in excess of 2 minutes from that notified to air traffic services, or such other period of time as is prescribed by the appropriate ATS authority or on the basis of air navigation regional agreements, a revised estimated time shall be notified as soon as possible to the appropriate air traffic services unit." Failure to provide a timely and accurate ETA may jeopardize planned separation between aircraft. See also ICAO Document 7030, Regional Supplementary Procedures, and

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North Atlantic (NAT) Doc 007, North Atlantic Operations and Airspace Manual, Chapter 5. Tolerance for U.S. airspace is found in the AIM, Chapter 5.

5) Operator Authorization Check. An Operator Authorization Check (formerly called Special Areas of Operation Verification (SAOV)) is an investigation to determine whether the operator has a current letter of authorization (LOA), management specification (MSpec) or operations specification (OpSpec) for operation in the SAO.

6) Emergency Event. An emergency event occurs when a flightcrew experiences an emergency requiring deviation from the assigned ATC clearance, and then notifies ATC as soon as practical.

7) Weather Event. A weather event occurs when a flightcrew requests a weather deviation clearance and ATC is unable to issue the clearance due to traffic or communications problems and the flightcrew exercises emergency command authority to execute the approved oceanic weather deviation procedure.

E. Objectives.

1) Determine the cause of an oceanic pilot deviation and report it to the applicable aviation safety stakeholders.

a) Reporting is via the ATQA system and the Program Tracking and Reporting Subsystem (PTRS), as applicable.

b) In determining the cause, the inspector should coordinate with an SAO specialist, and as appropriate, recommend action to prevent future errors.

c) Some errors may warrant enforcement action; for that, guidance in FAA Order 2150.3 pertains.

2) Help operators, regulators, and air navigation service providers recognize oceanic hazards and mitigate accordingly.

a) Reports of ATC operational errors are disseminated to regional SAO inspectors, who analyze oceanic hazards and engage with Flight Standards field offices and operators to develop and promote mitigations.

b) Headquarters (HQ), Flight Standards, analyzes reports and coordinates with regional SAO inspectors, as well as U.S. and foreign air navigation service providers to develop and promote mitigations.

F. Oceanic Errors are Reported to and Investigated By:

1) Parts 91K, 121, 125, and 135 operators – assigned CHDO or CMO.

2) Foreign operators who commit errors in U.S.-controlled oceanic airspace:

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a) Operating under part 129 – assigned IFO or IFU.

b) Not operating under part 129 – the IFO/IFU with the designated international Service Area corresponding to where the foreign operator's aircraft is registered. See https://www.faa.gov/about/office_org/field_offices/ifo/.

3) Part 91 operators:

a) Where aircraft is listed on an LOA – FSDO that issued LOA.

b) Where aircraft is not listed on an LOA – nearest FSDO to where the aircraft owner is located.

G. Applicability of Flight Rules while Over the High Seas. Part 91, § 91.703(a)(1) makes the flight rules contained in ICAO Annex 2, 3.6.2.1.1 binding for U.S. operators operating over the high seas and states that the aircraft "shall adhere to its current flight plan" and "when on an established ATS route, operate along the defined centerline of that route." (Exception allowed for Strategic Lateral Offset Procedures (SLOP) as noted in paragraph I.)

H. Requirements for Operations in NAT HLA. Flights within NAT HLA (FL 285-FL 420) require that aircraft have approved navigation performance capabilities and be authorized by the Administrator to perform such operations.

NOTE: Flights without a NAT HLA authorization may operate above or below NAT HLA. ATC may authorize flights to climb or descend through NAT HLA, but normally without intermediate level offs. This climb/descent does not require an LOA, MSpec, or OpSpec, but the appropriate ATC authority must clear the flight.

NOTE: An excellent source of information for NAT HLA operations is NAT Document (Doc) 007, North Atlantic Operations and Airspace Manual located at: http://www.paris.icao.int/documents_open/files.php?subcategory_id=108.

I. Strategic Lateral Offset Procedures (SLOP). ICAO Doc 4444, Procedures for Air Navigation Services-Air Traffic Management (PANS-ATM) and NAT Doc 007, North Atlantic Operations and Airspace Manual, allow aircraft to fly on a parallel track to the right of the centerline relative to the direction of flight. Flightcrew operating in oceanic airspace are encouraged to offset the assigned course by one mile or two miles to the right for reduced collision risk and for wake turbulence avoidance. A full description of SLOP can be found in ICAO Doc 4444, Chapter 16 at https://portal.icao.int. The "Login Procedures" tab should be selected for access to the ICAO site. SLOP guidance is also located in NAT Doc 007, Chapter 8 at http://www.paris.icao.int/documents_open/files.php?subcategory_id=108.

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J. Separation Minimums.

- Separation minimums establish the minimum lateral, vertical, and longitudinal distances used to separate aircraft, and correlate to an established minimum level of overall navigation performance that can be accommodated at any time without jeopardizing safety.
- ICAO Document 7030, Regional Supplementary Procedures, prescribes separation minimums in international airspace for various regions of the world.

K. SAO.

- LOAs authorize part 91 operators (except 91K) to conduct operations in designated SAOs.
- OpSpecs authorize parts 121, 125, 129, and 135 operators to conduct operations in designated SAOs.
- MSpecs authorize part 91K, fractional ownership operations to conduct operations in designated SAOs.
- Guidance for issuing LOAs for SAOs is found in FAA Order 8900.1, Volume 4, Chapter 12, Section 1.

NOTE: Most LOAs are found in WebOPSS and are numbered the same as OpSpecs and MSpecs. Select "part 91" under the CFR tab to find an LOA.

7-82 TYPES OF INVESTIGATIONS. ATC units generate oceanic error reports (OER) and submit them through email addresses to the SAO specialists, FAA headquarters (HQ) and to the appropriate monitoring agency. These reports are handled as:

A. Occurrences. Occurrences are defined in Volume 7, Chapter 1, Section 2. If ATC generates an Oceanic Error Report (FAA Form 7110-82) without filing a Preliminary Pilot Deviation Report (FAA Form 8020-17), or a monitoring agency (e.g., North Atlantic Central Monitoring Agency, NAT CMA) or a non-FAA air navigation service provider reports an oceanic error, the error is considered an occurrence. Occurrences are often ATC operational errors (no AFS investigation required), or are of a nature better suited to a less formal type of investigation, which should be recorded (as appropriate) in PTRS.

B. Incidents. Incidents are defined in FAA Order 8020.11. If ATC files a Preliminary Pilot Deviation Report (FAA Form 8020-17 in ATQA), in addition to the Oceanic Error Report, the error is considered to be an incident. The corresponding investigation is formal, following guidance in FAA Order 8020.11 and FAA Order 2150.3, as applicable.

C. Operator Authorization Check (Formerly Called SAOV). Such an investigation focuses on determining whether the operator has a current LOA, MSpec, or OpSpec for operation in the SAO.

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7-83 PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. Investigating oceanic pilot errors requires qualification as an ASI (Operations).

B. Timeliness of Investigations. Investigation of navigation/height/time error reports should begin immediately to ensure the availability of evidence necessary to establish the cause(s) of the error. The nature and extent of the investigation will depend upon factors such as the status of the equipment at the time of the error, crew qualifications for oceanic operations, and other factors.

- ATC keeps voice and communications records for between 15-45 days.
- ARINC keeps voice communications for 30 days.
- Investigations should be complete within 45 days of the incident.

NOTE: ATC does not always advise a crew that it files a report; therefore, the inspector should contact the crew as soon as possible so the crew will remember details of the event.

C. Aviation Safety Action Program (ASAP) Participating Carriers. Investigations of oceanic errors associated with an air carrier that participates in ASAP will be in accordance with Volume 7, Chapter 1, Section 2. Additional guidance related to ASAP investigations is contained in Volume 11, Chapter 2, Section 1. A list of participating carriers may be viewed at the following link: http://www.faa.gov/about/initiatives/asap/.

D. Coordination Requirements. Investigating oceanic errors involves complex international regulations, procedures, and equipment requirements. An SAO specialist should participate in the investigation. In addition to coordinating with a designated SAO specialist, the ASI may require coordination with the AFS regional counsel. Coordinate as necessary with inspectors from other specialties, such as maintenance or avionics.

E. Documents and Records. A thorough investigation requires retention and collection of relevant documents and records. Whenever an oceanic error is reported, flight plans, releases, load manifests, plotting charts, and maintenance logs carried on the airplane must be preserved and analyzed.

7-84 REFERENCES, FORMS, AND JOB AIDS.

A. Primary References (current editions):

- Title 14 CFR Part 91, § 91.703.
- FAA Order 2150.3, FAA Compliance and Enforcement Program.
- FAA Order 7110.82, Reporting Oceanic Errors.
- FAA Order 8020.11, Aircraft Accident and Incident Notification, Investigation and Reporting.
- Volume 7, Chapter 1, Section 2, Incident Investigations and Occurrences.

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B. Additional References (current editions). The following references refer to oceanic navigation and procedures but are not all inclusive:

- FAA North Atlantic (NAT) Resource Guide for U.S. Operators. File located at: http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs400/afs470/media/NAT.pdf.
- FAA Pacific (PAC) Resource Guide for U.S. Operators. File located at: http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs400/afs470/media/PAC.pdf.
- Advisory Circular (AC) 91-70, Oceanic and International Operations.
- ICAO Document 7030, Regional Supplementary Procedures.
- NAT Document 007, North Atlantic Operations and Airspace Manual.
- ICAO Annex 2, Rules of the Air.
- ICAO Annex 6, Part I International Commercial Air Transport – Aeroplanes.
- ICAO Annex 6, Part II International General Aviation—Aeroplanes.

C. Forms:

- FAA Form 7110-82, Oceanic Error Report Form.
- FAA Form 8020-17, Preliminary Pilot Deviation Report (ATQA).
- FAA Form 8020-18, Investigation of Pilot Deviation Report (ATQA).
- FAA Form 8020-19, Reclassification of Aviation Incident Report.
- FAA Form 8000-36, Program Tracking & Reporting System Data Sheet.

D. Inspector Job Aids:

- Figure 7-1, Oceanic Navigation Error Report/Oceanic Altitude Deviation Report.
- Figure 7-2, Operator Authorization Check Job Aid.

7-85 PROCEDURES AND RESPONSIBILITIES.

A. SAO Specialist Responsibilities. SAO specialists will coordinate with the office assigned to investigate the error. (See subparagraph 7-81F.) If ATC files a Preliminary Report of Pilot Deviation (FAA Form 8020-17), it will be submitted through the ATQA computer program.

B. IFO/IFU/CMO/CHDO/FSDO Responsibilities.

1) On receipt of a report, the office will determine how to proceed based on:

a) If FAA Form 8020-17 is filed, a pilot deviation investigation is required.

b) If FAA Form 8020-17 is not filed, the office in concert with the AXX-220 SAO specialist will determine the extent of the investigation required. See paragraph 7-88, Task Completion.

2) An operations ASI will conduct the investigation.

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3) Determine if the operator has an ASAP program:

a) If so, the FAA representative will participate in accordance with ASAP guidelines (see Volume 11, Chapter 2, Section 1).

b) If not, contact the operator and conduct the investigation.

4) Contact the appropriate ATC unit, if necessary, and obtain all available flight data within 15 days of the error occurring.

5) Establish the cause and/or factors contributing to the deviation.

6) Complete the appropriate forms (FAA Forms 8020-18, 8020-19, Enforcement Investigation Report (EIR), etc.). Refer to FAA Order 8900.1, Volume 7, Chapter 1, Section 2, Paragraph 7-36 ("Reports"), particularly with reference to FAA Form 8020-18, Block 18.

7) Take action as necessary to prevent recurrence of the error and determine if remedial training, counseling, administrative action, equipment replacement, or enforcement action is the most appropriate course of action and proceed accordingly.

8) Complete the PTRS and ATQA entries, as required.

7-86 REPORT COMPLETION DIFFICULTIES.

A. Operational Errors. ATC operational errors are reportable, but AFS does not investigate them. However, there may be cases when an ASI is investigating a pilot error and discovers an error was made by the ATC or was the result of a coordination error between ATC incidents. If this should be the case, complete an FAA Form 8020-19, Reclassification of Aviation Incident Report, in ATQA.

B. Ownership. Accurate ownership or operation of an aircraft at the time the error occurred can be difficult to determine.

1) When the current owner of the aircraft is listed as a bank, attorney firm, or corporate entity, the aircraft's operator may be in a different location. A SPAS/NPTRS search may provide the physical location of the aircraft, and contact with the local FSDO may determine the operator's name or responsible person.

2) If the current owner or operator of the aircraft cannot be located, a certified letter should be sent to the registered owner, at the FAA address of record, explaining the aircraft's involvement in an investigation and that the owner may be liable.

3) If the inspector is unable to determine the operator, contact one of the SAO specialists for guidance.

C. Limited Information. Information provided by ICAO regional monitoring agencies (e.g., the North Atlantic Central Monitoring Agency) and ATC can be very limited and may

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require relying on the operator for details regarding the error. Investigations that cannot be completed should be referred back to a SAO specialist.

7-87 EXAMPLES OF ERROR INVESTIGATIONS THAT MAY REQUIRE ENFORCEMENT ACTION.

A. Possible Situations. While conducting investigations of navigation/altitude/time errors, inspectors should be alert for the following situations:

1) When applicable, ensure that the aircraft involved was authorized to operate in the airspace by researching the operator's current OpSpecs/MSpecs/LOAs. The ASI should ensure the name, address, and responsible person are accurate. (See Figure 7-2.)

2) Ensure that the aircraft was equipped with the appropriate equipment for overwater operations.

3) Ensure flightcrew possesses the required publications and flight paperwork for international operations, including flight planning packages, documents, and forms.

4) Ensure flightcrew was operating with company international operations standard operating procedures (SOP). If not, ascertain if an SOP is provided to the crew.

5) Ensure that the pilots have the proper qualifications/training to operate the communications/navigation/surveillance systems, including having the ability to monitor the progress of the flight.

NOTE: Inspectors should determine what type of international operations training the flightcrew received. If the training is lacking in quality or content, the inspector should arrange for surveillance of the training program as a remedial action to prevent future errors. (Volume 4, Chapter 12, Section 1, International Aviation, contains training curriculum content requirements for oceanic operations.)

B. Additional Research. Determine if the following occurred:

1) The aircraft was flown contrary to an ATC clearance in violation of § 91.123, Compliance with ATC Clearances and Instructions. (ICAO Rule 3.6.1, Annex 2, Air Traffic Control Clearances.)

2) The aircraft was flown off course in violation of § 91.181, Course to be flown. (ICAO Rule 3.6.2, Annex 2, Adherence to Flight Plan.)

3) The pilot inserted incorrect waypoints in the navigation system in violation of § 91.13, Careless or reckless operation. (ICAO Annex 2, Chapter 3, 3.1.1., Negligent or Reckless Operation of Aircraft; 3.6.1, Air traffic control clearances; and 3.6.2, Adherence to flight plan.)

4) An emergency was declared, prior to or immediately after the emergency and/or weather event (subparagraph 7-81D).

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5) Whether the pilot filed an ASAP report.

7-88 TASK COMPLETION.

A. Extent of Investigation. If the ASI receives an Oceanic Error Report without FAA Form 8020-17, determine the extent of investigation required. In some cases this may only require an informational PTRS entry, using activity code 1725, Investigating/Occurrences, or it may entail completing an EIR.

B. ATQA Steps. If the ASI receives an Oceanic Error Report that includes Form 8020-17, complete FAA Form 8020-18 or 8020-19 as required and submit it into the ATQA database.

NOTE: Ensure you have included a cause for the error in item 18 on Form 8020-18 or a reason for the reclassification in item 6 on Form 8020-19. See Volume 7, Chapter 1, Section 2, paragraph 7-36B3), AFS Investigation.

C. PTRS Steps. If the ASI receives an Oceanic Error Report that includes Form 8020-17, complete a PTRS entry using appropriate activity code:

1) Activity code 1712, Investigating/Incident Other, or

2) Activity code 1725, Investigating/Occurrences.

7-89 TASK OUTCOMES. Completion of this task may result in one or more of the following:

- No action or reclassification of the incident or occurrence;
- Administrative action against an airman or certificate holder;
- Remedial training or counseling of an airman or a change to a certificate holder's training program;
- Enforcement action against an airman or certificate holder;
- An Airworthiness or Avionics inspector may need to inspect the aircraft to determine if defective equipment that caused the error has been repaired or replaced, and to determine if the pilot made a malfunction report as required by § 91.187, Operation under instrument flight rules (IFR) in controlled airspace: Malfunction reports; and
- Air Transportation Oversight System (ATOS) outcomes could include use of a Constructed Dynamic Observation Report (ConDOR), a risk management process (RMP), surveillance area targeting (SAT), retargeting, or requiring additional surveillance.

7-90 CONTACTS.

A. Contact Your Regional (AXX-220) SAO Specialist. These contacts are listed in the FAA NAT Resource Guide for U.S. Operators document at: http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs400/afs470/media/NAT.pdf. Select "Contact Us," then "SAO contacts."

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B. Headquarters. AFS-470, (202) 267-8806; AFS-400, 9-AWA-AVS-AFS-400-Flight-Technologies-Procedures-Division@faa.gov; AFS-220, (202) 267-8166, 9-AFS-200- Correspondence@faa.gov; and AFS-800, 9-AFS-800-Correspondence@faa.gov.

C. Military. AJR-01, 9-awa-dod-mil-reps@faa.gov, (202) 267-9427.

7-91 RESOURCES.

A. Job Aids. Figures 7-1 and 7-2 are to help in the investigation of an oceanic error.

B. Error Flow Chart. Figure 7-3 provides a flowchart of the investigation of oceanic errors.

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Figure 7-1. Oceanic Navigation Error Report/Oceanic Altitude Deviation Report

Complete the following for Gross Navigation, Height, or Time Errors			
Item:			**Complete**
Contact AXX-220 SAO Specialist – see subparagraph 7-90A.			
Request ATC/ARINC voice tapes or transcripts of the incident if not already provided – this must be done within 15 days of the incident or the tapes may not be available.			
Request controller reports and results of ATC investigation.			
Log information concerning all aircraft involved in the event of a loss of separation.			
Review the operator's OpSpecs, MSpecs, or LOAs for current authorizations to operate in the oceanic SAO (See Figure 7-2).			
Form 8020-18, Investigation of Pilot Deviation Report (ATQA).			
Items 1 – 9: self-explanatory.			
Item 10: mark "I" and specify OCEANIC.			
Items 11 – 16: self-explanatory.			
Item 17: if not recorded elsewhere, enter the following: ATC cleared route or track. Observed position (lat/long) and distance off assigned route or track. Type and number of units of long-range equipment in use.			
Item 18: Enter a description and cause of the error. NOTE: The cause is very important for analysis purposes.			
Pilot(s) comments:			
Did ATC advise the pilot(s) of occurrence?	Yes	No	
Did pilot file an ASAP report?	Yes	No	
If Enforcement Action is warranted: Conduct the investigation per current edition of FAA Order 2150.3.			
If Enforcement Action is NOT warranted or was an ATC error: Complete Form 8020-19, Reclassification of Aviation Incident Report.			
Complete PTRS (see paragraph 7-88).			

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Figure 7-1. Oceanic Navigation Error Report/Oceanic Altitude Deviation Report (Continued)

NOTES:

SAO specialists coordinate with the appropriate FAA office and will assist the aviation safety inspector (ASI) in determining the cause and responsibility for oceanic errors.

If the oceanic error report comes from an FAA air traffic control (ATC) facility, it will include an Oceanic Error Report (FAA Form 7110-82) and may include FAA Form 8020-17, Preliminary Pilot Deviation.

If the report comes from a monitoring agency, the data may be very limited. The following steps will ensure each Oceanic Error Report is handled appropriately.

Gross Navigation Error (GNE)

A GNE is a deviation of 25 nautical miles (NM) or more from the aircraft's cleared route. ATC will also report aircraft that deviate from a clearance, require ATC intervention to prevent a GNE, or that cause a loss of separation with another aircraft, regardless of the distance.

Height Error

An oceanic height error occurs when an aircraft is observed or reports an altitude 300 feet or more from its assigned altitude.

Time Error

ICAO Annex 2 was amended in 2012 and now specifies a more stringent tolerance:

"if the time estimate for the next applicable reporting point, flight information region boundary or destination aerodrome, whichever comes first, is found to be in error in excess of 2 minutes from that notified to air traffic services, or such other period of time as is prescribed by the appropriate ATS authority or on the basis of air navigation regional agreements, a revised estimated time shall be notified as soon as possible to the appropriate air traffic services unit."

Failure to adhere to this estimated time of arrival (ETA) amendment procedure may jeopardize planned separation between aircraft, resulting in a time error. See also ICAO Document 7030, Regional Supplementary Procedures and North Atlantic (NAT) Doc 007, North Atlantic Operations and Airspace Manual, Chapter 5. Tolerance for U.S. airspace is found in the AIM, Chapter 5.

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Figure 7-2. Operator Authorization Check Job Aid

Item:	**Complete**
Contact AXX-220 SAO Specialist for any questions concerning the validity of an OpSpec/MSpec/LOA – see contacts list in paragraph 7-90.	
Was an appropriate OpSpec/MSpec/LOA issued to this operator?	
Has the ownership or responsible person changed since the issuance of the OpSpec/MSpec/LOA?	
Has make/model/series of aircraft changed for this operator?	
Has any communication/navigation/surveillance (CNS) equipment been installed or removed since issuance of the OpSpec/MSpec/LOA?	
Have any altimeters been installed or removed since issuance of the	
Did the crew experience any communication, navigation or altimeter equipment malfunction?	
Did Pilot in Command (PIC) attend an international training course (Paragraph 7-87A5)?	
If an Enforcement Investigation is warranted: Conduct the investigation per FAA Order 2150.3. Complete FAA Form 8020-18 (ATQA), Investigation of Pilot Deviation Report. In Block 10, Type of Operation, mark “I” and specify Oceanic. In Block 18, it is very important to report the cause of the error.	
If an Enforcement Investigation is NOT warranted: Complete FAA Form 8020-19, Reclassification of Aviation Incident Report in ATQA.	
Complete PTRS including steps in paragraph 7-88.	

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Figure 7-2. Operator Authorization Check Job Aid (Continued)

NOTES:

When air traffic control (ATC) questions whether an aircraft operator is authorized to fly in the oceanic SAO, it will request an operator authorization check.

Parts 121, 125, 129, and 135 operators are issued OpSpecs that contain their SAO authorizations.

Part 91 subpart K Fractional Ownership operators are issued management specifications (MSpecs) for SAOs.

Part 91 operators are issued letters of authorization (LOA). (LOAs are issued through the WebOPSS system, https://webopss.faa.gov/.)

Unauthorized operation in a SAO is a violation of § 91.703, Operations of Civil Aircraft of U.S. registry outside of the United States. Inspectors should include as much detail as possible when completing Figure 7-2, as this information may become an Item of Proof in an enforcement investigation.

Though the operator authorization check is not a deviation investigation; if the operator does not have an authorization, then the check can become an enforcement action.

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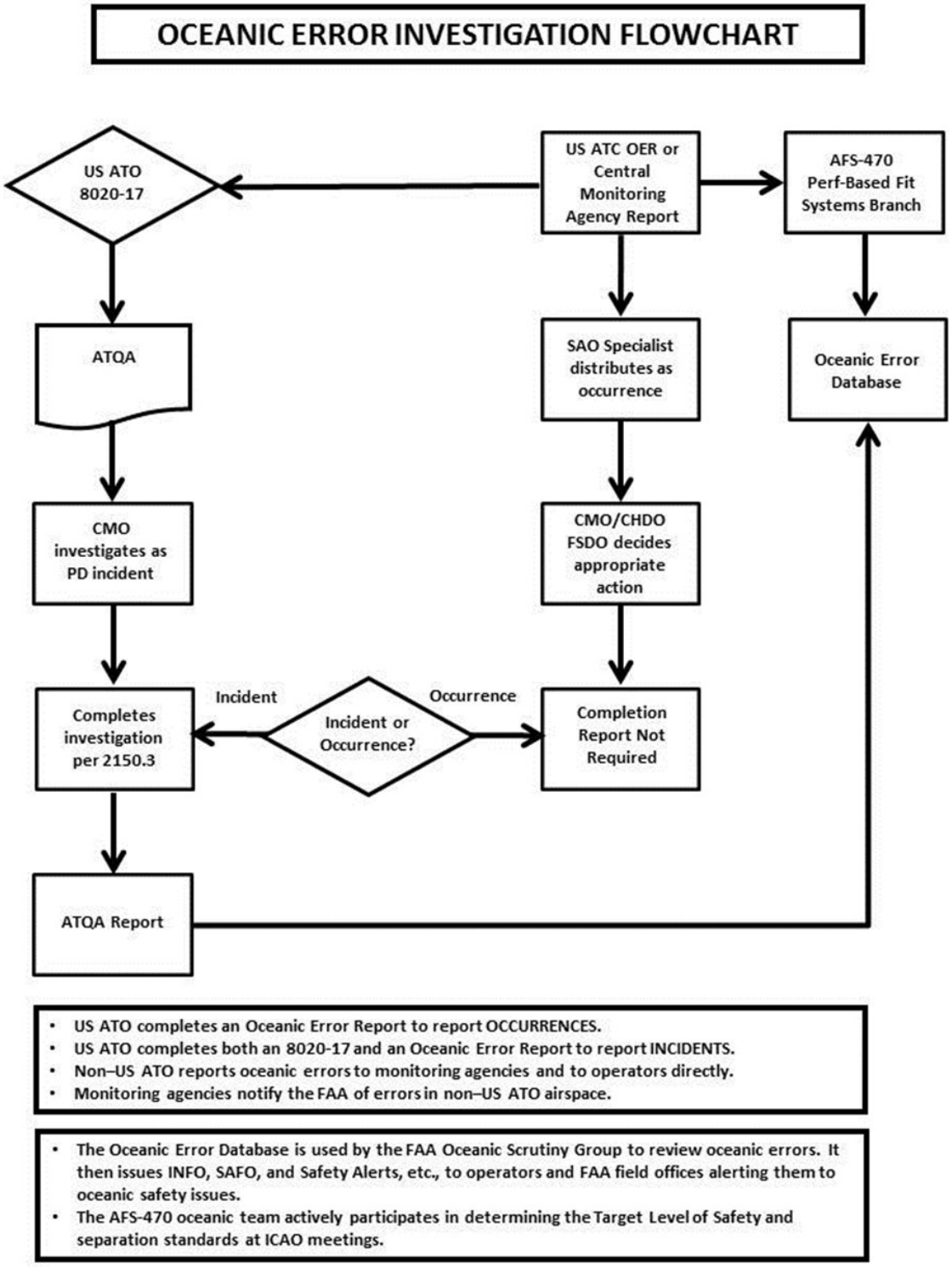
Figure 7-3. Oceanic Error Flowchart



RESERVED. Paragraphs 7-92 through 7-105.

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VOLUME 7 INVESTIGATIONS

CHAPTER 5 CONDUCT A COMPLAINT INVESTIGATION

Section 1 Background and Procedure

7-161 PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

C. Resolved as a Complaint:

- Operations: 1737.
- Maintenance: 3740.
- Avionics: 5740.
- Cabin Safety: 8737.

D. Other:

- Operations: 1771.
- Maintenance: 3766.
- Avionics: 5766.
- Cabin Safety: 8771.

7-162 OBJECTIVE. The objective of this task is to determine, through investigation, the appropriate resolution of a received complaint. Successful completion of this task may result in several different outcomes based on the nature of the complaint and its resolution.

7-163 GENERAL.

A. Authority. Part A of Subtitle VII of the revised Title 49 of the United States Code (49 U.S.C.) authorizes the Administrator to prescribe rules, regulations, orders, and minimum standards in the public interest. Sections 40113, 44709, and 46101 authorize the Administrator to conduct investigations.

B. Inspector Responsibilities. The inspector must determine whether to resolve the complaint quickly and reassuringly over the telephone or whether it requires further action.

1) When a complaint is resolved quickly by explanation, the complaint is closed with a record in PTRS describing the occurrence.

2) Sometimes there is a limited amount of evidence but not enough to support further action. In that case, the inspector may leave the complaint open until enough information is available to pursue an investigation, or the inspector may close the complaint with a record that insufficient evidence is available to pursue an investigation.

3) In many cases, the complaint must be referred to the agency responsible for handling that type of complaint.

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4) An inspector must thoroughly document any complaint that may require long-term Federal Aviation Administration (FAA) involvement.

5) In addition to obtaining a complete statement from the complainant, the inspector may be advised to make an onsite visit or compile a file of photographs, charts, maps, etc. Since the information in the file may be used with an associated enforcement action, completeness of the evidence is crucial.

6) Once an inspector determines that enforcement, surveillance, inspection, or administrative action is a likely option, formal evidence must be gathered. Formal evidence gathering is beyond the scope of this task. At that point, the inspector should follow the instructions contained in the appropriate Flight Standards Information Management System (FSIMS) chapter for that task.

C. Determination of FAA Responsibility. Areas of responsibility are determined by using the following criteria:

- There was an alleged violation of Title 14 of the Code of Federal Regulations (14 CFR);
- The performance of FAA facilities or functions was a factor (i.e., Air Traffic, Navigational Aids (NAVAID));
- The airworthiness of FAA-certificated aircraft of U.S. registry was a factor;
- The competency of FAA-certificated airmen, air agencies, air taxis, air carrier operators, air carriers, or airports was involved;
- The adequacy of 14 CFR was in question;
- The airport certifications safety standards or operations were involved; or
- The air carrier/airport security standards or operations were involved.

7-164 ACTIVE LISTENING. Effective or active listening is not a pop psychologist's trick or a gimmick. It is a skill that comes from practice and from a genuine desire to know what the other person means. An inspector must listen to complaints from many sources, and the inspector's response will vary, depending on the source and the nature of the complaint. Inspectors receive most complaints over the telephone, usually from a member of the public who may be irate. The complainant has probably obtained the telephone number from the U.S. Government section of the local telephone directory and has probably selected the office that the complainant feels is most likely to help. It may or may not be the correct office. The inspector must remember that, no matter how irate or obnoxious the complainant may be, the matter must not be taken personally. Table 14-2-1A, Tips for Active Listening (Volume 14, Chapter 2, Section 1), contains some listening tips that are good to remember when handling complainants by telephone or in person.

A. Inspector's Role in Active Listening. The inspector who initially receives a complaint, whether by telephone or by personal contact, represents the Agency in a "frontline position." Whatever the circumstances of the contact, or nature of the complaint, the inspector should assume an attitude of quiet, active listening and helpfulness. The inspector's demeanor should be calm, restrained, and respectful.

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B. Handling Referrals. If it seems immediately clear that the nature of the problem is not within the scope of the district office or even of the FAA, the inspector should allow the contact to finish talking, and then repeat the witness's description of the event. This brief reiteration of the complaint sends a signal to the complainant that the complaint was heard, understood, and considered. Then the inspector may proceed to explain patiently, but not condescendingly, that the complaint may be referred to another office or agency. If the complainant resists the referral, positive use of assertiveness training techniques will generally convince the complainant.

C. Followup. The inspector should follow up on any complaint by giving the complainant the name of the appropriate office and, if possible, the telephone number. In some instances, the inspector may wish to make the initial contact for the complainant. If the inspector is not certain whom the source should contact or whether the complaint should be handled in the district office, it is acceptable to acknowledge that fact. The inspector should obtain the complainant's name and daytime telephone number and promise to return the call as soon as possible. Then the inspector should consult the unit supervisor, or, if necessary, the region, or conduct independent research before calling the complainant back with the appropriate information.

7-165 KINDS OF COMPLAINTS.

A. Complaints within the Flight Standards District Office (FSDO) Area of Responsibility (AOR). Certain complaints can and should be investigated at the local district office level. This would include complaints against certificated aircraft, airmen, repair stations, air agencies, and air operators within the geographic limits of the district office. During a complaint investigation, if it becomes evident that enforcement, surveillance, or inspection is required, the inspector should close the complaint and initiate the appropriate action.

B. Complaints About FAA Personnel. The inspector will forward all complaints that involve actions or behavior of FAA operations personnel, regardless of AOR, to the appropriate unit supervisor.

C. Complaints Outside FAA Responsibility. FAA inspectors deal only with issues specified in the Federal Aviation Act of 1958 (FA Act). If an inspector receives a complaint that does not involve FAA responsibilities (see subparagraph 7-163C), that complaint must be referred to the appropriate agency (local, state, or Federal).

1) Environmental Concerns. This involves complaints about noise or environmental problems, such as aircraft noise, pollution, proximity of airport to persons, etc. Other environmental concerns, such as agricultural chemicals sprayed by 14 CFR part 137 operators, may be the concern solely of the Environmental Protection Agency (EPA) when no aviation safety issues are involved. Safety complaints about part 137 operators fall under subparagraph A above.

2) FAA-Certificated Operators. The complainant will directly refer consumer complaints (e.g., lost luggage or late departures or arrivals) about FAA-certificated operators (such as commercial airlines) to the operator of the air carrier. If unsatisfied, the complainant

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may call the Aviation Consumer Protection Division, C-75, U.S. Department of Transportation (DOT), at (202) 366-2220.

3) Equipment Failure. This category of complaints involves flight procedures, faulty NAVAIDs, or air traffic procedures. This type of complaint generally comes from pilots rather than the general public, and the inspector should refer them to the local air traffic or airways facilities office having jurisdiction.

4) Hazardous Airport Conditions. This type of complaint may come from the public or from pilots, and may involve the physical condition or layout of an airport or hazards posed by construction. Inspectors should refer these complaints to the airports division in the region.

5) Security. Security complaints may involve such diverse areas as people who feel security is not adequate enough or people who feel they have been treated unfairly by security screening personnel. Inspectors should refer these complaints to the local Civil Aviation Security Field Office (CASFO), if applicable, or the security division in the region.

6) Military Complaints. Complaints involving military airports or military personnel usually involve low flying, and often come from people who live close to military bases, Military Operations Areas (MOA), or restricted areas.

7) Alleged Criminal Activity. Complaints of this nature can also be very diverse. The inspector does not become involved unless aviation safety is also an issue. Refer these to the appropriate law enforcement agency, local or Federal.

7-166 COMPLAINTS. It is FAA policy to respond to all complaints that come to the attention of Flight Standards (AFS), whether by mail, phone, or in person.

A. Who Should Contact the FAA With Complaints. Persons employed in the aviation industry, private individuals, or organizations with an interest in aviation can contact the FAA with a specific complaint or concern regarding an element of the industry regulated by the FAA.

1) Individuals who complain via telephone should be encouraged to submit their specific complaint(s) in writing.

2) While information provided anonymously may be useful in planning surveillance, response to an anonymous complaint is limited to the procedures covered in paragraph 7-167.

B. Complaint Handling. Complaints and concerns will receive prompt handling, including a written FAA response. The written response, whether a final answer or an acknowledgement, will be sent within 10 working days from the time of receipt.

1) Even if the complaint investigation does not result in a finding of regulatory noncompliance, there must still be a response in writing to the complainant explaining the results of the investigation.

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2) If the complaint investigation does result in a finding of regulatory noncompliance, an Enforcement Investigation Report (EIR) must be initiated. Advise the complainant in writing that the FAA has received the complaint and is investigating the matter.

3) The complaint investigation may prompt the FAA to work with an operator or certificate holder in order to prevent a recurrence of the action or incident that brought about the complaint. Advise the complainant in writing that action is being taken to change the practice(s) in question.

4) The final letter of reply should respond directly to the concerns or issues cited in the complaint. A final response should be courteous, concise, and free of generalities.

5) Before replying to complaints concerning sensitive or significant issues, the responsible field office should discuss the form and manner of response with the appropriate regional office (RO) personnel.

6) Due to the provisions of the Privacy Act, specific information regarding possible or pending enforcement actions should not be discussed within a response.

C. Investigating a Complaint. When investigating a complaint the inspector should:

1) Gather any data or information that may be pertinent to the case,

2) Analyze how safety may have been affected and the possible impact on life or property, and

3) Analyze and report any mitigating or aggravating circumstances involved in the complaint.

D. Complaint Enforcement Action. The information gathered during the complaint investigation may indicate the need for an enforcement action. The methods for information gathering given in Volume 7 apply equally well to the process of investigating complaints.

7-167 COMPLAINT HOTLINE. The current edition of FAA Order 1070.1, FAA Hotline Program, identifies the procedures and guidelines used in responding to FAA Hotline items requiring AFS action.

A. FAA Hotline Center. Three hotlines are currently in operation in the FAA Hotline Center. Offices reporting to the Associate Administrator for Aviation Safety (AVS-1) may be required to respond to action items from any of these hotlines.

1) Administrator's Hotline. This hotline was established for FAA employees who find that the normal channels cannot satisfactorily resolve an issue. Use of this hotline can bring operational safety items to the attention of high-level management.

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2) Consumer Hotline. The aviation community and the general public are encouraged to use the FAA Consumer Hotline to receive answers concerning a variety of issues.

a) Aviation professionals can receive information about a wide range of topics, including:

- Pilot examinations,
- Aircraft certification,
- Flight Service Stations (FSS),
- Advisory circulars (AC),
- Foreign Civil Aviation Authorities (FCAA), and
- Much more.

b) The Consumer Hotline also provides information to the general public on issues such as aircraft child restraints, carry-on baggage, and other topics that are monitored by the FAA.

3) Safety Hotline. This hotline is available to the aviation community and the general public for reporting time-critical events that may require immediate action. This hotline is used to report:

- Violations of the Federal aviation regulations,
- Suspected use of unapproved parts,
- Nonadherence to operational procedures,
- Improper recordkeeping, and
- Unsafe aviation practices.

B. Hotline Operation. Complaints are forwarded to the office of primary responsibility for evaluation and assignment to the appropriate office, region, or individual for investigation and reply. The FAA Hotline number is 1-866-835-5322.

1) Confidentiality is a significant feature of hotline operations.

a) Action items may be received with or without caller identity. In addition, caller identification may be given with the stipulation that it not be divulged outside the Hotline Center. When requested, confidentiality must be retained. If a caller requests confidentiality at the time of the initial report, their name is withheld and they are protected by the Privacy Act.

b) Inspectors should guard against inadvertent exposure of confidential sources during investigation of action items.

c) Investigative reports provided to management should be limited to objective findings and appropriate verification of complaints.

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2) The Administrator establishes response times to ensure effective and timely reaction to hotline complaints.

a) The Administrator's Hotline has a completion time of 14 calendar-days following receipt of the complaint.

b) Callers to the Consumer Hotline should be contacted within 2 business days with either a reply or an explanation for continuance. Completion time is 30 calendar-days following receipt of the complaint.

c) The Safety Hotline completion time is 30 days following receipt of the complaint.

C. Responsibilities.

1) The FAA's Office of Audit and Evaluation is responsible for managing the Administrator's and Consumer's Hotline.

2) When a report is made to the Safety Hotline, hotline specialists enter the information in the Safety Hotline Database.

a) A preliminary analysis and technical review are made immediately, and one of three actions is taken:

- The report is assigned to the appropriate FAA division and/or regional personnel for immediate investigation,
- A report relating to issues other than safety is transferred to the appropriate office for further review, or
- The report provides insufficient information for action or is determined to be a non-safety issue and is closed.

b) The report is reviewed by FAA personnel once it is closed. This review assures information is complete and any action taken was appropriate. In addition, any callers who request a response and provide their name and address receive a written summary of FAA action.

c) No formal written reply is necessary for non-safety-related consumer complaints.

3) AFS managers assigned hotline action are responsible for responding in a thorough and timely manner.

a) Identified response times are the *maximum* time limits. When possible, complaints should be resolved in less than the prescribed times.

b) In lengthy or complex investigations, interim replies should be provided to the responsible office(s) in advance of the time limit.

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c) No formal written reply is necessary for non-safety-related consumer complaints.

d) The office managing the report should correspond directly with the consumer and resolve the complaint as informally as possible, preferably by telephone. In such cases, verbal notification of resolution should be documented.

7-168 COMPLAINTS WITHIN FAA RESPONSIBILITIES. When the problem appears to require district office action, the inspector obtains a complete statement of the alleged occurrence.

A. How to Take Statements. Volume 14, Chapter 1, Introduction to Investigation and Compliance Related Tasks, contains information on interviewing, which may be helpful in obtaining statements from complainants or witnesses.

1) The demeanor of the inspector is very important. It is critical to remain objective and emotionally detached from the issues concerning the complaint. Even if the occurrence or the potential consequences are serious, the inspector must never personalize the case. This is true even when the facts seem clear and emergent. A case that may eventually require substantiation for formal proceedings must be built on a carefully, objectively, and thoroughly constructed assemblage of the facts. Sometimes a long period of time elapses between the occurrence and the formal proceeding, and many facts may be forgotten or unobtainable by then. Objectivity and clear thinking allow the inspector to gather seemingly unrelated pieces of information that may be relevant later. It is best to deliver comprehensive evidence with a technical viewpoint.

2) It is essential to take complete and accurate information from the person initiating the complaint. At a minimum, a complete report includes:

a) The name, address, and daytime and home telephone numbers of the person initiating the complaint. Sometimes the inspector must investigate an anonymous complaint; however, it is preferable to be able to maintain contact with the source.

b) Information concerning the witness' occupation, particularly any aviation experience.

c) A complete statement of the specific incident. What happened? Who was involved? Does the complainant have information about the aircraft, especially the aircraft registration number? What were the date, time, and location of the occurrence? What airport was involved?

d) The signature of the witness or complainant, when practicable.

3) The inspector takes physical evidence such as photographs, charts, maps, and diagrams. The witness may present the information or may know of another source of the information which the inspector may contact. In any case, the inspector either receives or gathers any supporting evidence. How much evidence to gather, in what form, and who may

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be informally contacted are areas of inspector judgment. However, if and when the information indicates enforcement investigation or action, then the complaint becomes an enforcement task.

B. Enlisting Assistance. Sometimes the inspector needs the support and assistance of personal contacts in order to gather information about the complaint. Inspectors may use the assistance of local law enforcement persons, the airport manager, air operator, or other contacts.

7-169 PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. This task requires knowledge of 14 CFR, FAA policy and orders, and the investigative process and qualification as an aviation safety inspector (ASI).

B. Coordination. This task may require coordination with a variety of contacts, including:

- The airworthiness unit,
- Other district offices,
- The RO operations branch,
- Law enforcement agencies,
- Air traffic control (ATC),
- The armed forces,
- The airport manager,
- Other Federal government agencies, or
- Local or state governments.

7-170 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- Any related 14 CFR parts.
- FAA Order 1070.1, FAA Hotline Program.
- FAA Order 2150.3, FAA Compliance and Enforcement Program.
- FAA Order 8020.11, Aircraft Accident and Incident Notification, Investigation, and Reporting.

B. Forms:

- FAA Form 1360-33, Record of Visit, Conference, or Telephone Call.
- FAA Form 8000-36, Program Tracking & Reporting System Data Sheet.

C. Job Aids. Sample letters and figures, Figure 7-18 through Figure 7-20.

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7-171 PROCEDURES.

A. Initial Notification. Upon receipt of a telephone call, office visit, or written complaint, determine the nature of the complaint.

1) Assess whether it can be immediately resolved, warrants further action in the district office, or should be referred.

2) If the complaint is received by telephone, use FAA Form 1360-33 as a record.

B. PTRS. Open a PTRS record.

C. Determine Appropriate Action.

1) No Action. If the complaint can be resolved upon contact by explanation, complete the PTRS record with the name, home telephone number, and daytime number of the caller, visitor, or correspondent. Enter a description of the complaint in the remarks section. Close the PTRS with a "No Action."

2) Make Appropriate Referrals. Examine the evidence and make referrals to the appropriate office as necessary. Consult the most recent Internet edition of the FAA Telephone Directory for detailed instructions on handling consumer inquiries. Make referrals to appropriate agencies.

a) Refer complaints about noise to the local airport noise abatement office, airport manager, or city noise office and to the FAA regional noise abatement specialist.

b) Refer complaints about agricultural chemicals sprayed by part 137 operators to the local extension office or EPA office when no aviation safety issues are involved.

c) For consumer complaints concerning air operators, inform the complainant that he or she must contact the operator of the air carrier directly. If possible, provide the address or telephone number. Inform the complainant that he or she may also contact the Office of Intergovernmental and Consumer Affairs within the DOT, and provide that address and telephone number.

d) Refer complaints involving flight procedures to the regional flight procedures office.

e) Refer complaints about faulty navigational aids to airways facilities or Flight Service Station (FSS).

f) Refer complaints about air traffic procedures to the appropriate air traffic facility manager.

g) Refer complaints about hazardous airport conditions to the Airports Division of the appropriate FAA RO or the nearest airports district office.

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h) Refer complaints about airport security to the nearest CASFO or the local airport security office.

i) For complaints involving military airports or military personnel, contact the appropriate military base or the FAA regional military representative.

j) Refer complaints concerning alleged criminal activity to the appropriate law enforcement agency, such as local law enforcement, the Federal Bureau of Investigation (FBI), Drug Enforcement Agency (DEA), etc., as appropriate.

D. Complaints Requiring District Office Action. Advise the complainant that you or another inspector in the district office will investigate the complaint.

1) Fill out a complete witness statement (Figure 7-18).

2) Forward the job aid to the unit supervisor for assignment and coordination with the airworthiness unit.

E. Investigation of Complaints. When the inspector is assigned a case to handle:

1) Gather any evidence essential to the investigation. Be certain that the evidence includes any aircraft registration or N-numbers, pilot certificate grade and number, and previous enforcement and accident/incident history.

2) If appropriate, make an informal phone call to subject of the complaint in order to gather information.

3) If necessary, visit the scene or area involved in the complaint in order to gather complete information.

4) After gathering all information and evidence, determine if the evidence warrants opening an enforcement investigation or requires no action.

5) If an enforcement investigation is begun, see Volume 7, Chapter 6, Conduct an Investigation of FAA Flight Operations to Determine Compliance.

6) If no action is required, close out the PTRS record appropriately.

F. Followup to Complainant. Advise the complainant in writing of the results of the inspector's preliminary investigation (Figure 7-19 or 7-20, as appropriate).

1) If there is not enough information to proceed with an investigation, inform the complainant and indicate what additional information is required. Provide the complainant with a suspense date for the additional information. If that information is not received by the suspense date, close out the complaint in the PTRS.

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2) If the inspector is proceeding with a formal investigation, inform the complainant that the matter is being investigated. Indicate that the complainant will be informed of the disposition of the investigation.

G. Prepare Office File. Prepare a file which includes any evidence, correspondence, witness statements, and the disposition of the complaint.

H. PTRS. Close the PTRS record with explanatory remarks as to whether the case was referred or warrants further investigation.

7-172 TASK OUTCOMES. Completion of this task results in one or more of the following:

- A letter to the complainant indicating the disposition of the complaint,
- Initiation of an enforcement investigation, or
- Referral of the complaint to another agency or another area of the FAA.

7-173 FUTURE ACTIVITIES.

- Possible initiation of enforcement, surveillance, or inspection related tasks,
- Coordination with other offices, or
- Response to related complaints from different complainants.

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Figure 7-18. Sample Witness Statement and Referral Job Aid

WITNESS STATEMENT:

Date and time of complaint: _____

Name of Caller: _____

Home phone number: _____

Daytime phone number: _____

Occupation: _____

Aviation Experience: _____

Name of Person Involved: _____

Aircraft Registration No.: _____

(or description)

Description of Complaint:

REFERRALS CHECKLIST:
1. Airline Service: Call appropriate airline or Office of Intergovernmental and Consumer Affairs (OICA) (202) 366-2220.
2. Aircraft Noise: Call local noise abatement office at _____ or FAA Regional Noise Abatement Specialist at _____ or Office of Environment, FAA Headquarters (202) 267-3576.
3. Airport Security: Call local CASFO at _____.
4. For Airport Hazards: Call FAA Regional Airports Division at _____ or nearest Airports District Office at _____.
5. Military Aircraft: Call appropriate, local military base:
Army _____ Marine _____
Air Force _____ Navy _____
FAA Regional Military Representatives at _____.
6. Air Traffic: Appropriate Air Traffic facilities at _____ or FAA Regional Air Traffic Division at _____.
7. Near Mid-air Collision: FAA Regional Air Traffic Division Evaluation Branch at _____.
8. Criminal Activity: Local police _____ DEA _____ FBI _____.
9. Hazardous Materials: FAA Regional Civil Aviation Security Division at _____.
10. Navigational Facilities: FAA Regional Airways Facilities Division at _____.
11. Aviation Medical: FAA Regional Aviation Medical Division at _____.
12. Public Affairs: Regional Office of Public Affairs at _____.
[Inspector should sign and date to attest to the information's accuracy.]

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Figure 7-19. Sample Letter of Closing Out a Complaint That Requires Further Action

FAA LETTERHEAD

Date
Name
Address

Dear _____,

This letter is in response to your inquiry on [insert date complaint was received] regarding [insert brief description of the nature of the complaint]. Our findings indicate that further action may be warranted and we will investigate. If you have any additional information, please contact the district office as soon as possible.

Thank you for your concern and cooperation in this matter.

Sincerely,

[Principal Operations Inspector's signature]

Figure 7-20. Sample Letter of Closing a Complaint Without Further Action

FAA LETTERHEAD

Date
Name
Address

Dear _____,

This letter is in response to your inquiry on [insert date complaint was received] regarding [insert brief description of the nature of the complaint]. We have found insufficient evidence to proceed with enforcement action, and we consider this matter closed. However, if you have any further information that would assist the FAA in pursuance of an action, please contact this Flight Standards District Office.

Thank you for your concern and cooperation in this matter.

Sincerely,

[Principal Operations Inspector's signature]

RESERVED. Paragraphs 7-174 through 7-190.

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VOLUME 7 INVESTIGATIONS

CHAPTER 6 CONDUCT AN INVESTIGATION OF FAA FLIGHT OPERATIONS TO DETERMINE COMPLIANCE

Section 1 General

7-191 PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

A. Legal Action: 1731.

B. Administrative Action: 1733.

C. No Action: 1735.

7-192 INDEPENDENT SAFETY BOARD ACT AMENDMENTS OF 1994. The "Independent Safety Board Act Amendments of 1994, Public Law 103-411" redefined the definition of public aircraft. Advisory Circular (AC) 00-1.1, Public Aircraft Operations, provides guidance for government entities to determine whether or not the operations they conduct with government-owned aircraft are public aircraft operations or civil aircraft operations. Federal Aviation Administration (FAA) flight operations that are determined to be public aircraft operations must comply with certain FAA regulations under Part A of Subtitle VII of the revised United States Code (14 CFR), including those pertaining to the control of air traffic and aircraft identification (see Title 49 of the United States Code (49 U.S.C.) section 40103(b)(2)), while civil aircraft operations must comply with those and all other applicable FAA regulations. AC 00-1.1 should be used to assist in determining if a particular government-owned aircraft is being operated as public or civil operation. The public law also contemplates the use of leased aircraft for Federal government operations; however the AC does not address these types of operations.

7-193 OBJECTIVE. The objective of this task is to determine whether a violation of 14 CFR occurred and, if so, to conduct an investigation of the alleged violation and to recommend corrective action. Successful completion of this task results in preparation of a formal investigative report.

7-194 GENERAL. The Associate Administrator of Aviation Safety (AVS-1) wants to ensure that FAA flight operations are conducted in accordance with 14 CFR. *It must be made clear that if an investigation reveals that an FAA flight operation is being, or has been, conducted contrary to applicable FAA regulations, enforcement action will be initiated*. FAA Order 2150.3A, Compliance and Enforcement Program, is being amended to include guidance concerning enforcement actions against government entities, including the FAA.

A. Agency Policy. The Administrator of the FAA has determined that it will be agency policy that the FAA Flight Program will be operated to industry standards. As a result, some FAA flight operations will be conducted in accordance with 14 CFR part 135 or part 119 standards, even though they may be public aircraft operations, not legally subject to part 135 or part 119.

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B. General Guidelines. There may be times when personnel associated with FAA flight operations operate contrary to the FAA regulations, FAA policy, or both. The general guidelines to be used in implementing and executing an internal compliance and enforcement program are in paragraph 7-196.

C. Enforcement Investigative Report. When an apparent violation of the FAA regulations has occurred, or an operation apparently contrary to FAA policy requiring adherence to certain provisions of the FAA regulations has occurred, the inspector shall conduct an investigation and process an Enforcement Investigative Report (EIR) in accordance with the guidance contained in paragraph 7-196, Apparent Violations of 14 CFR.

D. Inspector Responsibilities. The inspector's role in an investigation is to gather *all* facts and circumstances as evidence, to analyze that information in the form of an EIR, and to recommend corrective actions based on the facts and circumstances. For a detailed discussion of investigative techniques and acquisition of evidence, see Volume 7, Chapter 1.

1) Investigations under the jurisdiction of the Federal Aviation Administration (FAA) are the responsibility of the Offices of Flight Standards, Aircraft Certification Service, Civil Aviation Security, Airport System Development, and Airport Safety and Standards. It is essential that coordination is maintained with any field office having an interest in an investigation.

2) Inspectors may be required to participate in national inspections and surveillance outside of their Flight Standards District Office's (FSDO) jurisdictions. Violations of regulations uncovered during one of the national inspections are referred to the FSDO having geographic authority for investigation and corrective action.

E. Notification Sources. The FSDO may be notified of possible violations from many sources. Upon notification of a possible violation, the inspector evaluates whether there is need for immediate emergency action, in which case the delay of routine handling could jeopardize public safety. The inspector may handle each notification differently based on its source.

1) Air traffic control (ATC) personnel at centers, towers, and Flight Service Stations (FSS) are in a unique position to observe apparent violations. Each ATC facility is responsible for promptly notifying the appropriate FAA FSDO of any incident or complaint that may involve violations of 14 CFR. Upon request from the appropriate FAA office, each ATC facility must provide factual documentation of possible violations in the form of tapes, transcripts, controller statements, etc.

2) If a Federal or local Law Enforcement Agency (LEA) has investigated an accident, incident, or criminal offense, it may have valuable information. These records often include the names of witnesses who may be interviewed by the investigating inspector.

3) Occasionally, information is received from the public concerning alleged violations. This is usually processed as a complaint from which information may lead to an enforcement investigation (see Volume 7, Chapter 5). The inspector must be careful to maintain the confidentiality of a person reporting a possible violation by an airman or an operator, especially when the person requests confidentiality.

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a) The person reporting the violation shall be assured that confidentiality will be maintained at least until the case has reached the hearing stage or until Regional Counsel believes that it is appropriate to release names.

b) Confidentiality assures that the livelihood or well-being of a potential witness is secured. Maintaining confidentiality may be of lifesaving importance to a potential witness who has reported drug-related violations.

F. Planning and Initiating the Compliance Investigation. A complete plan establishes who did or should have done what, where, when, why and how it happened. See FAA Order 2150.3, Compliance and Enforcement Program, Chapter 4, for comprehensive guidance on planning the investigation.

G. Evidence. See FAA Order 2150.3, Chapter 4, for a description of the diverse types of evidence used in investigations. See Chapter 6, Section 1, for a discussion of evidence acquisition in relation to FAA compliance policy.

H. Report Preparation. Refer to FAA Order 2150.3, Chapter 9, for a comprehensive description of report preparation, including sample letters. See Chapter 6, Section 1 for information on EIR analysis in relation to FAA compliance policy.

I. Determination of Action and Sanction. Initially, it is the inspector's responsibility to recommend the appropriate corrective action once the inspector has determined that a violation has occurred. Each pertinent office of the FAA is then responsible for evaluating the seriousness of a violation and judging the appropriate action to take. Sanctions should be as uniform as possible but of paramount importance. It is the requirement that the sanction selected in each case be sufficient to serve as a deterrent. See Volume 7, Chapter 6 for a discussion of FAA compliance policy and the role of the inspector in rehabilitation. FAA Order 2150.3, Appendix 4, contains guidance on appropriate levels of sanction.

J. Terminating the Investigation. If at any time during the investigation the inspector determines that there is insufficient evidence of a violation, the inspector should terminate the investigation with no action, complete sections A and B of the EIR, and notify the airman accordingly.

7-195 SPECIAL CONSIDERATIONS.

A. Aircraft Owner Identification. Unnecessary delays in completing EIRs and some enforcement actions have occurred because of difficulties in identifying aircraft owner. Letters of investigation were returned because the address on record (in the FAA Aircraft Registry) was incorrect or the ownership changed.

1) The accuracy of the information received from the FAA Aircraft Registry depends on the aircraft owner's active compliance with the registration requirements of 14 CFR parts 47 and 91.

a) In order for the information to be accurate, the owner must register the aircraft and submit the proper documentation to the registry.

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b) A ramp inspection may not detect inaccurate documentation. During a ramp check, if an aircraft is operating with the second duplicate registration application copy (pink slip), the inspector cannot verify that the owner submitted the appropriate application for registration.

2) In order to alleviate this problem, field office inspectors must verify the registration presented by the operators.

a) This is done by comparing the registration information presented against that contained in Aviation Safety Analysis System (ASAS). If a discrepancy is revealed, the ASAS documentation may be used for an enforcement action.

b) Validation is especially important when an aircraft is found that operates with a "pink slip" copy of the registration application because some operators continue to operate with the pink slip and without forwarding the registration application to the registry. Some operators use this practice to escape sales or property taxes; others may be involved in criminal activity.

c) When expiration of the pink slip is detected, the owner should be directed to request a grant of extension from the Aircraft Registration Branch, AFS-750. If granted, the extension will be sent to the owner by facsimile. The extension must be carried in the aircraft.

d) Guidance for replacement of lost, stolen, or mutilated certificates is in 14 CFR § 47.49.

e) The inspector shall take appropriate action when operators do not comply with the registration requirements of 14 CFR.

B. North Atlantic High Level Airspace (NAT HLA). See Volume 7, Chapter 3, Section 2 for information on NAT HLA.

7-196 APPARENT VIOLATIONS OF 14 CFR.

A. Title 14 CFR Part 91 Operations. If the airman and/or air operator may have violated a part 91 regulation, the EIR would be processed in accordance with the guidance contained in subparagraphs 7-194F and G.

B. Title 14 CFR Part 135/119 Operation. In the case of violations by an FAA air operator that carry civil penalty sanctions under the Sanction Guidance Table found in FAA Order 2150.3A, Appendix 4, and a civil penalty should not be recommended against the operating organization. The collection of civil penalties by the FAA from itself would not constitute a viable sanction. The Office of the Chief Counsel, AGC-300, should be consulted for a determination of the appropriate enforcement action to be taken against the operator. FAA personnel, however, are subject to civil penalties just as any other airmen are.

C. Operations Apparently Contrary to FAA Policy. Notwithstanding the fact that operations and maintenance manuals and operations specifications are modeled after those prescribed by various parts of the FAA regulations, certain operations contrary to these documents may not necessarily be violations of the FAA regulations.

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D. FAA Personnel Not Legally Subject to Regulations. If FAA personnel are required to operate in accordance with part 135 or part 119 standards by FAA policy (FAA Order 4040.24B, Operational Standards for FAA Aircraft; and FAA Order 4040.9D, FAA Aircraft Management Program), but are not legally subject to the regulations, the inspector nevertheless shall conduct a normal enforcement investigation and open an EIR if it appears that the FAA policy requiring adherence to the regulations has not been followed. Because the pertinent regulations legally have not been violated, FAA personnel will not be subject to enforcement action; however, because the policy to operate under part 135 or part 119 was not followed, responsible FAA personnel could be subject to FAA Order 3750.4, Conduct and Discipline.

7-197 PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. This task requires knowledge of 14 CFR, FAA policies and orders, the investigative process and qualification as an Aviation Safety Inspector—Operations. The inspector must also have completed the Compliance and Enforcement Procedures Course or have been signed off by the operations unit supervisor for "on-the-job" compliance and enforcement training.

B. Coordination. This task may require coordination with diverse offices and agencies within and without the FAA depending on the nature of the violation. As a minimum, ATC, the Regional Office, airworthiness unit, and other FSDOs should be coordinated with.

7-198 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- Pertinent 14 CFR according to the nature of the violation.
- Federal Aviation Act of 1958.
- Title 14 CFR Part 13, Investigative and Enforcement Procedures.
- FAA Order 2150.3, Compliance and Enforcement Program.
- FAA Order 8020.11, Aircraft Accident and Incident Notification, Investigation and Reporting.
- FAA Order 8740.1, Aviation Safety Program Managers' Handbook, Appendixes 6 and 7.

B. Forms:

- FAA Form 8000-36, Program Tracking and Reporting Subsystem Data Sheet.
- FAA Form 2150-5, Enforcement Investigative Report.
- FAA Form 8020-11, Aircraft Accident and Incident Notification, Investigation, and Reporting.

C. Job Aids. Sample letters and figures.

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7-199 PROCEDURES.

A. Notification. In general, upon receipt of notice of a possible violation, proceed as follows:

1) Open PTRS.

2) Within 48 hours of notification, ensure that the administrative staff makes an appropriate entry in the Enforcement Investigative Subsystem.

3) When notified by ATC, advise the facility whether the matter warrants an investigation. If a decision is made to proceed, request the Air Traffic Facility to forward the following information within 5 working days:

- FAA Form 8020-11.
- Certified re-recording of the ATC tapes, which include all communications pertinent to the case.
- Air Traffic Controller written statements.

4) When notification is received from a LEA, ask for documentation of the incident, and request that it be sent within 5 working days.

5) When notified from another FSDO, request documentation be sent as soon as possible.

6) When notified by the public, request a written witness statement that should contain a precise account of the occurrence (see Volume 7, Chapter 5).

7) If the inspector observes the violation during an en route or ramp inspection involving an operator whose certificate is held in another FSDO, notify the relevant Certificate Holding District Office by a telephone call. Follow up with the appropriate documentation.

8) If the inspector observed the violation during a base inspection, complete the appropriate Base Inspection Form and the PTRS Data Sheet. Proceed with the necessary investigation.

9) If the alleged violation was discovered as a result of investigation of an accident or incident, review the Accident/Incident Investigation Report, if available or any accident/incident data and determine whether a violation did occur.

B. Investigation Plan.

1) Regardless of the source of notification, determine whether there is a basis for investigation.

2) Develop a plan of action.

a) Determine if there is a need for immediate, emergency action.

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b) Determine whether this case is a criminal violation. If so, see FAA Order 2150.3, Chapter 6.

c) Obtain an EIR number.

d) Determine the specific section of 49 U.S.C. or regulation involved in the case. Determine the elements of the case that establish a violation (this may require assistance from legal counsel).

e) Determine what evidence is needed to substantiate this case, where it would be located, and how to obtain it. If evidence must be obtained from witnesses, assess whether the witness must be interviewed and whether written statements must be taken (see Chapter 6, Section 1).

C. Acquisition of Evidence. Obtain the following types of evidence, as appropriate:

- Response to any Letter of Investigation, if available.
- Witness statements. For complete development of witness statements see FAA Order 2150.3, Chapter 4, and this order, Volume 7, Section 1.
- Photographs, charts, maps, diagrams.
- Miscellaneous documents such as passenger manifests, operator records, records of phone conversations, air traffic documentation or documentation from other government agencies.
- Automated airman records such as pilot certificates, medical records, accident/incident and previous violation history records. If formal documentation is required, notify AFS-760 and request certified copies of documents.

D. Violation Determination. Based on the evidence, determine whether or not a violation occurred.

1) If a violation did not occur, prepare sections A and B of the EIR, and send a letter to the airman indicating that the investigation did not establish that a violation of the 14 CFR occurred.

2) If the inspector determines that a violation occurred, proceed with the investigation.

E. Recommend Corrective Action.

1) If the facts and mitigating circumstances warrant, recommend the airman for remedial training (see Figure 7-21).

a) Document the factors that justify remedial training (see Chapter 7, Section 1, paragraphs 3B and 4).

b) Send a letter of investigation to the airman, indicating that the airman may be eligible for the remedial training program.

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1. Inform the airman in the letter that the airman must cooperate during the investigation and express an interest in actively participating in a prescribed course of remedial education.

2. Indicate in the letter that the final determination for the airman's eligibility for the remedial training program is the FAA's option.

3. Inform the airman in the letter that the cost of all remedial training must be borne by the airman.

4. Inform the airman that he or she must respond to the offer of remedial training in order to begin the remedial training program planning.

c) Advise the Accident Prevention Program Manager (APPM) of all facts surrounding the violation.

d) Provide the APPM with a copy of the investigation file.

e) Upon contact from the airman expressing interest in the remedial training, notify the APPM to schedule a meeting with the airman.

f) Refer to FAA Order 8740.1 for additional information on the role of the APPM.

g) After the airman completes the remedial training to the satisfaction of the APPM, receive the APPM's verification of the remedial training. Place the following in the investigation file:

- An original record of training signed by each instructor or authorized official of the training establishment, which has been provided to the APPM by the airman.
- Any other documents that provide evidence of the completion of remedial training, facsimiles of logbook entries, aircraft rental invoices, etc.
- A record of discussion with the instructors providing the training, if the inspector deems that appropriate.

h) Issue the airman a letter of correction as per FAA Order 2150.3, paragraph 1104, and process the EIR.

i) Send a copy of the letter of correction to the Commercial Operations Branch, AFS-820, for program review.

j) If the airman fails to complete any requirements of the remedial training designed by the APPM, rescind the participation in the remedial training program in writing. Resume appropriate legal action against the airman, and inform the airman accordingly.

2) If the facts and circumstances do not indicate the airman's eligibility for remedial training, determine the appropriate legal action (see Order 2150.3, Appendix 4).

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F. Prepare an EIR Package.

1) If the inspector has opted for corrective action in the form of remedial training, prepare the EIR in accordance with FAA Order 2150.3, Chapter 9 and Chapter 10, paragraph 1001, and office procedures.

2) If the inspector has opted for legal action, prepare the EIR in accordance with FAA Order 2150.3, Chapter 9 and Chapter 10, paragraph 1002, and office procedures.

G. Processing the EIR Packet. The EIR will be processed at the FSDO level in the normal manner. When the EIR is forwarded to the Regional Office for review, it should be sent to the Regional Public Aircraft Coordinator. It shall be the Regional Public Aircraft Coordinator's responsibility to review the EIR and ensure that the EIR has been fully investigated and supports the action recommended by the District Office. The Regional Public Aircraft Coordinator will distribute the EIR in accordance with the procedures described in FAA Order 2150.3A. Additionally, in all cases, the Coordinator will forward a copy of the EIR to the Senior Flight Safety Officer, AFP-3, who will, in turn, forward the document to the appropriate FAA air operator for their processing of any potential conduct and discipline action.

1) It should be noted that FAA Order 3750.4, paragraph 201(h) requires FAA employees to observe the various laws, rules, regulations, and other authoritative instructions," including FAA's regulations. Therefore, an enforcement action taken against an FAA employee could result in a conduct and discipline action as well. Any FAA employee subjected to an enforcement action or conduct and discipline action will be afforded all due process considerations and be entitled to all rights of appeal.

2) While the above paragraphs focus on flight operations and pilots, the same logic is applicable to other FAA employees who are airman certificate holders such as mechanics, aircraft dispatchers and flight engineers.

H. Disposition. After completion of the EIR, forward it to the FSDO manager for approval and signature. Forward the EIR package to the Regional Office for review.

I. PTRS. Select the appropriate PTRS code according to the type of action recommended for the airman. Indicate in the Comments section whether remedial training was an option and whether it was successfully completed.

7-200 TASK OUTCOMES. Completion of this task results in one or more of the following:

- "No Action" notification letter to the airman.
- Completed EIR package.
- Letter of notification of reexamination.
- Letter of investigation.
- Letter of correction.
- Letter rescinding remedial training eligibility.

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7-201 FUTURE ACTIVITIES.

- Possible appearance at informal hearing.
- Possible appearance at court proceeding.
- Possible increase in surveillance schedule of an operator.
- Pilot reexamination or aircraft reinspection.

Figure 7-21. Remedial Training Scenario

We have provided the following case, involving an unauthorized TCA incursion, as an example of remedial training as a corrective action; however, corrective action through remedial training is not limited to TCA incursions. There are other types of non-compliance that can be corrected by the remedial training approach. We have cited a TCA incursion as an example because of the large body of knowledge accumulated in this area. The conclusion of a study of TCA incursions was that future compliance could best be assured when FAA provides for retraining of the airmen involved. FAA has decided that this approach is in the best interest of the public and will have a positive impact on aviation safety.

EXAMPLE

The pilot of a Cessna 182 was on a flight from a small, uncontrolled airport to a medium-sized controlled airport approximately 200 miles away. The trip was a pleasure flight under VFR in reported VMC. There were scattered clouds and six miles visibility at several reporting points along the route of flight. The pilot did not plot the planned course on the charts brought along for the flight. (The investigation disclosed that the charts were one revision cycle out of date.) The pilot planned to use a route close to what the pilot had previously flown using primarily VOR navigation. However, on this flight the pilot planned to use a newly installed LORAN-C receiver. Further, the pilot planned not to fly directly over the VOR's because of the amount of traffic the pilot had observed near them during previous flights. The airport of arrival was under the floor of a TCA, which the pilot planned to circumnavigate. The pilot did not program any waypoints into the LORAN-C receiver before takeoff since the pilot planned to rely on the receiver's built-in database.

The flight proceeded normally, with the pilot identifying landmarks, among them a river, a highway, railroad tracks, and a small city. About halfway through the trip, some cumulus buildups appeared ahead, and the pilot elected to deviate to the left of course. There was not a VOR in a good position for the new course, and no programmed waypoint in the LORAN's database seemed appropriate. The pilot elected to use a distant airport as a waypoint and followed the course indicated by the LORAN-C. After some minutes of flying, the terrain appeared unfamiliar. The pilot attempted to cross-check position with the VOR receiver but could not receive the selected station. Then, the pilot decided to program a waypoint in the general direction the pilot felt was appropriate. The pilot looked at the chart and defined the waypoint in terms of a radial and distance from a VOR that was some distance off the intended course of flight. The pilot continued on this course and after a while spotted a familiar river. The pilot was surprised at how far south the airplane's position was. The pilot concluded that the position was past the TCA and that the airplane was close to the original, intended route of flight.

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Nearing the intended destination, the pilot monitored ATIS and contacted the ATC tower for landing instructions. After the pilot landed uneventfully and turned off the runway, the ground controller asked the pilot to contact the tower by telephone. The pilot acknowledged and complied with the instruction as soon as the airplane was secured in the parking area.

The pilot was dismayed after placing the call to the tower because the controller answering the phone seemed officious and asked for the spelling of the pilot's name after the pilot admitted to operating the particular aircraft. The controller requested the pilot's address and pilot certificate, grade, and number. After supplying all the requested information, the pilot asked what the problem was. The controller indicated the TRACON had asked for the information. The pilot asked again if there was a problem, and the controller responded that the pilot would get an explanation in the mail.

Ten days later, the pilot received a letter of investigation from a FSDO near the location of the TRACON. The letter advised the pilot of an investigation into a TCA incursion on the day of the pilot's flight. The pilot decided to telephone the investigating inspector and provide the details of the flight. The investigating inspector was not available when the pilot called; however, after inquiring about the remedial training program, the pilot was put in touch with the accident prevention specialist (APS). The APS informed the pilot that the investigating inspector was the only FAA official who could determine the pilot's eligibility for participation. The APS arranged for the pilot to have an appointment with the investigating inspector.

When the pilot arrived for the appointment, the pilot brought the charts used for navigation, the operations manual for the LORAN-C, and airman and medical certificates. The investigating inspector interviewed the pilot at length and reviewed the pilot's cross-country planning procedures as well as the pilot's knowledge of VOR and LORAN-C. Before the interview, the investigating inspector had plotted the aircraft's actual track on a current sectional chart, as the inspector determined it from the National Track Analysis Program report. The inspector used that illustration during the interview.

The course plotted by the inspector showed that the aircraft had penetrated one of the outer rings of the TCA that the pilot had intended to avoid. The inspector showed the pilot the actual course and after some discussion with the pilot determined that the penetration occurred when the pilot was attempting to circumnavigate the cumulus buildups encountered on the trip. Further, the inspector determined that while the pilot's knowledge of navigation appeared adequate and up to the standards of the pilot's certificate, the pilot's navigational practices were insufficient, considering the pilot's use of the LORAN on this flight.

The inspector noted a number of deficiencies starting with using out-of-date charts. Further, the pilot had not plotted the course, and the pilot's knowledge of the LORAN-C equipment was deficient. In short, the pilot had failed to use all available navigational resources.

The investigating inspector, noting the pilot's prompt reply to the letter of investigation, the pilot's attitude toward compliance, and the pilot's willingness to disclose the facts and seek remedial training, determined that this case could best be resolved by a structured remedial training program. The inspector referred the pilot to the APS, who had previously reviewed the case with the investigating inspector before the pilot's interview and drafted a remedial training

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agreement. After some discussion of the availability of qualified instructors and the location of an FAA radar-equipped air traffic facility convenient to the pilot, the APS and the pilot agreed on the training objectives and the elements necessary to achieve them. They both signed the finalized training agreement, and the APS scheduled a telephone interview for a progress assessment 15 days from the date the agreement was signed.

During the progress review, the APS learned that the APS knew the pilot's chosen instructor and that the pilot had an appointment for Operation Rain Check at a TRACON 30 miles from the pilot's home. The APS later contacted the instructor, reviewed the pilot's progress, and explained to the instructor that the APS would require the pilot to present a letter, signed by the instructor, detailing the elements of the pilot's training and the results. The instructor was complimentary about the pilot's rigorous attention to the training and forecast that it would be complete in about seven days. The instructor also was complimentary about the remedial training program and promised to write the required letter detailing the pilot's accomplishment.

About two weeks later, the pilot returned to the FSDO and presented the APS with a letter written by the instructor who conducted the remedial training. The letter described, in detail, all of the elements covered during the remedial training and documented the pilot's success in achieving the objective of each element. The APS compared the letter from the flight instructor with the written training agreement and determined that terms of the agreement had been satisfied. The APS advised that the pilot had successfully completed the prescribed remedial training program and that the pilot would receive a letter of correction describing the pilot's participation in the remedial training program and advising that the case was closed. The APS offered the pilot some advice concerning avoiding future incidents of this nature. The pilot thanked the APS for the advice and commented that the experience had been positive.

The APS returned the file to the investigating inspector, and they discussed the pilot's participation in and completion of the remedial training. They agreed that the intent of the remedial training program had been met. The investigating inspector issued a letter of correction to the pilot and processed the EIR in accordance with policies governing administrative action.

RESERVED. Paragraphs 7-202 through 7-220.

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VOLUME 7 INVESTIGATIONS

CHAPTER 8 RESERVED

Section 1 Reserved

RESERVED. Paragraphs 7-251 through 7-277.

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VOLUME 8 GENERAL TECHNICAL FUNCTIONS

CHAPTER 2 TECHNICAL GROUPS, BOARDS, AND NATIONAL RESOURCES

Section 7 Maintenance Review Boards

8-151 BACKGROUND.

A. Instituting Requirements. The establishment of minimum maintenance/inspection tasking requirements for type certificated (TC) transport category aircraft are established through a development, review, and approval process involving both industry and regulatory authorities.

B. Maintenance Review Board Report (MRBR). An MRBR contains the initial minimum scheduled maintenance/inspection requirements for a particular transport category aircraft and on-wing engine program, but does not establish off-wing engine maintenance programs required by the regulations.

C. Advisory Circular (AC) 121-22, Maintenance Review Boards, Maintenance Type Boards, and OEM/TCH Recommended Maintenance Procedures (current edition). AC 121-22 provides basic guidelines for use during the development, approval, and revision of the MRBR.

8-152 FUNCTIONS OF A MAINTENANCE REVIEW BOARD (MRB). Through the MRB Chairperson, an MRB performs the following functions:

A. Establishes Requirements. Establishes the Federal Aviation Administration (FAA) minimum maintenance and inspection requirements for transport category aircraft, engines, propellers, and auxiliary power units (APU).

B. Determines Initial Tasking Intervals. Initial maintenance tasking intervals are determined based on data and aircraft design.

C. Ensures Data Collection System in Place. The FAA ensures the Original Equipment Manufacturer (OEM)/type certificate holder (TCH) has a system in place that allows for the collection of data from similar aircraft or systems for use in justifying initial tasking intervals for new aircraft. OEM data collection system should include a data communication process/facility that includes:

- Data storage infrastructure (electronic, manual, etc.).
- Data management system (revision control, access control, etc.).
- Clearly defined data elements to facilitate an analysis comparison.
- The required data fields are available to support statistical analysis and engineering evaluation.
- Data attributes designed based on SPEC 2000 digital format definitions.

D. Participates in Meetings. Participates in Industry Steering Committee (ISC) meetings. Reviews the Maintenance Steering Group (MSG) analysis presented by the Working Groups (WG) and approved by the ISC.

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E. Approves MRBR. Approve the MRBR after Aircraft Maintenance Division (AFS-300) concurrence. (The manufacturer is responsible for publishing and distributing initial and revised MRB reports as well as any supporting documents.)

8-153 COMPOSITION OF AN MRB. An MRB includes a chairperson from the appropriate Aircraft Evaluation Group (AEG). The MRB Chairperson invites qualified aviation safety inspectors (ASI) from the field to participate as FAA WG members/advisors. The MRB Chairperson is an FAA representative to the ISC. FAA advisors should include FAA engineering/design staff.

8-154 MRB PROCESS.

A. Policy Procedures Handbook (PPH). The aircraft manufacturer provides a proposed PPH which is further developed, reviewed, and approved by the ISC. The OEM/TCH is also the ISC Co-chairperson. The OEM provides the draft PPH. The ISC further refines and approves the PPH. The recommended contents of the PPH include required training criteria and rules on how to conduct the MRB/ISC and the basis for inspection intervals, analysis processes, regulatory authority participation, etc.

B. Obtaining Acceptance. Following approval of the PPH by the ISC, the PPH will be submitted to the MRB Chairperson for acceptance. Upon receipt and review, the MRB Chairperson will initiate an acceptance letter, concurred with by the chairperson management and signed by the MRB Chairperson. This letter will be forwarded to the ISC Chairperson. The ISC will obtain acceptance by the FAA of the PPH prior to commencing any and all WG activities.

NOTE: Further clarification and guidance is provided in AC 121-22.

8-155 REGULATORY AUTHORITY PARTICIPATION.

A. General. Regulatory authority participation will fall into one of the following categories:

- U.S.-manufactured aircraft with other regulatory authority participation.
- Foreign-manufactured aircraft with FAA and other regulatory authority participation.

B. Conditions. The following conditions will apply:

1) The regulatory authority of the country of manufacture will normally provide the MRB Chairperson and the MRB members.

2) A letter of confirmation between the FAA and each participating regulatory authority will be in place with the host authority prior to the commencement of any MRB activities. The FAA will include the following items:

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- The extent of participation by other regulatory authorities in the MRB process.
- The host authority will be the primary accepting authority for the MRBR and subsequent revisions; state in the report other regulatory authority acceptance confirmations of the MRBR and any revisions.

3) For United States OEM/TCH, the FAA will assign an MRB Chairperson. Foreign regulatory authorities may be invited to participate as determined between the MRB and ISC chairpersons.

4) Unless specifically stated in the letter of confirmation, policy contained in these MRB procedures will apply.

5) Participation of other regulatory authorities will be necessary if an authority expects to contribute to or influence the outcome of the MRBR.

6) MRB members/advisors concurrence with WG recommendations is not a prerequisite to the submittal of the recommendations to the ISC. However, the WG meeting minutes will document a lack of concurrence between the MRB members/advisors.

C. Duties and Responsibilities. The duties and responsibilities of the MRB members and the other regulatory authorities are as follows:

1) MRB members:

- Attend WG meetings and provide guidance to the WG members.
- Attend MRB meetings convened by the MRB Chairperson.
- Provide scheduled progress reports to the MRB Chairperson that contain an assessment of WG activities, including notification of controversial or potential problem areas.

NOTE: WG advisors may include regulatory staff from engineering/design certification branches.

NOTE: An MRB advisor will serve as an MRB member in cases when only one MRB advisor is assigned to a WG.

2) Other regulatory authorities:

a) Participate in the MRB and/or WG activities as provided by the letter of confirmation between the regulatory authority and the FAA.

b) Attend ISC meetings by invitation from the ISC Chairperson and concurrence of the MRB Chairperson.

c) Identify to the ISC Chairperson through the MRB Chairperson, prior to compiling the MRBR proposal, any national regulatory authority differences that will be included in an appendix of the MRBR.

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d) Acknowledge acceptance of the MRBR in the manner outlined in the letter of confirmation and in the PPH.

e) Review WG meeting minutes and provide, to the MRB Chairperson, an assessment or notification of controversial or potential problem areas prior to the next scheduled ISC meeting.

8-156 POLICY FOR THE IMPLEMENTATION AND OPTIMIZATION OF MRBR TASKING INTERVALS. The guidance in AC 121-22, Chapter 12, Implementation and Optimization of Tasking Intervals, is intended for use by OEMs, TCHs, and MRB/ISC members who are involved with the evolution/optimization of tasks in an initial/current MRBR. This guidance is used for developing and assessing proposals for changes to the MRBR.

RESERVED. Paragraphs 8-157 through 8-170.

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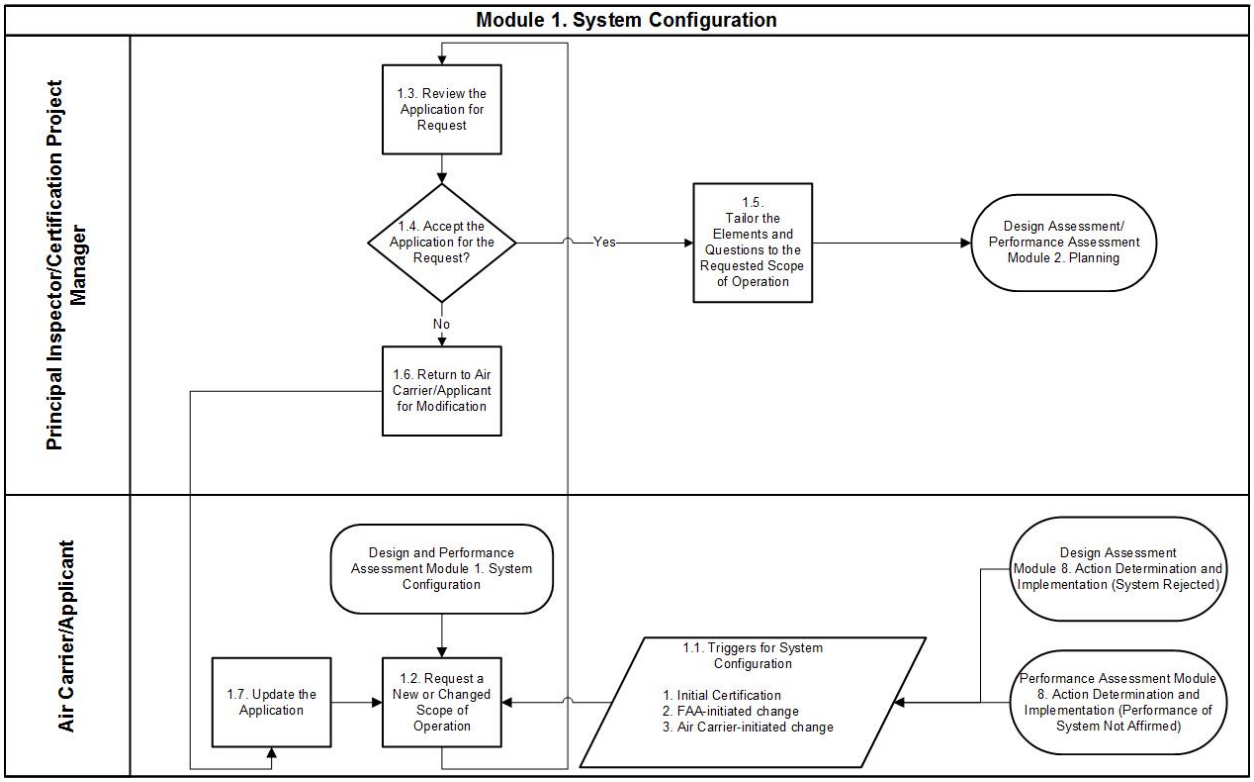
VOLUME 10 AIR TRANSPORTATION OVERSIGHT SYSTEM

CHAPTER 2 PROCEDURES FOR DESIGN AND PERFORMANCE ASSESSMENT

Section 1 Design and Performance Assessment System Configuration

Figure 10-11. Module 1: System Configuration Process Flow



10-95 INTRODUCTION. The air carrier or applicant defines its scope of operations and develops core processes, procedures, and programs for Federal Aviation Administration (FAA) approval or acceptance. Understanding the scope of operations enables the FAA to develop an oversight profile for a particular applicant or air carrier. The oversight profile allows the principal inspector (PI) or certification project manager (CPM) to plan and conduct oversight activities that are specific to the air carrier's or applicant's system configuration.

10-96 TRIGGERS FOR SYSTEM CONFIGURATION. Three events can trigger the system configuration process: Initial certification, FAA-initiated change, and air carrier-initiated change.

A. Initial Certification (see flowchart process step 1.1). An air carrier applicant submits a formal application package to a Flight Standards (AFS) office requesting authorization to operate under Title 14 of the Code of Federal Regulations (14 CFR) part 121. The Certification Services Oversight Process (CSOP) is then used to review, accept and prioritize the

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application. The system configuration process is triggered when the regional division manager assigns the activity to a Field Office (FO) to begin the certification process.

B. FAA-Initiated Change (see flowchart process step 1.1). The FAA may change a regulation or policy that affects the air carrier system or its operating authority. As part of a Design Assessment (DA) or Performance Assessment (PA), the FAA may require the air carrier to revise one or more of its programs or systems, or modify one or more of its authorizations.

C. Air Carrier-Initiated Change (see flowchart process step 1.1). The air carrier proposes a change to its operations specifications (OpSpecs), such as: cargo to passenger, supplemental to domestic or adding a new aircraft type. The air carrier proposes a change to its scope of operation that does not require a change to its OpSpecs, such as:

1) Changes to training programs.

2) Manual revisions.

10-97 REQUEST A NEW OR CHANGED SCOPE OF OPERATION (see flowchart process step 1.2).

A. Initial Certification. An applicant for a part 121 air carrier certificate submits a formal application package to the FAA.

B. FAA-Initiated Change. The Administrator may amend OpSpecs requirements or require program revisions when safety and public interest require such action. Amendments or revisions can result from significant changes to the air carrier's operating environment or safety concerns. Changes to policy or rules may also require an adjustment of OpSpecs. Regardless of who initiates the need for change, the air carrier must submit documentation sufficient for the FAA to evaluate the impact of the change on the air carrier's configuration.

C. Air Carrier-Initiated Change. The air carrier may make application to amend its OpSpecs or programs by submitting an electronic proposal within the OpSpecs subsystem or a letter to the appropriate FAA office.

10-98 REVIEW THE APPLICATION FOR REQUEST (see flowchart process step 1.3). The PI or CPM determines if the application package contains the required documentation in the form and manner acceptable to the Administrator before assessing and making a decision on the air carrier's or applicant's request.

A. Initial Certification. The CPM must initially review the application and make a determination of its acceptability upon receipt of the formal application. The CPM reviews the package for content and quality. The CPM determines whether the submitted material represents the air carrier's scope of operations, and whether the application package is of sufficient quality to allow for a productive formal application meeting and begin the certification process.

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B. Established Air Carrier. Upon receipt of a request for a new or changed scope of operation, the PI reviews any documents submitted as part of the request for content and quality. The PI should account for the complexity of the amendment to evaluate the change. The PI must review the application to ensure that it includes an explanation and any supporting documents or information to assess accurately the nature and scope of the proposal. This information allows the PI to determine the effect the request will have on the air carrier's system and oversight profile.

10-99 ACCEPT THE APPLICATION FOR THE REQUEST (see flowchart process step 1.4). The CPM or PI follows the appropriate FAA guidance to determine whether to accept or reject an air carrier's application for a new or changed scope of operations. If the application process is successful, the PI or CPM notifies the applicant in writing of acceptance of the formal application (see Figure 10-12, Acceptance of Formal Application letter).

10-100 RETURN TO AIR CARRIER/APPLICANT FOR MODIFICATION (see flowchart process step 1.6). If the application requesting a new or changed scope of operation is incomplete or of insufficient quality, the PI or CPM must reject the entire application package and return it to the air carrier or applicant with a letter stating the reasons for its rejection (see Figure 10-13, Rejection of Formal Application letter).

10-101 UPDATE THE APPLICATION (see flowchart process step 1.7). The air carrier or applicant reviews the PI's or CPM's comments, makes the appropriate modifications, updates the application package, and resubmits the updated application.

10-102 TAILOR THE ELEMENTS AND QUESTIONS TO THE REQUESTED SCOPE OF OPERATION (see flowchart process step 1.5). If the PI or CPM accepts the application requesting a new or changed scope of operation, the PI or CPM tailors the Air Transportation Oversight System (ATOS) elements and Data Collection Tool (DCT) questions to the requested scope of operation using the Air Carrier Configuration Checklist (see Figure 10-14, Air Carrier Configuration Checklist).

A. Air Carrier Configuration Checklist. The PI or CPM completes the Air Carrier Configuration Checklist by answering a series of questions about the air carrier or applicant that pertain to the actual or requested type or kind of operation; aircraft make, model, and series (M/M/S); certification and manufacture dates; powerplant and equipment; seating capabilities and accommodations; OpSpecs, personnel, and maintenance.

B. Air Carrier Oversight Profile (ACOP). Completing the configuration checklist creates an ACOP profile, which is a tailored list of elements and questions that are applicable to an air carrier's or applicant's scope of operation. The PI or CPM can manually modify the profile in the event that the air carrier has a unique situation that results in differences from the standard profile, such as a deviation or exemption. The PI or CPM must provide an explanation for all manual adjustments that apply to the current ACOP.

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Figure 10-12. Acceptance of Formal Application

[FAA Letterhead]

[Date]

Mr. Rockwell J. Jones
President and CEO, MidSouth Airlines
601 Sky Harbor Blvd.
Little Rock, Arkansas 72202

Dear Mr. Jones:

We reviewed your formal application and it is acceptable. Our acceptance of the application does not convey specific approval of the attachments. We will convey specific approvals or acceptance of the attachments after a detailed evaluation by the FAA certification team.

We look forward to working with your personnel in the continuation of the certification process.

Sincerely,

John T. Smith
Certification Project Manager

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Figure 10-13. Rejection of Formal Application

[FAA Letterhead]

[Date]

Mr. Rockwell J. Jones
President and CEO, Mid South Airlines
601 Sky Harbor Blvd.
Little Rock, Arkansas 72202

Dear Mr. Jones:

This office has reviewed your formal application for an air carrier certificate, dated XX/XX/XXXX. We are returning your application because of deficiencies in the following areas:

Résumés of Harvey Anderson, Director of Operations (DO), and S.F. Whipley, Director of Maintenance (DOM), were not included in your application.

The compliance statement is incomplete. For example, you did not address Title 14 of the Code of Federal Regulations (14 CFR) part 121, § 121.XXX (Subject). Your company's general manual attachment describes methods of compliance with this regulatory section, and you should appropriately reference them in the compliance statement. As previously discussed, your company must address all applicable regulatory sections in the compliance statement. The minimum equipment list (MEL) does not contain maintenance and operations procedures as required on the Master Minimum Equipment List (MMEL).

We are returning your letter of application with all attachments. You must submit a new formal application when you have corrected all discrepancies noted above and any other omissions that exist. Please contact us if we can be of any further assistance in clarifying the minimum requirements for your formal application.

Sincerely,

John T. Smith
Certification Project Manager

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Figure 10-14. Air Carrier Configuration Checklist

If the response to any of the following questions is Yes, then…	These elements apply
1. Does the air carrier use an approved reliability program?	1.3.15
2. Does the air carrier use an approved ground deicing/anti-icing program?	1.3.18
3. Is the air carrier authorized to conduct Category II (CAT II) Approach and/or landing operations? 4. Is the air carrier authorized to conduct Category III (CAT III) Approach and/or landing operations? 5. Is the air carrier authorized to conduct automatic approach and landing operations (other than CAT II and III) at suitably-equipped airports?	1.3.19
6. Does the air carrier have short-term escalation authority?	1.3.23
7. Does the air carrier have approval to be a member of the Coordinating Agencies for Supplier's Evaluation (C.A.S.E.)?	1.3.24
8. Is the air carrier authorized to conduct Extended Operations (ETOPS) with two-engine airplanes? 9. Is the air carrier authorized to conduct ETOPS in passenger-carrying airplanes with more than two engines? 10. Is the air carrier authorized to conduct operations in polar areas?	5.1.8
11. Does the air carrier conduct operations in Reduced Vertical Separation Minimum (RVSM) airspace?	5.1.9
Operations Elements	
1. Does the air carrier operate aircraft with exit seats as defined in § 121.585?	3.1.6
2. Does the air carrier use an approved ground deicing/anti-icing program?	3.1.7
3. Does the air carrier allow the carriage of cargo in a passenger compartment, and/or 4. Does the air carrier carry cargo in a cargo compartment that is designed to require physical entry of a crewmember to extinguish any fire?	3.1.8
5. Is the air carrier authorized to conduct CAT II approach and/or landing operations? 6. Is the air carrier authorized to conduct CAT III approach and/or landing operations? 7. Is the air carrier authorized to conduct automatic approach and landing operations (other than CAT II and III) at suitably-equipped airports?	3.1.10
8. Is the air carrier authorized to use an approved electronic record-keeping system and/or an Electronic Flight Bag (EFB)?	3.1.11
9. Does the air carrier use flight attendants (F/A)?	4.2.4
10. Does the air carrier conduct flight training in airplane simulators or airplane flight training devices (FTD)?	4.2.8
11. Is the air carrier authorized to use outsource training?	4.2.9
12. Is the air carrier authorized to use an Advanced Qualification Program (AQP)?	4.3.3
13. Is the air carrier authorized to conduct Class II navigation using multiple long-range navigation systems (LRNS), 14. Is the air carrier authorized to conduct operations in Central East Pacific (CEPAC) airspace, 15. Is the air carrier authorized to conduct operations in North Pacific (NOPAC) airspace, 16. Is the air carrier authorized to conduct operations in North Atlantic High Level Airspace (NAT HLA), and/or 17. Is the air carrier authorized to conduct operations in areas of magnetic unreliability (AMU)?	5.1.7
18. Is the air carrier authorized to conduct ETOPS with two-engine airplanes, 19. Is the air carrier authorized to conduct ETOPS in passenger-carrying airplanes with more than two engines, and/or 20. Is the air carrier authorized to conduct operations in polar areas?	5.1.8

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If the response to any of the following questions is Yes, then…	These elements apply
21. Does the air carrier conduct operations in RVSM airspace?	5.1.9
22. Does the air carrier use F/As?	6.1.3
23. Does the air carrier use dispatchers?	6.1.4

RESERVED. Paragraphs 10-103 through 10-116.

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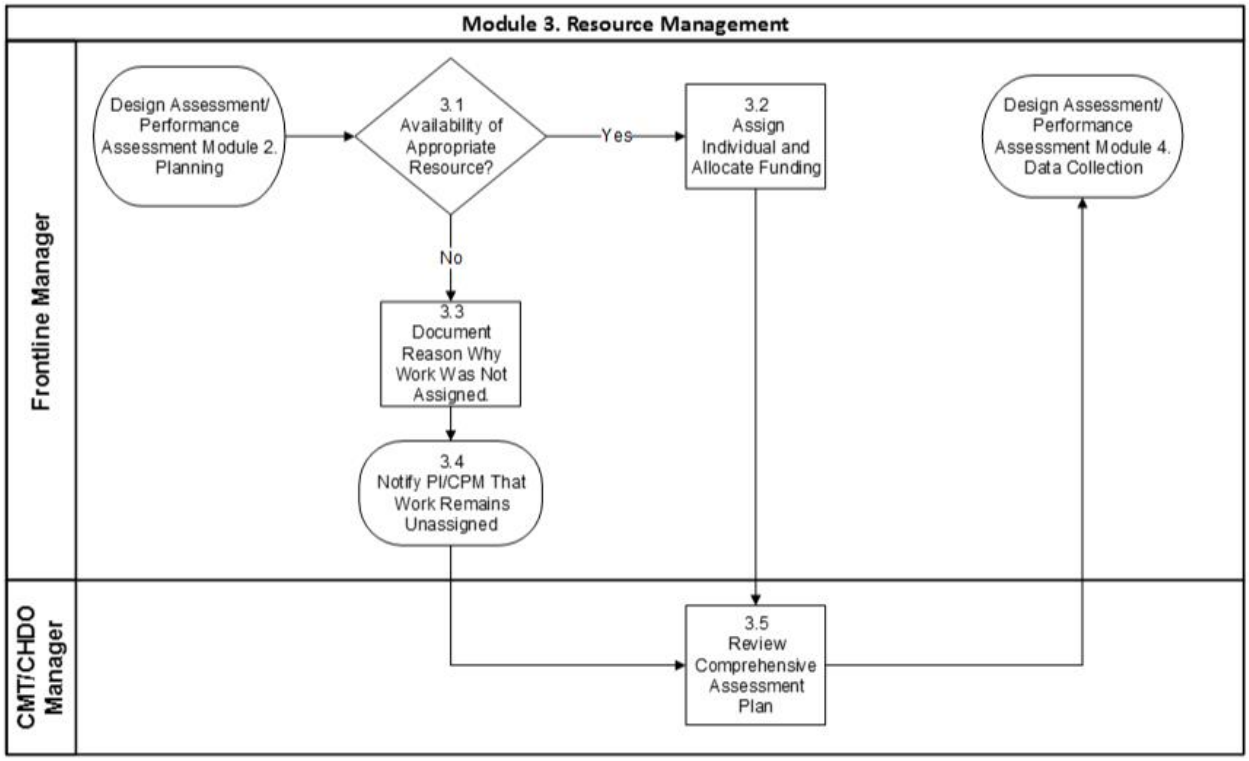
VOLUME 10 AIR TRANSPORTATION OVERSIGHT SYSTEM

CHAPTER 2 PROCEDURES FOR DESIGN AND PERFORMANCE ASSESSMENT

Section 3 Design and Performance Assessment Resource Management

Figure 10-45. Module 3: Resource Management



10-142 RESOURCE MANAGEMENT.

A. Introduction. Resource management is an ongoing process to ensure that available resources are assigned to the highest risk priorities identified in the Comprehensive Assessment Plan (CAP) for continuing operational safety. By comparing the prioritized CAP and available resources, managers ensure that available resources are assigned to tasks with the highest safety priority for a given quarter. Prioritizing and assigning resources based on risk is a critical aspect of the Air Transportation Oversight System (ATOS). CAPs are created independent of resources. Quarterly work programs consist of Design Assessments (DA) and Performance Assessments (PA) that are assigned to aviation safety inspectors (ASI). Unassigned DAs and PAs are eventually documented as work not accomplished because resources are not available.

B. Insufficient Resource Availability. Allocate funding to complete the job at the same time the individual is assigned. If resources are not available, the manager leaves the work unassigned and documents the reasons why. The principal inspector (PI) or certification project manager (CPM) receives notification that the work was not assigned. When insufficient resources are available to complete all the work, the Front Line Manager (FLM) uses the CAP to establish priority when making assignments.

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10-143 AVAILABILITY OF APPROPRIATE RESOURCE (see flowchart process step 3.1). The FLM evaluates the CAP against the roster of the Certificate Management Team (CMT) or the Certification Project Team (CPT) to determine whether the appropriate resources are available to accomplish the assessment activities. The FLM considers scheduled leave, scheduled training, training requirements, and other potential constraints. For a certification project, the certificate-holding district office (CHDO) and the regional Flight Standards division (RFSD) determine adequate resource availability during the initial evaluation per the Certification Services Oversight Process (CSOP). The manager should consider the availability of the Flight Standards National Field Office (AFS-900) Certification and Evaluation Program Office and regional and national specialist availability (e.g., resource pilot support).

A. Roster Maintenance. The manager ensures that the roster accurately reflects CMT or CPT membership as active qualified, active nonqualified, or inactive. The manager ensures CMT members do not remain on the roster when an air carrier surrenders its certificate.

1) Qualified Members. Active, qualified members are assigned to the CMT or CPT and meet the baseline training requirements for their assigned position. (See paragraph 10-144 for baseline training requirements.)

2) Nonqualified Members. Active, nonqualified members assigned to the CMT or CPT that have not completed baseline training requirements. (See paragraph 10-144 for baseline training requirements.)

3) Inactive Members. Inactive members are no longer assigned or available to the CMT or CPT.

B. CMT Staffing. A dedicated CMT has oversight responsibility for each air carrier. The CMT develops and executes a CAP tailored to that air carrier. CMT staffing includes specific minimum required positions. Depending on air carrier complexity, additional positions may be necessary. The following individual position titles identify each required position:

1) CMT Manager (Required Position). The CMT manager is the office, section, or unit manager with overall responsibility for air carrier certificate management. The CMT manager is an advocate for ATOS policies, processes, and their integration into the business strategies and operations of the office. The manager will assign ASI resources to the highest safety priorities for a given quarter.

2) FLM(s). FLMs directly supervise, assign, and review the work of CMT members.

a) If the FLM only assigns work to shared resources, then the Air-Carrier-Specific Familiarization Briefing is not required. If the FLM performs data review or conducts SAIs, EPIs, or ConDORs, then the Air-Carrier-Specific Familiarization Briefing is required.

b) FLMs who have not yet received ATOS baseline training must have a qualified FLM assign the work.

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3) Principal Operations Inspector (POI), Principal Maintenance Inspector (PMI), and Principal Avionics Inspector (PAI) (Required Position). A PI should not be assigned to more than one Title 14 of the Code of Federal Regulations (14 CFR) part 121 air carrier CMT.

4) Data Reviewer/Data Evaluation Program Manager (DEPM) (Required Position). A DEPM may be assigned to the CMT as a shared resource. In the absence of a DEPM, an FLM can serve as a data reviewer. The DEPM reports to an FLM above the PI. The data reviewer/DEPM must be qualified as an ASI. A DEPM should be assigned to no more than four CMTs. Shared DEPMs report to only one CMT manager and only one FLM, as determined by their RFSD.

a) ASIs. All ASIs assigned to the air carrier certificate are members of the CMT. Assigned ASIs can include those from the following areas of expertise: flight operations, maintenance, avionics, cabin safety, and dispatch. Each CMT has at least one Aviation Safety Inspector—Cabin Safety (ASI-CS), and one Aviation Safety Inspector—Aircraft Dispatcher (ASI-AD) (required positions). The ASI-CS and ASI-AD may be shared resources. Priority assignment must be a consideration to support CMTs with oversight responsibility of air carriers involved in passenger carriage. ASIs are generally located at the CHDO or certificate management office (CMO). ASIs may be exclusive to a CMO. However, others may also be shared, remotely sited or inspectors used for on-demand data collection.

b) Shared ASIs. Shared ASIs may be approved by a region when only one certificate-holding region (and ideally only one CHDO) is involved. The CMT office manager may approve the use of shared ASIs. Although management should not assign an ASI to more than four CMTs, other factors such as complexity of the air carrier, workload, and experience of the ASI should be considered. Shared ASIs report to only one CMT manager and only one FLM, as determined by their RFSD. All work requests will be coordinated through the ASI's FLM. The ASI's FLM will make the final decision when there is conflict over work requests.

c) Requirements for Remotely Sited Positions. Under certain circumstances, ASIs may have a base location other than the CHDO or CMO. Regional division managers are responsible for establishing and approving remotely sited positions.

1. Regional division managers establish these positions only for situations where the air carrier has very large, noncontract training or maintenance centers located far from the CHDO.

2. A remotely sited position may also be necessary with the expectation of an ongoing, full year of data collection for DAs and PAs associated with the CAP.

3. As the focus of ATOS is on systems-based assessments rather than event- or activity-based assessments, air carrier hubs and employee domiciles are not the sole consideration in this determination.

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5) On-Demand Data Collection. CMT office managers may request ATOS data collection assistance from any office that has ASIs available to accomplish SAI, EPI, or ConDOR data collection. These offices include, but are not limited to: International Field Offices (IFO), headquarters (HQ), regions, CMOs, or Flight Standards District Offices (FSDO). If the ASI's office can support the request to collect data without impeding their own ATOS data collection program, then the requesting CMT manager and the ASI's FLM coordinate the assignment of work and funding under the following circumstances:

a) ASIs requested for ATOS data collection must complete baseline training before being assigned to collect data. Being programmed to receive "Other Training" described in this section is not required for the ASI's baseline training. Baseline training consists of:

- All courses of the air carrier (operations or airworthiness, as appropriate) string training (Phases I–IV) or the relevant transition air carrier training, including ATOS 1.2 Interactive Training for ASIs and the Safety Management Course; and
- An air-carrier-specific familiarization briefing.

b) It is the responsibility of the CMT manager and the appropriate PI to ensure that ASIs are provided an air-carrier-specific familiarization briefing appropriate for the ASI's assignment and the air carrier's operation. The scope and duration should be tailored to the ASI's assignment and to the air carrier's operations and can be delivered electronically or in person. The curriculum can be developed from the list of suggested topics in this section under Figure 10-46, Air-Carrier-Specific Familiarization Briefing Outline of Subjects. When ASIs are assigned ATOS data collection, CMTs will maintain a supplemental tracking document to record completion of their air-carrier-specific briefings, including the curriculum, presenter(s), and delivery method.

c) The ASI reports to only one FLM and one office manager. ASIs and their FLMs are added to the CMT roster as active, qualified CMT members. The CMT FLM must coordinate with the ASI's FLM for ATOS data collection work assignments and funding. The ASI's FLM will make the final decision when there is a conflict over work requests.

d) Operations ASIs are not required to be programmed to receive initial training and a type rating in an aircraft type operated by the requesting CMT's assigned air carrier.

e) Airworthiness ASIs are not required to be programmed to receive initial systems training appropriate to their avionics or maintenance specialty in an aircraft type operated by the requesting CMT's assigned air carrier.

6) Operations Research Analyst (ORA). An ORA is assigned to each CMT. Regional or national analysts may provide analytical support.

7) Aviation Safety Technicians (AST) and Aviation Safety Assistants (ASA). If ASTs and ASAs are assigned to the air carrier certificate, then they are members of the CMT.

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C. CPT Staffing. A CPT is assigned to each initial certification project before the applicant initiating formal application. The CPT develops and executes a CAP that is tailored to that applicant.

1) General CPT Requirements. For air carriers certificated to operate under part 121, existing part 121 PIs are not used for new certification activities. Other ASIs currently assigned to a part 121 CMT may participate in new certification activities, to the extent that it does not compromise existing air carrier oversight. Available staffing for post-certification should exist or be reasonably projected to be available through reassignments or merit promotion selections. Existing part 121 PIs should not be used for new part 121 certification activities. Other ASIs currently assigned to a part 121 CMT may participate in new certification activities. CPTs for part 121 certification use only ASIs assigned to an air carrier position description.

2) CPT Members. CPT members include:

a) CPM. The CHDO manager designates one member of the certification team to serve as the CPM. The person designated as CPM should have completed the baseline training and should have previous experience in certifying an air carrier under part 121. A person designated as CPM should have experience as a PI.

b) Certification Team Leader (CTL). The AFS-900 Certification and Evaluation Program Office assigns a CTL and team members to each certification project. This person works with the CPM to communicate and coordinate all certification team activities and ensure adherence to the Certification Process Document (CPD).

c) Certification Team Members. The certification team should consist of at least an Operations ASI, a Maintenance ASI, and an Avionics ASI. Each certification project that involves passenger carriage has at least one ASI-CS assigned. If the certification is for a cargo-only operation, the certification team must consider cabin safety issues if the applicant has provisions or procedures for carriage of passengers specified in part 121, § 121.583(a). It is a requirement to use an Operations ASI. For each proposed aircraft type, there should be an Operations ASI assigned to the team who is qualified in that aircraft type.

10-144 BASELINE TRAINING. Baseline training requirements are different depending on the position and work function held by the ASI. An ASI may be assigned to a CMT or CPT before receiving baseline training, but it is the responsibility of the CMT manager and the FLM/supervisory PI to ensure ASIs are not assigned an SAI, EPI, or ConDOR until they have received the baseline training. Data reviewers must complete baseline training before reviewing data. Baseline training is a combination of multiple prerequisite courses and any additional curricula that the CMT/CPT defines. The prerequisite course material is unique to each ASI specialty. Table 10-7, Baseline Training Requirements for ATOS, provides baseline training requirements for all positions.

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Table 10-7. Baseline Training Requirements for ATOS

Position	Requirements
ASIs assigned to a Certification Project Team (CPT) or Certificate Management Team (CMT)	To collect data: 1. Based on the inspector's specialty (air carrier operations or airworthiness), all courses of their string training (Phases I–IV) or the relevant transition air carrier training. 2. ATOS 1.2 Interactive Training for ASIs. 3. Air-Carrier-Specific Familiarization Briefing. 4. Other training. (See paragraph 10-146.) CMT Operations and Airworthiness inspectors programmed for their training may perform data collection activities.
PIs	PI functions in ATOS: 1. Based on the inspector's specialty (air carrier operations or airworthiness), all courses of their string training (Phases I–IV) or the relevant transition air carrier training. 2. ATOS 1.2 Interactive Training for ASIs. 3. Air-Carrier-Specific Familiarization Briefing. 4. Other training. (See paragraph 10-146.) CMT Operations and Airworthiness inspectors programmed for their training may perform data collection activities. 5. ATOS 1.2 Interactive Training for PIs and Managers (required for all new PIs and managers).
DEPMs	To review data: 1. ATOS 1.2 Interactive Training for PIs and Managers (required for all new PIs and managers). 2. Air-Carrier-Specific Familiarization Briefing. 3. ATOS 1.2 for DEPMs and Data Reviewers. To collect data: See ASIs assigned to a CPT or CMT.
FLMs	To assign work: ATOS 1.2 Interactive Training for PIs and Managers (required for all new PIs and managers). To collect data: See ASIs assigned to a CPT or CMT. To review data: 1. ATOS 1.2 Interactive Training for PIs and Managers (required for all new PIs and managers). 2. Air-Carrier-Specific Familiarization Briefing. 3. ATOS 1.2 for DEPMs and Data Reviewers.
Office Managers	ATOS 1.2 Interactive Training for PIs and Managers (required for all new PIs and managers).
On-Demand ASIs	To collect data: 1. Based on the inspector's specialty (air carrier operations or airworthiness), all courses of their string training (Phases I–IV) or the relevant transition air carrier training. 2. ATOS 1.2 Interactive Training for ASIs. 3. Safety management course. 4. Air-Carrier-Specific Familiarization Briefing.

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Position	Requirements
ASIs not assigned to a CMT	Can only submit Dynamic Observation Reports (DOR) and random inspections. No baseline training requirements.
Aviation Safety Technicians (AST)	To be determined by office manager or FLM.
Aviation Safety Assistants (ASA)	To be determined by office manager or FLM.
Operations Research Analysts (ORA)	To be determined by office manager or FLM.
Regional Personnel	To be determined by manager.

10-145 AIR-CARRIER-SPECIFIC FAMILIARIZATION BRIEFING. It is the responsibility of the CMT manager and the FLM/supervisory PI to ensure that ASIs are provided the air-carrier-specific familiarization briefing upon initial assignment to an ATOS CMT. (See Figure 10-46, Air-Carrier-Specific Familiarization Briefing Outline of Subjects, for a list of suggested topics.) The Federal Aviation Administration (FAA) considers ASIs assigned to a CPT or who were assigned to the air carrier when it transitioned to ATOS to have already received the required initial air-carrier-specific familiarization briefing during the certification or transition processes.

A. Applicability. ASIs assigned to CMTs receive briefings in the general topics and subjects that are specific for their specialty. DEPMs receive briefings in the general topics and subjects specific to operations, cabin safety, maintenance, and avionics.

B. Methodologies. A combination of lectures delivered electronically or in person, site visits, and directed self-study presents the air-carrier-specific outline. The manager may decide to conduct the briefings one-on-one, or for a group of new CMT members. The FAA recommends completing the direct self-study during normal working hours. The FAA does not recommend using more than 50 percent of the briefing as directed self-study; however, ultimately the decision belongs to the CMT manager.

C. Recommended Curriculum. Figure 10-46 contains a list of suggested topics. The CMT manager determines which subjects are applicable to the ASI's assignment and the air carrier's operations and determines the amount of lecture and self-study hours. The CMT manager is not required to address every topic in the suggested list.

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D. Briefing Presenters. ASIs assigned to the CMT with expertise in the covered subject will conduct lecture portions of the air-carrier-specific familiarization briefings. For those CMT members who provide the air-carrier-specific familiarization briefings, the following electronic Learning Management System (eLMS) courses are available to enhance your presentation skills: Communications Skills to Fast-Track Your Career, Available Presentation Resources, and Presenting Successfully. Contact your Administrative Officer (AO) if you need assistance enrolling in any of these courses.

E. Recordkeeping. Each CMT will maintain a copy of its air-carrier-specific familiarization briefing outline and any self-study materials. The CMT documents successful completion of the initial air-carrier-specific familiarization briefing (eLMS course number 21000001) for each CMT member.

F. Funding. Each CMT is responsible for the costs associated with completing the air-carrier-specific familiarization briefings.

10-146 OTHER TRAINING. ASIs are normally scheduled for formal training programs in accordance with the needs of the CMT, availability of training courses, and national policy. See Volume 5, Chapter 1, Section 2, for additional information on Operations ASI qualifications.

A. Operations ASI Initial Training. Considering the needs of the CMT, availability of training, and national policy, all CMT Operations ASIs (other than on-demand ASIs) must be programmed to receive initial training and a type rating in an aircraft type operated by their assigned air carrier, unless the ASI already holds a type rating for an aircraft type operated by their currently assigned air carrier. ASIs may be programmed to receive recurrent training as required by their assigned responsibilities.

B. Airworthiness ASI Initial Training. Considering the needs of the CMT, availability of training and national policy, all CMT Airworthiness ASIs (other than on-demand ASIs) must be programmed to receive initial systems training appropriate to their avionics or maintenance specialty in an aircraft type operated by their assigned air carrier, unless that ASI has already attained systems training for an aircraft/systems type operated by their currently assigned air carrier.

C. Considering ASIs Not Assigned to a CMT. The following are requirements to conduct ATOS random inspections:

1) Substituting Earlier ATOS Training. ASIs may not substitute earlier ATOS training.

2) Qualifications. Operations and Airworthiness ASIs not assigned to an ATOS CMT must have qualifications on an aircraft used in part 121 operations but do not need qualifications on the inspected aircraft.

3) Air-Carrier-Specific Familiarization Briefing. ASIs who have not received air-carrier-specific familiarization briefing on the inspected air carrier should limit their observations to generic regulatory compliance issues.

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D. Briefing on the CPD. ASIs assigned to a CPT receive briefings on the CPD (see Volume 10, Chapter 6, Section 2, Certification Process Document).

E. ORA Training. ORAs receive the following training, as required: indoctrination, Safety Performance Analysis System (SPAS), ATOS baseline training, and training for data-rich carrier programs as needed (e.g., Advanced Qualification Program (AQP), Aviation Safety/Accident Prevention system (ASAP), and Maintenance Reliability).

10-147 ASSIGN INDIVIDUAL AND ALLOCATE FUNDING (see flowchart process step 3.2). When making work assignments, the manager or FLM should consider the ASI's training, experience, qualifications, geographic location, availability, and workload. When the appropriate resource is available based on staffing, training, and funding, the FLM assigns the ASI to the appropriate work assignment and allocates funding.

A. Resource Management by FLM. The FLM assigns and utilizes resources in accordance with the prioritization identified by the PI or CPM in the CAP. There may be situations when an ASI can accomplish lower priority activities at the same time as higher priority activities. When this occurs, the FLM will assign the higher priority item with the lower priority item. The FLM must consider the ASI's higher priority activities and the location before assigning lower priority activities. FLMs should also consider relevant certificate factors when making work assignments, particularly when CMTs share resources. Factors to consider when comparing work requests from two or more CMTs include:

- Enplanements and departures;
- Length of time the carrier held the certificate;
- Fleet size, type, and age;
- Utilization rate;
- Route structure (number of stations, number of FAA regions);
- Type of operation (effect on flying public);
- Number of approved programs (complexity);
- Maintenance contracts;
- Training contracts;
- Crew domiciles;
- Multiple certificate management responsibilities of principals; and
- Wet and dry lease.

B. Other Considerations for Assigning Work to CMT or CPT ASIs.

1) CAP. The CAP is the only part 121 assessment work program assigned. It is an option to assign work to ASIs according to Volume 11, Chapter 11, Section 1, Flight Standards Geographic Program, in addition to data collection activities for the assigned CMTs. (Refer to the current edition of FAA Order 1800.56, National Flight Standards Work Program Guidelines.)

2) FLM. An FLM can redirect work assignments from one CMT or CPT member to another.

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10-148 ASSIGNMENTS FOR DA OR PA.

A. PI Instructions. PIs should provide detailed instructions to assist the manager or FLM in identifying appropriate individuals to assign to SAIs, EPIs, and ConDORs. The manager or FLM should consider ASI training, experience, qualifications, geographic location, availability, and workload.

B. Data Collection Tool (DCT)-Specific Instructions. Some DCTs may contain specific instructions for additional training, experience, or qualifications that may be helpful in determining ASI assignments. Specific instructions may also include additional references, background information, manuals, or other system documents that should be reviewed, as well as suggestions for specific types of activities and/or reporting instructions.

C. ASI Assignments Can Be Changed Anytime. Assignment changes may include switching from unassigned to assigned or vice versa, and reassigning an assessment from one ASI to another. It is permissible to change ASI assignments for EPIs or SAIs even if work has already begun. Copy work completed prior to changes to prevent the loss of data. The FLM should contact the Help Desk for assistance and a ticket number for tracking if a record removal process is necessary.

10-149 CONSIDERATIONS SPECIFIC TO ASSIGNING AN SAI. The FLM assigns SAI team coordinators (TC) and SAI team members. The FLM may assign an SAI to a single ASI. In that case, the ASI is also the TC. To help the FLM identify appropriate individuals to assign to SAI teams, PIs or CPMs should provide detailed instructions. The FLM should consider ASI training, experience, qualifications, geographic location, availability, and workload.

A. The SAI TC. The SAI TC organizes and coordinates SAI team activities. The TC ensures that activities, such as air carrier personnel interviews, are not redundant and that team members complete all activities to accurately answer the questions on the SAI. The TC is a leadership role that should be assigned to an experienced ASI with a solid knowledge of the air carrier. The TC should have a base location near where most SAI activities will take place.

B. SAI Team Members. ASIs who have varied backgrounds and experience and are from different geographic locations can comprise a team. SAI teams should always contain ASIs with a sufficient knowledge base to assess the element accurately. The ASI(s) designated to complete the SAI should be appropriately trained and knowledgeable on subjects related to the element.

10-150 DOCUMENT REASONS WHY WORK WAS NOT ASSIGNED (see flowchart process step 3.3). The FLM assigns work based on the CAP priorities for a given quarter until no resources remain. The CAP is a risk-based plan created by the PI, independent of the resource function. If resources are not available to complete the entire CAP, then the FLM documents why he or she was not able to assign the remaining work. The CAP should not be modified to accommodate resource shortfalls. The FLM will use the “Not Assigned Reason” drop-down to identify the reason. The drop-down options are: Training, Budget, Staffing, and Other. Use the “Comment” text box to document why the work is not assigned. The work not assigned should be considered by the PI and FLM in future planning and resource management cycles.

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10-151 NOTIFY THE PI/CPM THAT WORK REMAINS UNASSIGNED (see flowchart process step 3.4). The FLM notifies the PI or CPM of any work that remains unassigned.

10-152 REVIEW COMPREHENSIVE ASSESSMENT PLAN (see flowchart process step 3.5). After developing the CAP, document the data collection requirements using detailed work instructions. Assign or identify as unassigned all of the data collection activities. The CMT or CPT manager will then review the plan.

A. Justification of Risk Priority. The review ensures that the CAP is risk based and that priorities form the basis for work assignments. The CMT or CPT manager will review the CAP to ensure the elements are prioritized according to risk or proper justification has been entered for elements not prioritized according to risk.

B. Adjust the Plan. A CMT or CPT manager who does not concur with the oversight requirements, priorities, or resource decisions should discuss the issue with the PI and the FLMs. The PI may adjust the plan as necessary. The PI can enter a comment in the plan that explains the reason for an adjustment.

10-153 ONGOING RESOURCE MANAGEMENT. Resource management is a continual task for the CMT or CPT. FLMs should continue to evaluate resources for work plans and consider the needs of special data collection and assessment activities, such as ConDORs and risk management processes (RMP).

10-154 INCOMPLETE WORK RESULTING FROM AN INSPECTOR LEAVING THE CMT OR CPT, OR BEING UNAVAILABLE TO FINALIZE HIS OR HER WORK. The FLM will ensure that before an ASI leaves the CMT or CPT, he or she will finalize all work in progress. If the ASI is unavailable to complete the work in progress, the FLM finalizes the records, reassigns the work, or initiates the removal process for an incomplete record. The FLM should contact the Help Desk for assistance and a ticket number for tracking if the incomplete record removal process is necessary. Once the office manager has reviewed the CAP and finds the content to be satisfactory, he or she will concur with the CAP.

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Figure 10-46. Air-Carrier-Specific Familiarization Briefing Outline of Subjects

General Topics—All Specialties	
1. OVERVIEW OF AIR CARRIER. a. Brief History. (1) Mergers. (2) Acquisitions. (3) Financial status (i.e., bankruptcies). (4) Compliance attitude. (5) Corporate headquarters location. (6) Main base location. (7) Corporate philosophy. b. Air Carrier Demographics. (1) Key personnel (names/phone numbers). (2) Organization chart. (3) Major programs. (4) Location of hubs. (5) Location of training bases. (6) Location of maintenance facilities. (7) Personnel strengths. (8) Agent for service. (9) Communications. (10) Special operations. (11) Fleet demographics. (12) Aircraft numbering system. c. Areas of Operations. (1) Type/fleet type of activity. (2) Concentrations of activity. d. Code Sharing/Wet Lease/ Interchange. (1) Airline participants. (2) Foreign flight attendants (F/A). e. Future Plans of the Air Carrier.	b. Policies and Procedures for Certificate Management Team (CMT) Responsibility for Coverage of Incidents and Occurrences. c. Individual Interests/Specialties. Type ratings, areas of interest, background and experience. d. Communications. (1) Types of information to be requested directly from air carrier (points of contact). (2) Information available from the CMT. (3) Points of contact and protocol. **3. BACKGROUND OF COMPREHENSIVE ASSESSMENT PLAN (CAP).** a. Special Emphasis Areas. (1) Results of Air Carrier Assessment Tool (ACAT). (2) New and pending issues. **4. COMPANY MANUALS.** a. Overview of Air Carrier Manual System. (1) Manual numbering. (2) Master listing of all parts of the air carrier's manual. (3) Where to find the master listing. (4) Where certain manuals are located.

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General Topics—All Specialties	
2. CERTIFICATE MANAGEMENT TEAM. a. Key Personnel. (1) Listing (name and phone number of all). (2) Principal inspectors (PI) (including regional hazardous materials (hazmat) branch managers).	b. Types and Identification of Manuals. (1) Hard copies. (2) Computerized manuals; CD-ROM. c. Location of Manuals. (1) Required on aircraft. (2) Required software, if applicable. (3) Required for crewmembers. (4) Microfiche reader. (5) Required at stations.

Figure 10-46. Air-Carrier-Specific Familiarization Briefing Outline of Subjects (Continued)

General Topics—All Specialties	
d. Distribution and Revision. (1) Determining current revision status. (2) Use of computer, if applicable. (3) What method is used to issue revisions? (4) Tracking responsibilities. e. Alerts and Bulletins. (1) Method to determine current status. (2) Transmission of bulletins and revisions.	b. Quick Reference Handbook Location and Use. c. Safety Briefing. d. Crew Briefing; Communication. e. Required Paperwork/ Documentation. (1) Location of logbooks (flight deck/cabin). (2) Location of minimum equipment list (MEL). (3) Airworthiness release. (4) Placards. f. Unique Fleet/Air Carrier Procedures.
5. SECURITY AND ACCESS. a. Access to Ramp and Facilities. (1) Site-specific requirements. (2) Air carrier's security coordinators.	

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General Topics—All Specialties	
b. ID Badges. c. Cockpit Keys. d. Security Alerts for Travel Advisories.	g. Aircraft Communications Addressing and Reporting System (ACARS). (1) Weight and Balance (W&B). (2) Release amendments. (3) Communications.
6. HAZARDOUS MATERIALS. a. Acceptable Shipments. b. Documentation. c. Location Verification. d. Company Material (COMAT).	**9. CABIN PROCEDURES.** a. Exit Seating. b. Emergency Equipment. (1) Location. (2) Preflight, if applicable, for F/As. c. Markings and Placards. d. Carry-On Baggage. e. Special Procedures. f. Medical Emergencies. (1) Medical oxygen. (2) Medlink. (3) Automated External Defibrillators (AED). g. Couriers. h. Cargo/Animal Handlers. i. Cockpit/Cabin Communications. j. Carriage of Weapons. (1) Forms and procedures.
7. EN ROUTE PROCEDURES. a. Jumpseat Authorization and Procedures. (1) Jumpseat operation. (2) Radio operation; headset location and use. b. Requirement for International Travel. (1) Country clearance forms (passport and visa). **8. FLIGHT DECK PROCEDURES.** a. Checklist Location and Use. (1) Flight deck flows.	

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Figure 10-46. Air-Carrier-Specific Familiarization Briefing Outline of Subjects (Continued)

Specific Topics—All Specialties	
1. AIR CARRIER PROGRAMS. a. Deicing. (1) General procedures and training. (2) Paperwork. b. Fueling. (1) General procedures and training. (2) Paperwork. (3) Passenger handling during fueling. (4) Bonding and grounding. c. Pushback/Powerback Procedures. d. International Procedures. (1) Crew check-in time. (2) Crew complement. (3) Flight/duty and rest computation. (4) General declaration. (5) Passport and visa requirements. e. Special and Ferry Flight Procedures. f. Cargo Operations. g. Security. (1) Hijack procedures. (2) Interference with crewmembers.	**4. OPERATIONS SPECIFICATIONS.** a. Exemptions and Deviations. b. Special Areas of Operations. c. Special Authorizations and Programs. (1) Powerback procedures. (2) Single-engine taxi. (3) Extended Operations (ETOPS). (4) Areas of magnetic unreliability (AMU). (5) Lower Landing Minimums (LLM). (6) North Atlantic High Level Airspace (NAT HLA). (7) Flight operations quality assurance (FOQA). (8) Aviation Safety Action Program (ASAP). (9) Reduced Vertical Separation Minimums (RVSM). (10) Category III (CAT III) approach procedures.

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Specific Topics—All Specialties	
2. RECORDS AND REPORTING. a. General. (1) Format: paper, microfiche, electronic. (2) Electronic signatures. (3) Security issues. (4) Custody and retention.	
3. STATION FACILITIES. a. Manuals. b. Fueling Equipment and Facilities. c. Maintenance Support. d. Contract Services. e. Passenger and Baggage Screening.	

RESERVED. Paragraphs 10-155 through 10-170.

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VOLUME 12 INTERNATIONAL AVIATION

CHAPTER 2 FOREIGN AIR CARRIERS OPERATING TO THE UNITED STATES AND FOREIGN OPERATORS OF U.S.-REGISTERED AIRCRAFT ENGAGED IN COMMON CARRIAGE OUTSIDE THE UNITED STATES

Section 3 Part 129 Part A Operations Specifications

12-125 DEFINITIONS.

A. Responsible Flight Standard District Office (FSDO). The phrase "responsible FSDO" used in Title 14 of the Code of Federal Regulations (14 CFR) part 129, § 129.11 means any International Field Office (IFO) with responsibility for the oversight of part 129 operators.

B. Special Interest Flight (SIF). An SIF is any flight conducted in U.S. territorial airspace in aircraft registered in, or designated as, or operating with the International Civil Aviation Organization (ICAO) three-letter designator of a foreign operator in a country that the U.S. State Department has designated as a special interest country.

OPERATIONS SPECIFICATION (OPSPEC) A001—ISSUANCE AND APPLICABILITY, AND REPORTS (Required for All Air Carriers).

A. Legal Name, Doing Business As (DBA), Air Operator Certificate (AOC), and Economic Authority. OpSpec A001 must identify the OpSpecs holder. The name that appears in OpSpec A001 must be the legal name of the foreign air carrier as shown on its AOC issued by the State of Operator and as shown on its economic authority applicable to its operations or registrant information filed with the U.S. Department of Transportation (DOT). See also Volume 12, Chapter 3, Section 2 for added detail referencing economic authority, and part 129, § 129.7 for the regulatory reference.

NOTE: If a foreign air carrier were to conduct operations wholly outside the United States that involved the carriage of a U.S. air carrier code, the foreign air carrier would need economic authority in the form of an exemption and would also require a statement of authorization under 14 CFR part 212. It would also have to meet all of the requirements of the Code-Share Safety Audit program. (If a foreign air carrier conducted operations wholly outside the United States that did not involve the carriage of a U.S. air carrier code, then the foreign air carrier would not need DOT economic authority).

1) The State of Operator AOC (Identification). The identifying number of the foreign air carrier AOC, is as issued by the Civil Aviation Authority (CAA) of the State of Operator. Foreign air carriers must provide a copy of the AOC and principal inspectors (PI) must verify the AOC with the CAA before the issuance of part 129 OpSpecs.

2) Legal Name and DBA. PIs can verify the foreign air carrier's or Canadian Air Taxi Operator's legal name (listed on its economic authority) and DBA by any of the following methods:

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a) By requesting from the air carrier or Canadian Air Taxi Operator either their final notice from the DOT or their application for DOT economic authority.

b) By using the Regulations.gov Web site at http://www.regulations.gov.

NOTE: A search may be narrowed down by limiting the words used in your search such as: [name of airline] permit, [name of airline] exemption or DOT-OST-[docket year of original request]-[the next 4 numbers that were assigned to the original request]. When reviewing search results, look for key words such as "Final Order" in the title associated with [name of airline] permit and DBA. Another phrase to look for in the search results is "Notice of Action Taken" in the title associated with [name of airline] exemption and DBA. Notice of action taken would indicate the DOT final decision for approval or disapproval of an exemption or permit request. The DOT assigns a docket number to each request and response. The docket number of the response will be associated with the docket number of the request. If you have a copy of the airline request for DOT economic authority, it may be easier to search by the docket number. If searching by docket number, type in all but the last 4 digits of the docket number associated with the request. For example, if the request had a docket number of: "DOT-OST-2012-0211-0001," search using DOT-OST-2012-0211. Your search should yield the following results: DOT-OST-2012-0211-0001, DOT-OST-2012-0211-0002.... as applicable. The search results may not be in numerical or chronological order.

c) By contacting the DOT's Foreign Air Carrier Licensing Division. A foreign air carrier who wishes to change its legal name on its Federal Aviation Administration (FAA) OpSpecs must first register any name change with the DOT following the procedures in 14 CFR part 215, and present evidence of its new name on an AOC issued by the State of Operator CAA.

NOTE: You can find a list of Canadian Air Taxi Operators registered under 14 CFR part 294 at the following DOT Web site: http://www.dot.gov/policy/aviation-policy/licensing/other-special-authorities.

3) The Foreign Air Carrier's or Person's OpSpec Designator/Number (The Part 129 and § 129.14 Templates). This will be the same number obtained from the Aviation Data Systems Branch (AFS-620). Enter it into the foreign air carrier's enhanced Vital Information Database (eVID).

B. The Foreign Air Carrier's or Person's Address.

1) Address of Place of Business or Residence. The foreign air carrier's or person's address is the physical address of the foreign air carrier's place of business or residence within the State of Operator.

NOTE: Under international law, the State of Operator is responsible for issuing an AOC to an air carrier that engages in international commercial air transport. The AOC must be issued in accordance with the standards of ICAO Annex 6,

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Part I or III, as applicable to the Convention on International Civil Aviation (the Chicago Convention). Annex 6 defines the State of Operator as, "The State in which the operator's principal place of business is located or, if there is no such place of business, the operator's permanent residence."

2) The Address of the Foreign Air Carrier within the United States. Some foreign air carriers will have an operations representative in the United States (e.g., a representative for North American operations). If the air carrier does not have an address within the United States, enter "None."

3) Address for International Mail Delivery. The foreign air carrier's mailing address for international mail delivery to its principal place of business or residence within the State of Operator.

C. Responsible FSDO. Enter the name and the mailing and overnight delivery address of the IFO with responsibility for the oversight of the OpSpec holder, to include the PI names and contact information to assist PIs with oversight responsibilities of the OpSpec holder.

D. U.S.-Registered Aircraft. Foreign air carriers operating U.S.-registered aircraft must ensure each flightcrew member complies with 14 CFR part 61, § 61.3(j). See Volume 12, Chapter 4, Section 1 for additional information on pilot age requirements as they relate to foreign air carriers using the services of a pilot of a civil airplane of U.S. registry.

E. Information Required by OpSpec A001, the Part 129 Template. The following is a summary of some of the information captured in OpSpec A001 for foreign air carriers operating to the United States.

1) Authorized Operations. The kind of operations authorized (scheduled and/or nonscheduled).

2) Foreign Air Carrier Responsibilities. The responsibilities (appropriate DOT economic authority, appropriate Transportation Security Administration (TSA) security program, valid State of Operator AOC or equivalent document, required reports as specified in OpSpec A001, etc.) of the foreign air carrier in conducting its operation to the United States.

3) Applicable Regulations. The regulatory sections (14 CFR parts 91 and 129 and Title 49 of the Code of Federal Regulations (49 CFR) part 175) and any other applicable regulations, laws, and orders of the United States or international standards that apply to the operations to be conducted (Annex 1; Annex 6, Parts I or III; and Annex 8, Part II, Chapters 3 and 4, to the Convention on International Civil Aviation, as applicable).

NOTE: Certain portions of 14 CFR part 382 are also applicable to foreign air carriers.

4) OpSpec Effectiveness. General requirements about the effectiveness of an air carrier's OpSpecs as they relate to its DOT economic authority and crewmember licensing and age requirements. Foreign air carriers must comply with the current age requirements of Annex 1 to the Convention on Civil Aviation.

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5) The DOT Economic Authority Type. Based on what the DOT has issued, in the table within subparagraph A of the OpSpec, under the heading of "DOT Economic Authority (Type)," select either "Foreign Air Carrier Exemption," "Foreign Air Carrier Permit," or "Part 294 Registrant."

NOTE: The DOT issues "Part 294 Registrant" for Canadian Charter Air Taxi Operators.

6) The DOT Economic Authority Expiration. Based on what the DOT has issued, in the table within subparagraph A of the OpSpec, under the heading of "DOT Economic Authority (Expiration)" there are three selectable choices: a blank space, "N/A," and "application pending (Part 377 & APA)." If the DOT economic authority is without an expiration date, then select "N/A." If the foreign air carrier's economic authority has an expiration date, then select the blank space and enter the expiration date. Select "application is pending (Part 377 & APA)" if:

a) The foreign air carrier has applied for exemption renewal before the exemption's expiration date;

b) In the application for renewal, the applicant cited 14 CFR part 377 and Administrative Procedures Act (APA); and

c) The DOT has not taken some type of action.

NOTE: A foreign air carrier exemption will always have an expiration date. The DOT will grant an exemption for 1 or 2 years, subject to timely renewal. The DOT will grant a permit to a foreign air carrier under the statute typically 99 percent of the time for an indefinite period, subject to certain conditions tied to the agreements. In the event that the permit covers something extra bilateral (not specifically covered by the agreement), the permit will be granted for 5 years. Canadian air taxi registrations under part 294 are indefinite.

7) DBA Names Authorized by the DOT and the State of Operator. (See also subparagraph B above.)

8) Authorized Geographic Areas of U.S. Operation. The foreign air carrier must conduct each operation within the United States in accordance with its State of Operator-issued AOC and associated limitations and provisions, and in accordance with specific authorizations, limitations, and procedures contained in these FAA-issued foreign OpSpecs. For the purpose of this OpSpec, the available authorized areas are selectable as follows:

- USA—The 48 Contiguous United States and the District of Columbia.
- USA—The State of Alaska.
- USA—The State of Hawaii.
- USA—The Commonwealth of Puerto Rico.
- USA—The Commonwealth of the Northern Mariana Islands (CNMI).
- USA—The Territory of American Samoa.

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- USA—The Territory of Guam.
- USA—The Territory of the U.S. Virgin Islands.

9) Authorized Radio Call Sign and the ICAO Three-Letter Designator.

10) Nonscheduled Flight Notification Method. If the air carrier conducts only scheduled operations, select "N/A" in the table. If the air carrier to whom the FAA issues part 129 OpSpecs plans on conducting a nonscheduled flight, the air carrier must provide the responsible IFO with advance written notice (including by fax, email, or paper document) of the operation. For urgent situations, a foreign air carrier may use telephone notification to the responsible IFO, followed by a written notice sent as soon as possible. At a minimum, the nonscheduled foreign air carrier must provide the following information for each flight conducted to, from, or within the United States:

a) Aircraft registration.

b) Aircraft make/model.

c) All arrival and departure airports to be used within the United States.

d) Estimated arrival and departure times at each airport used.

NOTE: As directed by the IFO, the air carrier will provide updates on the estimated time of arrival (ETA) and departure when delays are expected.

e) Purpose or description of flight. For example, ferry flight for maintenance, golf charter, dropping off passengers, etc.

f) If possible, the air carrier should provide a contact phone number within the United States. An example of this would be a Fixed-Base Operator (FBO), a ground-handling company, or a contract maintenance provider.

NOTE: Foreign air carriers from U.S. State Department designated special interest countries to which the FAA issues 129 OpSpecs are exempt by the U.S. State Department from the previously required SIF program notifications. A part 129 foreign air carrier's route information will no longer be posted on the FAA SIF Web site. A foreign air carrier from a special interest country conducting a 14 CFR part 375 operation under part 375, § 375.42 (authorized by the DOT for occasional plane load charters) must continue to make SIF notifications. A part 375 operator's route information is required to be posted on the SIF Web site. An inspector conducting a ramp inspection may use the FAA SIF Web site as an additional tool to help determine the type of operation conducted. Inspectors should direct any operational issues with a specific SIF to the Domestic Events Network (DEN). PIs should direct general questions on SIFs, including link and access authorization for the FAA SIF Web site, to the Strategic Operations Security Group (AJR-22) via email at 9-ATOR-HQ-IFOS@faa.gov. PIs may find FAA U.S. Territorial Airspace Route Authorization Requirements for SIF operators for each special interest country in

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the International section of the FAA Class II Notices to Airmen (NOTAM) publication, http://www.faa.gov/air_traffic/publications/notices/.

11) Airports Used in Scheduled Operations. For scheduled operations, select one ICAO airport identifier per drop-down menu. For scheduled operations, the foreign air carrier will provide the list of airports to be used and included as follows:

a) Regular Terminal. An airport approved under scheduled service to a community as the regular stop to that community.

b) Alternate. An airport at which an aircraft may land if a landing at the intended airport becomes inadvisable or if operational necessity requires the use of that airport. Select the most probable alternate for the regular terminal airport listed for a given regular terminal airport. This does not preclude the foreign air carrier from using an alternate airport not listed in the table if weather, air traffic control (ATC) routing, or other operational necessity requires it.

c) Technical/Refueling Stop. Leave blank if the foreign air carrier has no technical/refueling stop that it will use on a regular basis for the regular terminal airport.

NOTE: For nonscheduled operations, the "Airports to be used for Scheduled Operations" table will be left blank.

12) Notifications. Changes to any information in the FAA-issued OpSpecs, or the basis upon which the FAA issued them, require that the foreign air carrier notify the responsible IFO in a form and manner acceptable to the FAA. For example, changes to the:

a) Foreign air carrier (company) ownership;

b) Addresses for the foreign air carrier and contact details such as telephone, fax, and email;

c) Foreign air carrier agent for service and management personnel;

d) Economic authority issued by the U.S. DOT;

e) Airports authorized for scheduled operations to the United States by the State of Operator and to be used in the United States; and

f) Notification method for nonscheduled flights to the United States.

NOTE: The responsible IFOs, if necessary, should make periodic inquiries to the air carrier to ensure the currency of information.

13) Additional Reports. The foreign air carrier must provide additional reports and notifications when requested by the FAA. For example:

a) A copy of the valid AOC or equivalent document issued by the State of Operator.

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b) For scheduled flights, the schedule and frequency of flights and any changes to those schedules and frequencies; and

c) The foreign air carrier's operations and maintenance liaison persons and contractors at any U.S. airport served on a scheduled basis.

14) Responsible FSDO. See subparagraph C above.

F. Information Required by OpSpec A001, the § 129.14 Template. The following is a summary of the information captured in OpSpec A001 for foreign air carriers or foreign persons operating U.S.-registered aircraft only outside the United States.

1) The Foreign Air Carrier's or Foreign Person's Name. See subparagraph A.

2) The Foreign Air Carrier's or Foreign Person's Addresses. See subparagraph B.

3) DBA Names Authorized by the State of Operator. See subparagraph A.

4) The Foreign Air Carrier's or Foreign Person's OpSpec Designator/Number. See subparagraph A.

5) The Foreign Air Carrier's or Foreign Person's State's Operating Certificate Number.

6) The Foreign Air Carrier's or Foreign Person's Representative. This representative will be the primary representative for all contact regarding the air carrier's or person's U.S.-issued OpSpecs for the maintenance program and minimum equipment list (MEL) approval.

7) Agent for Service Located in the United States. See also Volume 12, Chapter 3, Section 2 and Volume 12, Chapter 3, Section 7, OpSpec A006.

8) Responsible FSDO. See subparagraph D.

OPSPEC A002—DEFINITIONS AND ABBREVIATIONS (Required for All Air Carriers). OpSpec A002 includes definitions of words or phrases used in other OpSpecs paragraphs. These definitions enhance understandings between the FAA and foreign air carriers. These definitions have been developed by the International Programs and Policy Office (AFS-50) and must not be changed. Any recommendations for changes/addition to these definitions will need to be forwarded to AFS-50 for review and determination. An addition of a definition by an International Field Office (IFO) would make the OpSpec nonstandard and, as such, must be processed as a nonstandard OpSpec request through AFS-50 for approval.

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OPSPEC A003—AIRCRAFT AUTHORIZATION (Required for All Foreign Air Carriers Operating to the United States – Only the Part 129 OpSpec Templates, Not the § 129.14 OpSpec Templates).

A. General. OpSpec A003 lists the aircraft that the FAA has authorized a foreign air carrier to use in its operations to the United States by aircraft, configuration, conditions, and certain operations authorized. This paragraph also describes the following specific requirements in order for the aircraft to be listed in OpSpec A003 and used by a foreign air carrier to conduct its international air transportation operations within the United States.

NOTE: Civil aircraft operated solely in nonrevenue service (not holding out to the public) to the United States by a foreign air carrier who also conducts scheduled or nonscheduled operations in common carriage (holding out to the public) to the United States do not need to be listed in OpSpec A003.

1) Aircraft Registration and Airworthiness Certificates. The aircraft must have on board a current and valid Certificate of Airworthiness and registration issued by the State of Registry. The Convention on International Civil Aviation (the Chicago Convention) requires in Article 29 that aircraft engaged in international navigation carry a Certificate of Airworthiness and registration. Airworthiness and registration certificates are also required for foreign air carrier aircraft by 14 CFR part 91, §§ 91.203(a)(1) and 91.203(a)(2); 14 CFR part 129, § 129.13; and 14 CFR part 375, § 375.20. If the aircraft is subject to an agreement made under Article 83 bis (see Volume 12, Chapter 2, Section 8) to the Chicago Convention, the Certificate of Airworthiness may be issued by the State of the Operator.

2) Airworthiness Code. The State of Registry must have a comprehensive and detailed national airworthiness code established for the class of aircraft as required by International Civil Aviation Organization (ICAO) Annex 8, Part II, Chapter 3, 3.2.2. Determinations concerning the adequacy of a State's airworthiness code are made under the FAA's International Aviation Safety Assessment (IASA) Program. If any doubt exists, contact International Programs and Policy Division (AFS-50) before adding the aircraft.

3) Maintenance Programs. Each aircraft must have a maintenance program approved by the State of Registry or, for an aircraft subject to an Article 83 bis agreement, by the State of the Operator. For aircraft subject to an Article 83 bis agreement, verify the agreement has been registered with ICAO and covers the applicable aircraft (see Volume 12, Chapter 2, Section 8). The maintenance program shall conform to the international standards set forth in ICAO Annex 6, Part I, Chapters 8 and 11 for airplanes, and ICAO Annex 6, Part III, Chapters 6 and 9 for helicopters. For each U.S.-registered aircraft, the FAA must have approved the maintenance program in accordance with § 129.14(a).

4) Minimum Equipment List (MEL) Exceptions. The aircraft manufacturer develops the Master Minimum Equipment List (MMEL) in conjunction with the State of the manufacturer's Civil Aviation Authority (CAA). The State of the Operator approves a foreign air carrier's MEL. Each foreign air carrier who wants to operate U.S.-registered aircraft with certain instruments or equipment inoperative must have OpSpec D095 issued to them. (See Volume 12, Chapter 2, Section 6.) If the foreign air carrier does not have a MEL, then the

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principal inspector (PI) must ensure that the following selectable limitation is selected in OpSpec A003 under subparagraph B:

> "The following aircraft listed below do not have a MEL. Accordingly, the foreign air carrier may not take off the following aircraft with inoperable instruments or equipment installed."
>
> NOTE: Additionally, the PI must ensure that the appropriate aircraft make, model, and series (M/M/S), aircraft registration, or both are listed in the text box below the above limitation. For example, if a foreign air carrier has three aircraft listed in the table for OpSpec A003, none of which has a MEL, then the PI should just list the M/M/S. If a foreign air carrier has three aircraft listed in the table for OpSpec A003, all of which are the same M/M/S, but one of the aircraft does not have a MEL, then the PI needs only to ensure that the registration number of the aircraft without the MEL is listed.

5) Airworthiness Directives (AD). A foreign air carrier must have properly accomplished all ADs issued by the State of Registry or adopted by the State of Registry from the state of design applicable to each aircraft listed, in accordance with ICAO Annex 6, Part I, Chapters 8 and 11 (airplanes) and ICAO Annex 6, Part III, Chapters 6 and 9 (helicopters) as applicable. After the aircraft is on the OpSpecs, the failure to comply on an ongoing basis with all applicable ADs is justification for removing the aircraft from the OpSpecs.

> NOTE: OpSpec A447 must also be issued to each carrier operating U.S.-registered aircraft, which are listed in OpSpec A003, to enable the FAA to notify the foreign air carrier regarding emergency ADs.

6) Flight Deck Security. Section 129.28 establishes additional flight deck security requirements to prevent unwanted persons from entering the flight deck when operating to the United States.

B. Enter Aircraft Information. All aircraft information must be first entered into the Web-based Operations Safety System (WebOPSS) in the left navigation area, under "CHDO," "Maintain Operator Data," "Aircraft." Once you do that, when you move a new OpSpec A003 template to workspace, all of the information entered under "Operator—Aircraft" will self-populate the table. All aircraft that the foreign air carrier owns, dry leases, or wet leases that it will operate within the United States must be entered in OpSpec A003. Both foreign- and U.S.-registered aircraft must be entered. The aircraft of a foreign air carrier that provides service to the United States will only be listed in OpSpec A003 of the "primary operator's" OpSpec A003, in the case of an interchange operation; the "lessor's" OpSpec A003, in the case of a wet lease; or the "lessee's" OpSpec A003, in the case of a dry lease. (See Volume 12, Chapter 2, Section 9.)

> NOTE: For additional help in adding an aircraft to part 129 OpSpecs in the left navigation area, under "Tools" select "CHDO—User Manual."

1) M/M/S. When entering an authorized M/M/S into OpSpec A003, select it from the listing provided in the WebOPSS. If the appropriate M/M/S cannot be found in the

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WebOPSS, inspectors should immediately notify the WebOPSS help desk so that the table can be updated. On the "Certificate Holder, Aircraft Authorization" menu, enter data on both the general and detail tabs.

2) Aircraft Serial Number. Enter the manufacturer's aircraft serial number.

3) Aircraft Registration Number. Enter the aircraft registration marking assigned by the State of Registry. The ICAO defines the State of Registry as "the State on whose register the aircraft is entered." In accordance with Article 18 of the Chicago Convention, an aircraft cannot be validly registered in more than one State.

4) Configuration. PIs must select "All Cargo," "Passenger," "Combi," or "Pax and Cargo" based on the main cabin configuration.

a) All Cargo. The main cabin is for cargo hauling only. There may be a few supernumerary seats.

b) Passenger. The main cabin is for pax seating only. There may be over-head bins for bags.

c) Combi. The main cabin of the airplane is a simultaneous combination of passenger and cargo. For example, half of the main cabin volume is for cargo and half of the main cabin volume is passenger seating.

d) Pax and Cargo. At one time the main cabin is All Cargo (see above); at another time the main cabin is Passenger (see above), though not at the same time.

EXCEPTION: The PI must ensure that the selection represents how the aircraft's main cabin can be used and that it is not contrary to the type of service for which the aircraft is approved. For example, if an aircraft's main cabin can be configured for "Pax and Cargo," but the State of the Operator and the Department of Transportation (DOT) economic authority only authorize the air carrier to carry passengers, then the PI must select "Passenger."

5) En Route. Inspectors must enter the appropriate en route flight rule for each M/M/S. If the M/M/S is a large aircraft, as defined in OpSpec A002, and/or approved for only instrument flight rules (IFR) operations by the State of the Operator CAA, enter the phrase "IFR" in the column labeled "En route." If the M/M/S is other than a large aircraft, as defined in OpSpec A002, and/or restricted to visual flight rules (VFR)-only operations by the State of the Operator CAA, select the phrase "VFR." If the M/M/S is other than a large aircraft, as defined in OpSpec A002, and/or approved for both IFR and VFR operations by the State of the Operator CAA, select the phrase "IFR/VFR."

6) Condition. Select the day/night condition for each M/M/S. If the State of the Operator CAA approves the M/M/S for both day and night conditions, select the phrase "Day/Night" in the block labeled "Condition." If the State of the Operator CAA approves the M/M/S for daylight conditions only, select the phrase "Day Only."

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7) Noise Stage. This only applies to turbojet airplanes with a maximum weight of more than 75,000 pounds; otherwise, enter "NA." Select the aircraft noise stage II, III, or IV. If the aircraft is stage II or the aircraft is a dual-noise-stage-certificated B-747, then OpSpec A026 must also be issued to the foreign air carrier. Evidence of noise stage should be from approved aircraft documentation, such as a noise certificate if issued, Approved Flight Manual (AFM), or other document issued by the State of Registry.

8) Reduced Vertical Separation Minimum (RVSM). For RVSM Operations, select RVSM as follows.

a) If the foreign air carrier's aircraft is authorized for RVSM operations, then:

1. The RVSM selectable must be selected when entering aircraft-specific data in WebOPSS, "CHDO," "Maintain Operator Data," "Aircraft."

2. Select "Yes" in the RVSM column of the OpSpec A003 table.

3. The operational authorization of RVSM is provided by State of the Operator. OpSpec A003 is used to confirm that the foreign air carrier has operational approval. The maintenance program is approved by State of Registry. The United States approves the RVSM maintenance program for U.S.-registered aircraft via OpSpec D108. The State of the Operator must have regulation and supporting guidance documents for the issuance of RVSM. The following are examples of guidance documents the FAA considers to be consistent with ICAO standards on RVSM:

- The current edition of Advisory Circular (AC) 91-85, Authorization of Aircraft and Operators for Flight in Reduced Vertical Separation Minimum Airspace; and
- Joint Aviation Authority (JAA) Temporary Guidance Leaflet (TGL) 6.

NOTE: If the PI has concerns as to how the State of the Operator approved the air carrier for RVSM (e.g., the State of the Operator approved the air carrier without regulation and supporting guidance documents for the issuance of RVSM), then the PI must advise AFS-50. AFS-50 will coordinate with the Flight Technologies and Procedures Division (AFS-400), initiate discussions with the State as appropriate, and advise the PI on resolution.

b) If the foreign air carrier is not authorized for RVSM, then:

1. Ensure that RVSM must not be selected when entering aircraft-specific data in WebOPSS, "CHDO," "Maintain Operator Data," "Aircraft."

2. Select "No" in the RVSM column of the OpSpec A003 table.

c) Authorization Process. Before designating the airplanes in OpSpec A003, the responsible International Field Office (IFO) inspectors must obtain documentation from the foreign air carrier or operator for verification of RVSM approval to include the following:

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1. In the case of foreign-registered airplanes, a copy of their foreign OpSpecs or other issued Air Operator Certificate (AOC) special operating provisions that show they have been authorized by the State of the Operator for RVSM. The documentation from the foreign CAA must show the M/M/S, aircraft serial number, and aircraft registration number of the airplanes that the operator has been authorized to fly in RVSM airspace. Normally for foreign-registered aircraft, the responsible IFO inspectors will only need to examine the foreign OpSpecs or other AOC special operating provisions documented evidence of foreign CAA approval. If the responsible IFO believes it to be necessary in the interest of safety to verify such RVSM authorization, then the responsible IFO inspector(s) may require that the operator submit the following:

a. Documentation of airplane RVSM eligibility. The foreign air carrier or operator's aircraft must comply with RVSM standards. For in-service aircraft, documentation showing that inspections and/or aircraft system modifications are completed as required by the applicable Service Bulletin (SB), Service Letter (SL), Supplemental Type Certificate (STC), or other approved documents approved or accepted by the State of Registry CAA. For aircraft that were manufactured RVSM-compliant, the approved AFM or Type Certificate Data Sheet (TCDS) contains a statement of RVSM eligibility, as appropriate.

NOTE: For U.S.-registered airplanes, the FAA is the State of Registry CAA and documentation must be in accordance with subparagraph b below.

b. Documentation showing that the State of the Operator CAA has approved the foreign air carrier or operator's RVSM maintenance program, and that it is acceptable to the State of Registry.

c. Documentation that the State of the Operator CAA has approved/accepted the operator's plan to participate in a monitoring program.

d. Documentation that the State of the Operator CAA has approved/accepted the foreign air carrier or operator's RVSM operational procedures in their manual required by ICAO Annex 6, Part I, Chapter 4, 4.2.

2. In the case of U.S.-registered airplanes, the following:

a. Documentation of airplane RVSM eligibility. For in-service aircraft, the FAA determines that inspections and/or aircraft system modifications are completed as required by the applicable SB, SL, STC, or other Aircraft Certification Office (ACO)-approved document. For aircraft manufactured RVSM-compliant, the FAA-approved AFM or TCDS contains a statement of RVSM eligibility, as appropriate.

b. The FAA has approved the foreign air carrier or operator's RVSM maintenance program by issuing OpSpec D108.

9) Additional Aircraft Items. When loading aircraft information into WebOPSS, "CHDO," "Maintain Operator Data," "Aircraft," select or check other authorizations as appropriate to the AOC and the aircraft used. These include nose number (or NA), Multiengine Land, Single-Engine Land (SEL), Multiengine Sea (MES), Single-Engine Sea (SES), etc., or

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§ 129.14, and Civil Reserve Air Fleet (CRAF) information, if appropriate. The number of seats, installed and demonstrated, must record a number entered in each block to close the entry. The "AUTHORIZATIONS" tab should have appropriate entries checked, such as RVSM, Category (CAT) II, CAT III, etc., for each aircraft entry.

10) Ground Deicing Program. The PI must ensure that the appropriate drop-down (yes or no) is selected in the column titled Ground Deicing Program for each CAA-approved aircraft based on whether or not the M/M/S has been approved for ground deicing. If requested, the foreign air carrier must provide (as proof of CAA ground deicing program approval) their PI with either:

- The English-language material provided to the U.S. ground deicing contractor (if the foreign air carrier's manual reference for ground deicing is not in English), or
- The foreign air carrier's manual reference (if in English).

a) Approved Program. A foreign air carrier must communicate with each contractor prior to having its aircraft deiced on procedures to be followed. Contractors are not regulated by the FAA and will not have approved or accepted deicing programs; however, the contractor is required to follow the air carrier's approved deicing program. It is the air carrier's responsibility to communicate its procedures to each contractor and to ensure that the air carrier's approved program is being followed. ICAO Annex 6, Part I, Chapter 4 states in part that:

1. A flight must not commence until the pilot in command (PIC) is assured that the airplane is Airworthy in respect to ice contamination.

2. Accumulation of ice or other naturally occurring contaminants must be removed so that the airplane is kept in an Airworthy condition prior to takeoff.

b) Not-Approved Program. Some CAAs do not require a system to conduct operations during ground icing conditions if the carrier:

- Only operates in areas where ground icing conditions should not occur, such as Puerto Rico and other specific islands and territories within the region of the South Pacific Ocean, such as Guam and Samoa.
- Is only authorized VFR with small airplanes or helicopters. These are typically nonscheduled, on-demand charter operations (e.g., from Canada).

NOTE: The above is not an exclusive list. There are CAAs that authorize an operator into IFR but not for ground deicing.

11) Data Link Communications. The FAA has made available Departure Clearance (DCL) using FANS-1/A at various airports within the U.S., replacing voice communication between pilots and air traffic control (ATC) with data link at those U.S. airports for the purpose of picking up DCLs. The FAA does not approve data link communications installations, training programs, MELs, or maintenance programs for foreign operators operating non-U.S.-registered

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aircraft. Such authorizations are addressed as specified by the State of the Operator. However, since compatibility of data link communications within U.S. airspace is essential, part 129 operations guidelines for data link communications are issued. Compliance with these data link communications provisions ensures both data link communication system and procedural compatibility. The FAA issues limitations for data link communications, in accordance with, but not limited to, the following:

- Global Operational Data Link Document (GOLD). ICAO Global Guidelines for data link operations.
- If adopted by the CAA, equivalent standards to current edition of AC 120-70, Operational Authorization Process for Use of Data Link Communication System.

NOTE: PIs must coordinate all acceptable criteria other than that specified above with AFS-50 who will coordinate with AFS-400 as appropriate. For a list of applicable ICAO standards and recommended practices, refer to AC 120-70.

12) Data Link Address. An appropriate data link must be installed and operated on suitable frequencies specified by ATC during flight in U.S. airspace if procedures are predicated on its use. A unique and specific address, the ICAO 24-bit aircraft identification, must be assigned to the airplane and the data link must recognize this address. When properly set, the unique address may not be altered, set to a duplicated address, or set to an address that potentially interferes with ATC or data link safety functions.

13) Data Link Coordination. A data link capable of coordinating with air traffic facilities using RTCA, Inc. DO-219, Minimum Operational Performance Standards (MOPS) for ATC Two-Way Data Link Communications, or other equivalent standards must be installed if operations will be predicated on its use. The data link system should be operated in an appropriate data link mode during flight in U.S. airspace using data link, except as provided for by the MEL provisions acceptable to the State of the Operator.

14) Training Program. All foreign air carrier flightcrews must have successfully completed their State of the Operator's CAA-approved training program for data link communication prior to conducting data link communication in U.S. airspace.

a) Foreign Air Carrier Actions. A foreign air carrier applying to the FAA to conduct data link communications within U.S. airspace must provide the responsible IFO with evidence that the State of the Operator has approved the foreign air carrier for this operation. The approval must include:

- A statement from the State of the Operator's CAA stating that the foreign air carrier is approved for data link communication in accordance with XXXX (e.g., ICAO GOLD) criteria, that the aircraft and aircraft equipment are eligible and approved for data link communication and that the flightcrews are trained to conduct data link communication.
- Data link communication system make and model (M/M) approved for each aircraft M/M/S.

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- Procedures for using data link communication.
- Any other pertinent information.

NOTE: PIs may accept equipment eligibility that has been determined eligible and approved by a foreign air carrier's CAA when it is also documented by the AFM or other FAA-recognized means.

b) Foreign Air Carrier Authorization. After the principal operations inspector (POI) and principal avionics inspector (PAI) agree that the foreign air carrier has been authorized to conduct data link communications by the State of the Operator CAA, and that the foreign air carrier is eligible for data link communications operations in the U.S. National Aerospace System (NAS), the PI must select:

- The data link system (M/M).
- The data link communication system.
- The data link communication boilerplate limitation.

NOTE: FANS-1/A+ adds a latency timer to the FANS-1A/is equivalent to FANS-1A.

NOTE: If the data link or communication system is not in the table, then a request for the addition must be made to AFS-50 who, with AFS-400 concurrence, will coordinate the addition with the Air Transportation Division (AFS-200).

C. Adding or Deleting an Aircraft. Inspectors must instruct a foreign air carrier wishing to add or delete an aircraft to its part 129 OpSpecs to submit a letter or electronic transmittal to its assigned FAA office. The air carrier should address the letter to its PI, as listed in OpSpec A001, requesting the aircraft addition or deletion. The PIs assigned to the foreign air carrier must obtain and review the following documents prior to adding an aircraft to the air carrier's OpSpecs:

1) A copy of the State of the Operator-issued OpSpecs/air carrier certificate or other document, reflecting that the proposed aircraft is authorized for the proposed type of operation by the State of the Operator.

2) If applicable, any aircraft lease (wet or dry) or interchange agreements. The lease or interchange agreements must address who is responsible for aircraft maintenance, operational control, flightcrew and cabin crew responsibility, etc. If no lease or interchange agreement is applicable, review the copies of documents showing ownership of the aircraft. (See Volume 12, Chapter 2, Section 9.)

3) Approvals of the State of the Operator and State of Registry relating to the aircraft maintenance programs. This paragraph and ICAO Annex 6 establish the requirement that the aircraft's airworthiness certification be in accordance with a comprehensive and detailed code of airworthiness. Coordinate with AFS-50 if either of the following applies:

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- If the aircraft that the foreign air carrier wants to add to its operations to the United States is registered in a country (which may not be the State of the Operator) that is IASA CAT II (or has not been assessed by the FAA).
- The airworthiness certificate for the aircraft that the foreign air carrier wants to add to its operations to the U.S., which does not contain a statement that it is issued in accordance with ICAO Annex 8.

4) The following aircraft-specific documentation showing approval from the State of the Operator and State of Registry and/or compliance by the foreign air carrier, as applicable:

a) The Certificate of Airworthiness and registration issued by the State of Registry or the State of the Operator in the case of an existing Article 83 bis agreement (see Volume 12, Chapter 2, Section 9).

b) If the aircraft is subject to an Article 83 bis agreement, review the Article 83 bis agreement and ensure agreement registration with ICAO.

c) Approval by the State of the Operator for the aircraft MEL, with exception noted above in subparagraph A4).

d) Noise stage compliance for each applicable aircraft.

e) Documentation that flight deck door security requirements have been met in accordance with § 129.28.

f) Traffic Alert and Collision Avoidance System (TCAS)/Airborne Collision Avoidance Systems (ACAS) installation approval including compliance with required software version number for aircraft equipped with TCAS II.

g) Aircraft configuration information showing the State of Registry and/or State of the Operator-approved aircraft configurations. PIs must select “All Cargo,” “Combi,” “Passenger,” or “Pax and Cargo” based on the main cabin.

h) The carrier has each required approval from the State of the Operator CAA for specific operations such as RVSM, North Atlantic High Level Airspace (NAT HLA), CAT II, CAT III, instrument landing system (ILS)/precision runway monitor (PRM), Required Navigation Performance Authorization Required (RNP AR) or restricted CAT II/III approaches, Low Visibility Take-Off (LVTO) minima, land-and-hold-short operations (LAHSO), etc., to be authorized in the OpSpecs. Confirm that the carrier has authorizations for Extended Operations (ETOPS), if appropriate. Some authorizations will require additional OpSpec paragraphs to be issued.

i) Contact AFS-200, Technical Programs Branch (AFS-260), to verify that the air carrier’s insurance company has filed a properly completed Office of the Secretary of Transportation (OST) Form 6411, U.S. Foreign Air Carriers Certificate of Insurance under 14 CFR Part 205, indicating that the additional aircraft have required insurance coverage. Verify insurance by contacting the following program specialist:

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- Program Specialist (for foreign air carrier names A-Z) at 202-267-7897 or by email at AFS-260-insurance@faa.gov.
- In the case of foreign air carriers who have been issued OpSpecs managed by the Alaskan Region, insurance verification can be completed by contacting the Technical Standards Branch–General Aviation (AAL-230) for the Alaskan Region, who monitors insurance on those carriers for AFS-260, at 907-271-1308 or by email at AAL-230-insurance@faa.gov.

j) A statement from the foreign air carrier that the aircraft meets the aircraft equipment requirements of ICAO Annex 6, Part I for airplanes or Part III for helicopters as appropriate. (Refer to § 129.5(b).) The following exceptions apply:

- A foreign air carrier whose aircraft does not meet the aircraft equipment requirements of ICAO Annex 6 must apply for and receive an exemption from the Administrator in accordance with 14 CFR part 11 before the aircraft can be added to the air carrier's OpSpecs.
- When the FAA allows all U.S. carriers or a class of U.S. carriers to meet different safety standards in U.S. airspace, the FAA believes that ICAO Article 11 obligations permit the FAA to allow similarly situated carriers from ICAO member states to operate in U.S. airspace under standards that do not make distinctions among the operators based on nationality. Per the Office of Chief Counsel "…when FAA rules allow U.S. air carriers to meet different standards, then the FAA can permit foreign air carriers to operate in the U.S. airspace either under the U.S. standards appropriate to the class of air carrier or under ICAO Annex 6 standards."

5) Obtain and review aircraft-specific documentation for each U.S.-registered aircraft to verify the following:

a) For U.S.-registered aircraft, approval of the aircraft maintenance program and MEL by the FAA in accordance with part 129.

NOTE: Documents that apply to multiple aircraft and have already been reviewed for another applicable aircraft already on the OpSpecs do not have to be reviewed again for subsequent aircraft, i.e., if all of the airplane type to be added are covered by a fleet MEL, and another aircraft of the same type is added, the MEL does not need to be reviewed again. The option to review will rest with the responsible IFO. An instance when it would be advisable to review the records would be if the previously reviewed records are no longer available.

b) The air carrier has complied with supplemental inspection requirements for U.S.-registered aircraft in accordance with part 129, as applicable.

c) Digital flight data recorder (DFDR) installation is in accordance with part 129.

d) The air carrier has complied with special maintenance program requirements in accordance with part 129, as applicable.

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D. Limitations. The PI must select only the applicable limitations to the foreign air carriers operations. For additional details refer to the OpSpec A003 job aid under the guidance tab in WebOPSS.

OPSPEC A004—SUMMARY OF SPECIAL AUTHORIZATIONS AND LIMITATIONS (Required for All Air Carriers).

A. Purpose. This OpSpec summarizes optional authorizations applicable to the foreign air carrier that have been issued by OpSpecs. This OpSpec also summarizes limitations and restrictions that apply to the foreign air carrier's operations within the United States. Although this OpSpec is completed automatically by the automated Operations Safety System (OPSS) when related OpSpec paragraphs are moved into the workspace, PIs can use this OpSpec as a checklist in selecting other optional OpSpecs for issuance in the OPSS.

B. Procedure. Optional OpSpecs can be selected in the workspace by checking the blocks for the associated authorizations, limitations, or restrictions. These optional OpSpecs will then be generated in the workspace.

OPSPEC A005—EXEMPTIONS AND DEVIATIONS (Optional).

A. General. Both exemptions and deviations may be authorized for a foreign air carrier. In order for a foreign air carrier to conduct operations under the provisions of any exemption or deviation, OpSpec A005 must be issued and list the exemption or deviation. Volume 3, Chapter 2 contains the process for application and approval of exemptions or deviations.

B. Exemptions. In the left navigation area, under "CHDO," "Maintain Operator Data," "Exemptions," enter the current exemption number and expiration date. List the exemption numbers in numerical order. In the space labeled "Remark" (referencing each exemption), enter a brief description of the exemption or, if appropriate, the exempted regulations. If another OpSpec specifies certain conditions or limitations related to the exemption, enter the reference number of the other OpSpec in this space. Coordinate all exemptions with AFS-50 prior to authorization in the foreign air carrier's OpSpecs.

C. Deviations. All deviations must be first selected in the OPSS in the left navigation area, under "CHDO," "Maintain Operator Data," "Deviations." Enter the applicable 14 CFR sections to which a deviation has been granted in paragraph "b" of OpSpec A005. List the deviations in numerical order by 14 CFR section. In the space labeled "Remarks and/or References" (adjacent to each deviation), briefly describe the provisions of the deviation or indicate a reference number for the standard OpSpecs paragraph that authorizes the deviation. Coordinate all deviations with AFS-50 prior to authorization in the foreign air carrier's OpSpecs.

OPSPEC A006—FOREIGN AIR CARRIER'S PERSONNEL, DESIGNATED AGENT, AND OTHER PERSONS (Required for All Air Carriers).

A. General. This OpSpec identifies the following individuals: the foreign air carrier's management personnel, personnel designated to officially apply for and receive OpSpecs, the agent for service, and the responsible government official.

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B. Instructions for the Information Fields. The following provides direction for the information fields, which must be added to this paragraph.

1) Management Personnel.

a) Air carrier management information must be first entered into the Web-based Operations Safety System (WebOPSS) in the left navigation area under "CHDO," "Maintain Operator Data," "Personnel." If designated by the operator, the names of the Director of Maintenance (DOM), Director of Operations (DO), Director of Quality Assurance, Director of Safety (DOS), and chief pilot should be entered. If foreign equivalent titles that fulfill similar responsibilities are used, select (in the "FAA Recognized Position Title") the title default of "(Not Applicable)" and enter the equivalent title in the "Equivalent Position Title." The box for "Management Personnel (A006)" should also be checked. Once that is accomplished, moving the template from "available" to "workspace" will cause the information to be loaded automatically into the table in subparagraph a of the OpSpec. The telephone, fax, and e-mail will need to be loaded manually into A006 (once template A006 is in "workspace").

b) A foreign air carrier's management personnel may have titles significantly different from titles of management positions used in 14 CFR parts 121 and 135. In addition, under 14 CFR part 129 there is no regulatory requirement for foreign air carrier management personnel, nor is it within the FAA's authority to approve foreign air carrier management personnel.

c) The intent of OpSpec A006 is to clearly identify the air carrier's key management personnel who are fulfilling management positions in accordance with the air carrier's own requirements as well as any that are imposed by the State of Operator Civil Aviation Authority (CAA).

2) Operations Representative. OpSpec A006 subparagraph b should include the foreign air carrier's primary representative for all contacts regarding the foreign air carrier's OpSpecs and foreign air transportation operations within the United States. The name, address, title, telephone number, fax, and e-mail of the operations representative will need to be typed in manually. Some foreign air carriers will have a management representative in the United States (for example, a manager of U.S. operations). If the air carrier does not have a management representative within the United States, enter information for the operations representative located outside the United States.

3) Agent for Service.

a) An agent for service is a person or company designated by the foreign air carrier upon whom all legal notices, processes and orders, decisions, and requirements of the Department of Transportation (DOT), the FAA, and the National Transportation Safety Board (NTSB) shall be served. Once any of these documents has been served upon the foreign air carrier's agent for service, the foreign air carrier cannot claim (legally) that it did not receive the documents. Title 49 of the United States Code (49 U.S.C.) § 46103(a) requires foreign air carriers to designate an agent for service.

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b) Subparagraph c of the OpSpec should include the name, address, title, telephone number, fax, and e-mail of the air carrier's agent for service. Agent for service information must be first entered into WebOPSS in the left navigation area under "CHDO," "Maintain Operator Data," "Personnel." The box for "Agent for Service" should be checked. If the agent for service is also designated by the air carrier as authorized to apply for and receive OpSpecs, then the "Other Designated Persons (A007)" box also needs to be checked (see subparagraph B4) for more details). Once that is accomplished, moving the template from "available" to "workspace" will cause the "Name," "Address," and "Title" information to be loaded into the OpSpec automatically. The remaining contact information will need to be manually entered into OpSpec A006.

4) Personnel Designated to Apply for and Receive OpSpecs. Subparagraph d of the OpSpec should include the name, title, and parts authorized of persons designated by the air carrier as authorized to apply for and receive OpSpecs. Persons signing the OpSpecs must be first entered into WebOPSS in the left navigation area under "CHDO," "Maintain Operator Data," "Personnel." The "Other Designated Persons (A007)" box for personnel type should be checked. Also, check the boxes for the OpSpecs parts for which the designated person is responsible. Once that is accomplished, moving the template from "available" to "workspace" will cause the information to be loaded into the OpSpec automatically.

5) Responsible State Government Official. Subparagraph e of the OpSpec should include the name, address, title, telephone number, fax, and e-mail of the foreign CAA official responsible for issuing the air operator certificate (AOC) and for ensuring continuing oversight of the foreign air carrier. The name, address, title, telephone number, fax, and e-mail of the responsible State Government official will need to be typed in manually into subparagraph e of the OpSpec.

C. Safety Alerts for Operators (SAFO) and Information for Operators (InFO). Operators may go to the FAA Web site (www.faa.gov) to subscribe to SAFOs and InFOs. Once on the Web site, operators must provide their e-mail address to subscribe. Operators have the primary responsibility for obtaining SAFOs and InFOs. Principal inspectors (PI) should not take on this primary role. PIs are encouraged to advise their foreign air carriers and foreign persons of SAFO and InFO subscription availability.

OPSPEC A007. DECOMMISSIONED.

OPSPEC A008—OPERATIONAL CONTROL, AERONAUTICAL WEATHER, AND AIRPORT AERONAUTICAL DATA (Required to be Issued Only for Part 129 Air Carriers from IASA Category 2 Countries).

A. General. Operational control, aeronautical weather, and airport data is a requirement for all operators under International Civil Aviation Organization (ICAO) Annex 6. When the FAA determines, under the international aviation safety assessment program (IASA), that the State of Operator does not oversee civil aviation safety in accordance with minimum international standards, then the FAA puts additional OpSpec requirements on foreign air carriers issued an air operator certificate (AOC) by these countries. The FAA does not require that operational control, aeronautical weather, and airport data be captured for foreign air carriers

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assessed under the IASA as being from a Category 1 country because the FAA has determined that the State of Operator oversees civil aviation safety in accordance with minimum international standards.

B. Purpose. The purpose is to ensure that each 14 CFR part 129 foreign air carrier, under the oversight of an IASA Category 2 country, is operating within the United States in accordance with the ICAO Annex 6 standards for operational control, aeronautical weather and airport data, and that those requirements are:

1) Contained in the manual required by ICAO Annex 6 (Part I, paragraph 4.2.3 for airplanes, and Part III, paragraph 2.2.3 for helicopters) that has been accepted or approved by the foreign air carrier's State Civil Aviation Authority (CAA); and

2) Described or referenced in the OpSpec, preferably by the manual or sections of an air carrier's manual. When an air carrier's manual does not adequately describe the system or procedures used, a narrative description combined with references will be provided by the operator and entered in the OpSpec. The narrative description should be brief. It should provide sufficient information so that the FAA and the air carrier have the same understanding about the system or procedures used by the air carrier. The foreign air carrier shall inform their assigned FAA principal inspectors (PI) as listed in A001 of any changes when they occur.

C. Operational Control. Operational control may be provided by a dispatch organization or method of flight supervision. Operational control is defined by ICAO as "the exercise of authority over the initiation, continuation, diversion, or termination of a flight in the interest of the safety of the aircraft and the regularity and efficiency of the flight." The description of the systems or procedures for controlling flight movement as described in the air carrier's manual and referenced or described in the OpSpecs should include the following types of information, as appropriate to the kind of operation:

- Methods and procedures for initiating, diverting, and terminating flights.
- Persons or duty positions authorized to, and responsible for, exercise of operational control.
- Facilities and location of facilities used by the air carrier in the exercise of operational control.
- Communication systems and procedures used by the air carrier.
- Special coordination methods and/or procedures used by the air carrier to assure the aircraft is Airworthy.
- Emergency notification procedures.

NOTE: A method of control and supervision of flight operations is covered in ICAO Annex 6, Part I, paragraph 4.2.1.3 for airplanes, and Part III, paragraph 2.2.1.3 for helicopters.

D. Aeronautical Weather Data. The operator needs to have a system of obtaining and disseminating weather data (ICAO Annex 6, Part I, paragraph 4.3.5 for airplanes, and Part III, paragraph 2.3.5 for helicopters) so that prior to takeoff the operator has a means of determining that:

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1) A flight that is to be conducted under visual flight rules (VFR) can remain under VFR; and

2) A flight that is to be conducted under instrument flight rules (IFR) has the weather minimums necessary to make a landing at the destination airport or, if required, the alternate airport. At least one destination alternate (if required), at the estimated time of arrival (ETA), must have the weather at or above the airport operating minimums.

E. Airport Aeronautical Data. The data required in accordance with ICAO Annex 6 is at least the following types of airport aeronautical data:

1) Current Aeronautical Guides and Charts. Information relating to communication facilities, Navigational Aids (NAVAID), aerodromes, and other such information may be found in ICAO Annex 6, Part I, paragraph 6.2.3, and ICAO Annex 6, Appendices 2 and 6.

2) Minimum Flight Altitudes. The method for determining minimum flight altitudes for each route to be flown (ICAO Annex 6, Part I, paragraph 4.2.7).

3) Aerodome Operating Minima. Aerodrome operating minima shall be applicable to the type of operation as specified in ICAO Annex 6, Part I, paragraph 4.2.8. Consideration shall be given in establishing such minima for the following:

a) Airplane type, performance, and handling characteristics;

b) Flightcrew composition and experience;

c) Runways to be used;

d) Adequacy and performance of the available visual and non-visual ground aids;

e) Airplane navigation equipment to the type of operation; and

f) Obstacle clearance altitudes for landing, missed approach, and climb.

OPSPEC A009–A013. RESERVED.

OPSPEC A014. DECOMISSIONED.

OPSPEC A015–A022. RESERVED.

OPSPEC A023. DECOMISSIONED.

OPSPEC A024—AIR AMBULANCE OPERATIONS (Optional).

A. Purpose. The intent of OpSpec A024 is to promote the same understanding between the foreign air carrier and the FAA concerning the safe conduct of air ambulance operations within U.S. airspace.

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B. Manual Requirements. The foreign air carrier should have air ambulance procedures in their foreign air carrier's State Civil Aviation Authority (CAA)-approved/accepted manual. While International Civil Aviation Organization (ICAO) Annex 6 does not contain specific references to air ambulance operations, it does require that:

1) The operations manual required by ICAO Annex 6, Part I, paragraph 4.2 and Appendix 2 contain:

- Instructions outlining the responsibilities of operations personnel pertaining to the conduct of flight operations, and
- Checklists of emergency and safety equipment and instructions for its use.

2) An operator shall ensure that all operations personnel are properly instructed in their particular duties and responsibilities and the relationship of such duties to the operation as a whole, as required by ICAO Annex 6, Part I, paragraph 4.2.3.

C. Training. The foreign air carrier should ensure that all crewmembers have been trained in air ambulance procedures in accordance with a training program approved by the foreign air carrier's State CAA. While ICAO Annex 6 does not contain specific references to air ambulance training, ICAO Annex 6, Part I, paragraphs 9.3 and 12.4 require that an operator establish and maintain a ground and flight training program, approved by the State of Operator, which ensures that all flight and cabin crewmembers are adequately trained to perform their assigned duties. In addition, ICAO Annex 6, Part I, paragraph 4.2 and Appendix 2 require that all operations personnel are properly instructed in their particular duties and responsibilities and the relationship of such duties to the operation as a whole, and that instructions be contained in the operator's manual.

D. Prerequisites. Prior to issuing OpSpec A024, the inspector should review the appropriate documentation to ensure that:

1) The air carrier has procedures in its manual for air ambulance operations that its CAA has approved/accepted. Absent any guidance or requirements from the State of Operator, the air carrier may use the advisory information in the current editions of FAA Advisory Circular (AC) 135-15, Emergency Medical Service/Airplane (EMS/A), for airplanes, and/or AC 135-14, Emergency Medical Services/Helicopter (EMS/H), for helicopters. The foreign air carrier's air ambulance procedures should be consistent with those of a U.S. air carrier authorized to conduct similar air ambulance flights.

2) The carrier has air ambulance operations included in its approved crewmember training program. The minimum training should indicate that the pilot in command (PIC) (and the second in command (SIC) if appropriate) is trained in the same areas as required of all pilots and supplemented by training in any additional aircraft equipment, normal operating procedures, and emergency procedures specific to air ambulance operations. The inspector should also determine whether medical personnel participating in the flight are considered passengers or crewmembers in order to determine the extent of training required. Also, refer to AC 00-64, Air Medical Resource Management, current edition.

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3) The carrier is authorized by an appropriate government agency within the State of Operator (CAA or other agency). This may be in the form of a letter, operating certificate, or other document. The inclusion of air ambulance procedures and training in required manuals may be sufficient to determine if the operator is authorized to conduct air ambulance operations since those procedures and training will have been approved/accepted by the State of Operator.

4) The installation of the medical equipment (or air ambulance required equipment) on the aircraft (the aircraft modification) has been approved by the State of Registry and the State of Operator.

E. System References. The system approved/accepted by the State of Operator for the foreign air carrier must be described or referenced in OpSpec A024. Referencing pertinent sections of the air carrier's manual or other documents that describe the system used by the air carrier should complete the paragraph. When a single manual or document does not adequately describe a system, it may be appropriate to provide an additional narrative description of the system in additional text to complete OpSpec A024. When a narrative description (or outline) is used, it should be brief but provide sufficient clarifying information, describing the complete system for air ambulance operations.

OPSPEC A025. RESERVED.

OPSPEC A026—RESTRICTED OPERATION OF CERTAIN STAGE 2 AIRPLANES (Optional).

A. General. The intent of OpSpec A026 is to promote the same understanding between the foreign air carrier and the FAA concerning aircraft noise requirements and ensure that a foreign air carrier who operates Stage 2 aircraft to the United States is in compliance with the Airport Noise and Capacity Act (ANCA) of 1990. The ANCA prohibits the operation of civil subsonic turbojet Stage 2 airplanes over 75,000 pounds in the contiguous United States after December 31, 1999. On November 29, 1999, the President signed into law certain changes to the ANCA that affect operators of Stage 2 airplanes. These changes distinguish airplanes by type of certification and operation. The prohibition on revenue operations of Stage 2 airplanes after December 31, 1999, remains in effect.

B. Noise Requirements. The noise requirements were implemented in 14 CFR part 36 and 14 CFR part 91, §§ 91.801 through 91.877. In accordance with part 91, no foreign air carrier shall operate any aircraft to or from any airport in the contiguous United States, unless it complies with Stage 3 noise levels. Subparagraph a of OpSpec A026 reiterates this requirement. There are two exceptions to this requirement as follows:

1) Dual-Certificated Boeing 747 Airplanes. At the foreign air carrier's discretion, in order to comply with the noise requirements § 91.853, an operator of a Boeing 747 that is currently certificated for operation in either a Stage 2 or Stage 3 configuration (per the Aircraft Flight Manual (AFM)) may choose to limit the operation of that airplane to Stage 3 configuration only, to allow operation in the contiguous United States. These airplanes should be entered in subparagraph b of OpSpec A026, including make, model, and series (M/M/S), registration number, and serial number.

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2) Other Stage 2 Airplanes. The foreign air carrier may choose to restrict their operation to operations solely outside the 48 Contiguous United States. Section 91.857 requires that this restriction be included in the carrier's OpSpecs. These airplanes should be entered in subparagraph c of OpSpec A026, including M/M/S, registration number, and serial number.

C. Additional Information. The law permits a range of nonrevenue Stage 2 operations. Any operator of a Stage 2 airplane over 75,000 pounds may operate in the contiguous United States for the following purposes:

1) To sell, lease, or scrap the airplane.

2) To obtain modifications to meet Stage 3 requirements. Operators moving a Stage 2 airplane to a location for Stage 3 modification must provide a copy of the modification contract to the FAA with the application for a Special Flight Authorization (SFA).

3) To obtain scheduled heavy maintenance or significant modifications. The FAA interprets "scheduled heavy maintenance" to mean a "C" or "D" check; "significant modifications" are those requiring special knowledge or equipment not readily available elsewhere or not practicable outside the United States.

4) To deliver the airplane to a lessee or return it to a lessor.

5) To park or store the airplane.

6) To prepare the airplane for any of these events.

D. SFAs. The operator of a Stage 2 airplane that wishes to operate in the contiguous United States for any of the purposes listed above may apply to the FAA's Office of Environment and Energy (AEE) for a special authorization. The applications are due 30 days in advance of the planned flight and must provide the information necessary for the FAA to determine that the planned flight is within the limits prescribed in the law.

OPSPEC A027—LAND AND HOLD SHORT OPERATIONS (Optional).

A. General. This paragraph authorizes land-and-hold-short operations (LAHSO) for foreign air carriers operating under 14 CFR part 129, after requirements for operational policies, procedures, and training for LAHSO have been met. No air carrier may participate in LAHSO unless it has accomplished flightcrew training. The information contained in this subparagraph is critical to the safety of LAHSO and will be used in conjunction with FAA Air Traffic Order 7110.118, Land and Hold Short Operations, current edition.

B. Background. In 1997, the FAA expanded and replaced simultaneous operations on intersecting runways (SOIR) with LAHSO. SOIR, used since 1968, exclusively described simultaneous operations on two intersecting runways; either two aircraft landing simultaneously or one aircraft landing while another is taking off. LAHSO includes landing operations to hold short of an intersecting runway, taxiway, predetermined point, or an approach/departure flightpath. LAHSO, just as SOIR, is an air traffic control (ATC) tool used to increase airport capacity and maintain system efficiency and safety. In April 1999, the FAA, in coordination with

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industry, outlined changes in policy and procedures for conducting LAHSO. LAHSO procedures require both pilot and controller participation to balance the need for system efficiency and safety. These operations include landing and holding short of an intersecting runway, an intersecting taxiway, or some other predetermined point on the runway other than on a runway or taxiway.

C. Requirements. Foreign air carriers may not participate in LAHSO and the FAA will not issue OpSpec A027 unless the following conditions are met:

1) The appropriate Civil Aviation Authority (CAA) having oversight responsibility for the foreign air carrier has authorized the air carrier to conduct LAHSO.

2) The appropriate CAA certifies as to the completion of training and qualification of the flightcrew members to conduct LAHSO. The training and qualification of flightcrew members must be equivalent to that specified in OpSpec A027.

3) The appropriate Civil Aviation Authority (CAA) has certified the landing and stopping capabilities and airworthiness requirements of the airplanes that will conduct LAHSO. The airworthiness requirements and the landing and stopping capabilities of any airplane being operated in LAHSO by a foreign air carrier must be equivalent to that specified in FAA Air Traffic Order 7110.118.

4) The part 129 carriers must be identified in the local Air Traffic Directives before they can participate in LAHSO.

5) The POI has received the necessary written documentation from the appropriate CAA certifying the successful accomplishment and completion of LAHSO policies, procedures, and operational requirements specified in this order and FAA Air Traffic Order 7110.118.

6) Foreign air carriers, in order to participate in LAHSO, must ensure that English-speaking flightcrews are at the controls of the aircraft when the LAHSO clearance is accepted.

D. Procedures. OpSpec A027, subparagraph c, must reference/describe the foreign air carrier's LAHSO procedures approved/accepted by the State of Operator. These procedures may be contained in any flightcrew member manual or document readily available to flightcrew members for reference. When possible, the OpSpec should be completed by referencing pertinent sections of the carrier's manual or other documents that describe the procedures used by the carrier. When an air carrier's manual does not adequately describe the procedures used, a narrative description combined with references may be necessary. When a narrative description is used, it should be brief but provide sufficient information so that the FAA and the carrier have the same understanding about the LAHSO procedures used by the carrier.

OPSPEC A028—AIRCRAFT WET LEASE ARRANGEMENTS (Optional).

A. Purpose. Paragraph A028 is required to be issued to any foreign air carrier conducting operations to the United States under any aircraft wet lease arrangements approved by the U.S. Department of Transportation (DOT). OpSpec A028 is issued with the intent to

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promote the same understanding between two or more foreign air carriers and the FAA concerning their aircraft wet lease arrangements. This paragraph provides general direction and guidance for processing and authorizing wet lease arrangements in OpSpecs. Volume 12, Chapter 2, Section 9 contains complete information on wet lease agreements for foreign air carriers and should be reviewed prior to issuing A028.

1) When a wet lease to serve the United States is authorized for two air carriers, whether between a U.S. and foreign air carrier or between two foreign air carriers, at least the air carrier with operational control must hold appropriate economic authority. In the case of a U.S. carrier and a foreign air carrier, the U.S. carrier must have operational control and must have economic authority for the wet lease. In the case of two foreign air carriers, the carrier with operational control must have economic authority for the wet lease and to serve the United States in their own right. Some wet leases may be referred to as Aircraft Crew Maintenance Insurance (ACMI), which is a leasing arrangement whereby one airline (lessor) provides an aircraft, complete crew, maintenance, and insurance (ACMI) to another airline (lessee), which pays by hours operated. The lessee provides fuel and covers airport fees, and any other duties, taxes, etc. These leases normally only take place between two International Civil Aviation Organization (ICAO) member States. The lessor may operate them using the flight numbers of the lessee. In a damp lease, the cabin crew is provided by the lessee with safety training and the supervising purser being provided by the lessor. The terms wet lease, ACMI, and damp lease can be considered to be interchangeable. However, ACMI is more commonly used instead of damp lease.

2) When a wet lease arrangement is authorized, OpSpec A028 is issued to both the lessor and the lessee, except as otherwise allowed by this paragraph. Only those carriers with FAA-issued OpSpecs receive A028.

3) If the foreign air carrier has more than one lease agreement, OpSpec A028 must authorize all such agreements.

4) Each aircraft shall also be entered in OpSpec A003 of the primary operator (the operator who has operational control), normally the lessor.

5) A determination must be made as to which carrier has operational control. In the case of a U.S. carrier being the lessor, the U.S. carrier must have operational control.

6) A U.S. carrier may not wet lease from a foreign air carrier (see Volume 12 Chapter 2, Section 9).

B. Requirements and Definitions.

1) For the purposes of these OpSpecs, a wet lease is any leasing arrangement, other than a code-sharing arrangement, whereby a lessor such as a foreign air carrier provides an aircraft and at least one crewmember to another foreign air carrier (the lessee) where one air carrier retains operational control. A wet lease requires that authorized officers of the two parties execute a written agreement between the lessor and the lessee. A copy of the lease agreement must be provided to the responsible International Field Office (IFO) or International Field Unit (IFU) along with the statement of authorization approved by the DOT. The wet lease must be

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reviewed by the regional legal office of the certificate-holding district office (CHDO) of the U.S. air carrier when that carrier is the lessor. A valid wet lease agreement must be in force for the DOT approval period as shown in the DOT statement of authorization. Further, the only wet lease agreements that should be listed in this paragraph are those wet lease agreement(s) that are documented and authorized by the DOT. The DOT documented authorizations are in the form of an approved statement of authorization.

2) Before issuing OpSpec A028, principal inspectors (PI) will need to review the terms and conditions of the appropriate wet lease agreement. The lease agreement shall specify the primary operator's approved maintenance program, minimum equipment list (MEL), that the primary operator has operational control, and any associated procedures to be used during the wet lease operation. A valid wet lease agreement must be in force for the DOT approval period as shown in the DOT statement of authorization. Paragraph A028 shall be revised by removing authorization for any wet lease agreement at the expiration of the DOT approval period in the statement of authorization or the expiration of the wet lease agreement (if not renewed and provided to the IFO/IFU), whichever occurs first. If renewal of the DOT authority has been requested prior to the expiration of the existing DOT authority, the wet lease can continue. Enter the phrase "DOT renewal applied for" in the box for the DOT order expiration date. Verification of DOT approval must be received.

C. Procedures. The following provides direction for the information fields, which must be added to this OpSpec:

1) Paragraph a. When the foreign air carrier that is issued paragraph A028 has operational control. The name of the lessor and lessee for each agreement must be entered in the columns provided. The aircraft registration and serial number used in each agreement, the DOT statement of authorization number, date of execution, and expiration date, and the wet lease effective date and expiration date must be entered in the columns provided. If this paragraph does not apply, enter "NA" in all columns of paragraph a. If it is necessary to specify other conditions or limitations, enter them as additional text.

NOTE: When the foreign air carrier that is issued paragraph A028 has operational control, in lieu of listing each aircraft registration and serial number in paragraph a, if the wet lease agreement allows for all of the lessor's aircraft, then enter "all A/C listed on A003" in both "aircraft registration" and "aircraft serial number" columns. If the agreement allows for all aircraft of a certain type (e.g., MD–80, B737) listed on the lessor's A003, then enter "all [name type of aircraft—(e.g., MD–80)] listed on A003" in both the "aircraft registration" and "aircraft serial number" columns.

2) Paragraph b. When the foreign air carrier that is issued paragraph A028 does not have operational control. The name of the lessor and lessee of each agreement must be entered in the columns provided. The DOT statement of authorization number, date of execution and expiration date, and the wet lease effective date and expiration date must be entered in the columns provided. If this paragraph does not apply, enter "NA" in all columns of paragraph b. If it is necessary to specify other conditions or limitations, enter them as additional text.

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3) Any additional text added to the OpSpec makes the whole OpSpec nonstandard. Any additional text added to this OpSpec must be coordinated with AFS-50.

D. Paragraph Completion. Additional wet lease and paragraph completion information.

1) For a short-term wet lease (fewer than 60 days or a series of wet leases fewer than 60 days) between a U.S. carrier and a foreign air carrier, with the U.S. carrier operating flights from a foreign country to the United States, no statement of authority for the wet lease is normally approved by the DOT. In this case, the wet lease is not documented in A028 for either carrier, even though the foreign air carrier may hold OpSpecs to serve the United States. In this case, the U.S. carrier must always have operational control.

2) For a short-term wet lease (fewer than 60 days or a series of wet leases fewer than 60 days) between two foreign air carriers from the same country, a statement of authorization may or may not be issued by the DOT, dependent on the current bilateral air transport agreement. If DOT does not approve a statement of authorization, then the wet lease will not be documented in A028.

OPSPEC A029—AIRCRAFT INTERCHANGE AGREEMENTS (Optional). The intent of OpSpec A029 is to promote the same understanding between two or more air carriers and the FAA concerning their aircraft interchange agreements. This paragraph provides general direction and guidance for processing and authorizing aircraft interchange agreements in OpSpecs. Complete information on aircraft interchange agreements to include definitions for foreign air carriers is contained in Volume 12, Chapter 2, Section 9 and Volume 3, Chapter 13, Section 5. (Additional definitions may be found in Volume 3, Chapter 13, Section 2.)

A. Discussion. An interchange agreement is a form of a dry lease. An interchange agreement permits one operator to connect two points using the same aircraft but each operator's crewmembers, thereby providing greater operational flexibility and utilization of transport category aircraft by the operators. When an aircraft interchange is authorized, OpSpec A029 is issued to the primary operator (as determined by the FAA) and the interchange operator (only to the interchange and primary operator that operates to the U.S.). For the purpose of this paragraph, the primary operator is the air carrier that would normally operate the aircraft if an interchange agreement were not in effect. The primary operator always retains responsibility for the maintenance control of an aircraft that is the subject of an interchange agreement. The interchange operator is the other party to an interchange agreement. The interchange points are those airports where an aircraft may be transferred between the primary operator and the interchange operator. The transfer involves the replacement of the flightcrew of one operator with the flightcrew of the other operator.

B. Amending OpSpecs. The following scenarios will arise when amending the OpSpecs to document interchange agreements involving foreign air carriers and operations to the United States:

1) If the primary operator under an interchange agreement provides service to the United States, then the aircraft subject to the interchange will be identified in paragraph A029 of

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the primary operator's OpSpecs and included in the list of the primary operator's aircraft in paragraph A003 of its OpSpecs.

2) If the primary operator under an interchange agreement does not provide service to the United States, then the interchange points must be located outside the United States. The FAA would not issue OpSpec A029 to the primary operator.

3) If the interchange operator provides service to the United States, then the aircraft subject to the interchange will be identified in paragraph A029 of the interchange operator's OpSpecs. If the interchange operator does not serve the United States, then the FAA would not issue OpSpec A029 to the interchange operator. The interchange points must be located outside the United States in that case.

4) When U.S.-registered aircraft are included under an interchange agreement between two foreign air carriers, those aircraft must also be listed in paragraph D085 of the primary operator's OpSpecs.

C. Review Terms of the Interchange Agreement. Before issuing OpSpec A029, principal inspectors (PI) must review the terms and conditions of the appropriate interchange agreement. The interchange agreement must specify the associated procedures to be used during the interchange operation. The agreement should ensure the following:

1) When the primary operator's flightcrew is operating the aircraft, the primary operator will be responsible for and maintain operational control of the aircraft. When the aircraft is under the operational control of the primary operator, the flightcrews and dispatch personnel of the primary operator will conduct the operation.

2) The interchange operator, when its flightcrews are operating the aircraft, is responsible for maintaining operational control of the aircraft. When the aircraft is under the operational control of the interchange operator, the flightcrews and dispatch personnel of the interchange operator will conduct the operation.

3) The primary operator is responsible for the maintenance control of the aircraft at all times and must ensure that all maintenance authorizations/special authorizations are in compliance.

D. Instructions for Information Fields for OpSpec A029. The following provides direction for the information fields, which must be added to OpSpec A029 in the columns provided:

- Parties to the interchange agreement—the name to include Doing Business As (DBA) if applicable of the primary and interchange operator;
- Aircraft make, model, and series (M/M/S);
- Manufacturer's aircraft serial number;
- Aircraft registration markings from the State of Registry; and

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- The interchange points (airport name and International Civil Aviation Organization (ICAO) identifier) where operational control between air carriers will change.

NOTE: If the primary operator is a foreign air carrier that does not serve the United States then the interchange points must be located outside the United States. If the FAA downgrades the State of Operator of a foreign air carrier that is a party to an existing interchange agreement from International Aviation Safety Assessment (IASA) Category 1 to IASA Category 2, then all interchange points must be frozen at those locations. PIs must also ensure that if the interchange operator from an interchange point outside the U.S. makes any stopovers while en route to the U.S. that that route be identified because in the event of a downgrade that route would likewise be frozen.

OPSPEC A030–A035. RESERVED.

OPSPECS A036 and A040. DECOMMISSIONED.

OPSPEC A041–A046. RESERVED.

OPSPEC A447—EMERGENCY AIRWORTHINESS DIRECTIVES (AD) NOTIFICATION REQUIREMENTS FOR U.S.-REGISTERED AIRCRAFT (Required for All Carriers Operating U.S.-Registered Aircraft). (Formerly A047.)

A. Applicability. The FAA shall issue OpSpec A447 to any foreign air carrier/operator that operates U.S.-registered aircraft. Paragraph A447 establishes the emergency Airworthiness Directives (AD) notification and receipt requirements for foreign air carriers and operators, and requires the carrier/operator to maintain an up-to-date information system that provides the FAA a means of notifying the carrier/operator of telegraphic/emergency ADs. The carrier/operator of a U.S.-registered aircraft is responsible for maintaining that aircraft in an Airworthy condition, as required by 14 CFR part 91, § 91.403(a) and 14 CFR part 39. This information system must include:

1) An AD point of contact (POC) name, address, telephone, and notification method (facsimile number) for AD notification. An emergency AD that requires immediate action may be issued electronically.

NOTE: The Aircraft Certification Service (AIR) uses facsimile and/or U.S. Mail for official notification of the emergency ADs. AIR no longer uses Société International de Télécommunications Aéronautiques (SITA) or ARINC codes for electronic notification. AIR does not use e-mail for official emergency AD notification at this time.

2) Electronic means are used to distribute emergency ADs affecting transport category aircraft.

3) The “receipt” of an emergency AD notification, current notification information, and compliance with an AD is the responsibility of the carrier/operator’s management personnel.

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B. Contact Information. The foreign air carrier/operator is required to notify the FAA by signing the fax cover page and faxing it to the Delegation and Airworthiness Programs Branch (AIR-140), at facsimile number 405-954-2009 (telephone 405-954-4103) or they may fax their confirmation receipt to the directorate issuing the emergency AD. Use the directorate fax number and include all the information required in OpSpec A447.

C. Authority. ADs are substantive regulations issued by the FAA in accordance with part 39. ADs are issued under the following circumstances:

- When an unsafe condition has been found to exist in particular aircraft, engines, propellers, or appliances installed on aircraft, and
- When that condition is likely to exist or develop in other aircraft, engines, propellers, or appliances of the same type design.

D. Requirements. Once an AD is issued, no person may operate a product to which the AD applies except in accordance with the requirements of that AD.

OPSPEC A570.

A. Applicability. OpSpec A570 is a time-limited authorization that applies to transport Category turbine-powered airplanes with a type certificate (TC) issued after January 1, 1958, that, as a result of original type certification or later increase in capacity have a maximum TC'd passenger capacity of 30 or more, or a maximum payload capacity of 7,500 pounds or more. This authorization does not apply to the airplanes listed in 14 CFR part 129, § 129.117(m). Specifically, it applies to the airplanes listed in Table 12-2, Airplanes Which Require Ground Air Conditioning Systems.

Table 12-2. Airplanes Which Require Ground Air Conditioning Systems

Boeing	**Airbus**
737 series	A318, A319, A320, A321 series
747 series	A300, A310 series
757 series	A330, A340 series
767 series	
777 series	

B. Eligibility. OpSpec A570 is used to extend the compliance date in § 129.117(e) by 1 year. In order to be eligible for the extension, an operator must have notified their principal inspector (PI) before March 29, 2009, of its intention to use ground air conditioning systems on its applicable airplanes in accordance with § 129.117(k)(2) and (3) and the operator must have applied for OpSpec A570 by June 24, 2009. With the issuance of this OpSpec, the final compliance date is extended to December 26, 2018. OpSpec A570 will expire after that date.

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NOTE: Section 129.117 will be amended to show the compliance dates as discussed in subparagraph B above.

C. Action. OpSpec A570 is the joint responsibility of the principal operations inspector (POI) and the principal maintenance inspector (PMI). Inspectors should issue OpSpec A570 no later than 30 days after publication of the corrected final rule. Inspectors should use the guidance in Volume 3, Chapter 18, Section 6, OpSpec A570, to issue the OpSpec.

RESERVED. Paragraphs 12-126 through 12-176.

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VOLUME 12 INTERNATIONAL AVIATION

CHAPTER 2 FOREIGN AIR CARRIERS OPERATING TO THE UNITED STATES AND FOREIGN OPERATORS OF U.S.-REGISTERED AIRCRAFT ENGAGED IN COMMON CARRIAGE OUTSIDE THE UNITED STATES

Section 6 Part 129 Part D Operations Specifications—Aircraft Maintenance

12-269 PART D OPERATIONS SPECIFICATIONS (OPSPECS)—AIRCRAFT MAINTENANCE. The Federal Aviation Administration (FAA) issues Part D OpSpecs to foreign air carriers who conduct operations within the United States under Title 14 of the Code of Federal Regulations (14 CFR) part 129 using U.S.-registered aircraft. The FAA also issues Part D OpSpecs to foreign persons and operators using U.S.-registered aircraft operated in common carriage solely outside the United States in accordance with part 1 29, § 129.1(b). This chapter contains additional information specific to these types of operations. The FAA does not issue Part D OpSpecs to part 129 foreign air carriers who conduct operations with only foreign-registered aircraft. The following guidance gives general instructions on how to complete Part D OpSpecs. Detailed instructions on the procedures for approving a maintenance program and minimum equipment list (MEL) under § 129.14 are contained in Volume 12, Chapter 3, Section 2 and Volume 4, Chapter 4, Section 1.

OPSPEC D070 and D072. DECOMMISSIONED.

OPSPEC D085—U.S.-REGISTERED AIRCRAFT LISTING AND MAINTENANCE REQUIREMENTS. (Required for all air carriers and 14 CFR part 129, § 129.14 operators conducting operations with U.S.-registered aircraft.) OpSpec D085 identifies the maintenance program that the FAA has reviewed and approved for any U.S.-registered aircraft, as required by § 129.14. After the principal maintenance inspector (PMI) has evaluated the maintenance program that the foreign air carrier or foreign person has submitted in accordance with Volume 12, Chapter 3, Section 2, and the current edition of Advisory Circular (AC) 129-4, Maintenance Programs for U.S.-Registered Aircraft Operated Under 14 CFR Part 129, the PMI will need to issue OpSpec D085 as follows:

A. Make, Model, and Series (M/M/S), Aircraft Registration Number, and Aircraft Serial Number. All aircraft information must be first entered into the Web-based Operations Safety System (WebOPSS) in the left navigation area, under “CHDO,” then “Maintain Operator Data,” and then “Aircraft.” Aircraft used to operate solely outside the United States identify as “129.14”. Aircraft flying into the United States identify as “129”. Once the “Aircraft” data is entered, when the PMI or operator moves a new OpSpec D085 template to the workspace, the aircraft-specific information (M/M/S, aircraft registration number, and aircraft serial number) for the foreign air carrier’s or foreign person’s U.S.-registered aircraft will be auto-filled into the table(s).

NOTE: In the D085 template that is issued to foreign air carriers that operate to the United States, there is an additional column in the table that identifies if the aircraft is being used to operate to or solely outside the United States. (Aircraft

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that are used to fly to the United States are identified as “129”, and aircraft that are used to fly solely outside the United States are identified as “129.14”.)

B. Maintenance Program Document Information. Maintenance program document name, and document revision date and number. Enter the information manually into the appropriate table.

NOTE: For dry-leased aircraft, refer to additional guidance in Volume 12, Chapter 2, Section 9 and § 129.14(b).

OPSPEC D092. DECOMISSIONED.

OPSPEC D095—MINIMUM EQUIPMENT LIST AUTHORIZATION—U.S.-REGISTERED AIRCRAFT (OPTIONAL). (Required for U.S.-registered airplanes if the carrier/operator is authorized to use a MEL.)

A. General. The regulatory basis for a MEL is 14 CFR part 129, § 129.14. Without the MEL, the foreign air carrier or foreign person operating a U.S.-registered aircraft would have to operate the aircraft with all instruments and equipment operative. For MEL exceptions, see Volume 12, Chapter 2, Section 3, OpSpec A003.

B. Approval. When seeking approval of an MEL, the foreign air carrier or foreign person must show that the procedures in its maintenance program are adequate to support the use of its MEL. MELs are approved for U.S.-registered aircraft through FAA OpSpecs. Section 129.14(b)(4) states in part that the OpSpec permitting the use of the MEL is carried on board (refer to § 129.14(b)(4)).

1) The carriage on board of the MEL is not limited to hard copies. The intent of § 129.14(b)(4) is that the current and approved MEL is accessible to the flightcrew. For example, if a foreign air carrier or a foreign person is approved by their State of the Operator to carry the MEL electronically, this is an acceptable means of compliance with § 129.14.

2) An inspector conducting a ramp inspection must be able to verify that the MEL is available, approved, and up-to-date. (Refer to International Civil Aviation Organization (ICAO) Doc 8335, and see Volume 12, Chapter 3, Section 3, Figure 12-18).

C. Principal Inspectors’ (PI) Evaluation. After the principal operations inspector (POI) has evaluated the operator-submitted program and coordinated with the principal maintenance inspector (PMI) and/or principal avionics inspector (PAI) in accordance with Volume 4, Chapter 4 and Volume 12, Chapter 3, Section 2, the PIs will need to issue OpSpec D095. The aircraft make, model, and series (M/M/S), Aircraft Registration Number, Serial Number, Master Minimum Equipment List (MMEL), Revision Date and Number, and MEL Revision Date and Number for aircraft authorized for the use of an MEL must be listed in the OpSpec table.

OPSPEC D097—AGING AIRCRAFT PROGRAMS. For aging aircraft programs for 14 CFR part 129 that include approval sections for each of the aging aircraft CFRs. OpSpec/Management Specification (MSpec)/LOA D097 is the means by which the principal inspector (PI) will

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approve the operator's incorporation of the applicable aging aircraft regulations, as well as any revisions that he or she needs to incorporate into the Continuous Airworthiness Maintenance Program (CAMP). It allows the PI to select the applicable CFR and accomplish individual approvals for each, including the approval date. The PI should select the regulatory references applicable to the operator and insert the approval dates into the operator's CAMP.

NOTE: Table 1 must include the registration number; serial number; aircraft make, model, and series (M/M/S); along with the maintenance document, which incorporates the comprehensive repair assessment program.

A. Fuel Tank System Maintenance Program. When issuing the Fuel Tank System Maintenance Program the PI must ensure that the free text area of the OpSpec/MSpec/LOA is used for the following:

1) To identify and record the document(s)—by document number, revision number, and date—that are used as the source of the FAA Oversight Office-approved electrical wiring interconnection system (EWIS)/fuel tank safety (FTS) instructions for continued airworthiness (ICA).

2) If this information is contained in the operator's manual system, a reference to that location in their manual system must be recorded in the free text area.

NOTE: The PI must ensure that the operator has procedures in its manual that track any changes and approvals made to the FAA Oversight Office-approved EWIS/FTS ICA.

B. Fuel Tank Flammability Reduction (FTFR) Program. When issuing the FTFR Program the PI must ensure that the free text area of OpSpec/MSpec/LOA is used for the following:

1) To identify and record the document(s)—by document number, revision number, and date—that are used as the source of the FAA Oversight Office-approved FTFR airworthiness limitations (AL).

2) If this information is contained in the operator's manual system, a reference to that location in their manual system must be recorded in the free text area.

NOTE: The PI must ensure that the operator has procedures in its manual that track any changes and approvals made to the FAA Oversight Office-approved FTFR AL.

OPSPEC D108—MAINTENANCE PROGRAM − CONTINUOUS AIRWORTHINESS − U.S. REGISTERED AIRPLANES. (Required for all foreign air carriers and foreign persons, with U.S.-registered aircraft, conducting RVSM, or other operations in airspace requiring authorizations.)

A. General. Both operations in U.S. airspace designated as Reduced Vertical Separation Minimum (RVSM) airspace and operations in airspace designated as RVSM airspace outside the

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United States with U.S.-registered airplanes require authorization by the FAA in accordance with 14 CFR part 91, §§ 91.180 and 91.706. OpSpec D108 is also used to list the navigation equipment and navigation specification for each airplane type that a foreign air carrier (or foreign person) operating U.S.-registered aircraft operators that requires a continuous maintenance program.

1) RVSM. OpSpec D108 is used to identify the RVSM maintenance program that the FAA has reviewed and approved for any U.S.-registered aircraft as required by 14 CFR part 129, § 129.14. Before issuing OpSpec D108, the principal maintenance inspector (PMI) and principal avionics inspector (PAI) must review RVSM authorization guidance and coordinate the issuance with the principal operations inspector (POI). The PMI has to evaluate the program submitted by the operator in accordance with this order and Advisory Circular (AC) 91-85, Authorization of Aircraft and Operators for Flight in Reduced Vertical Separation Minimum Airspace. OpSpec D108 must be issued in conjunction with OpSpecs A003 of the primary operator (see Volume 4, Chapter 1, Section 5).

2) Requirements. The following are specific requirements for the airplanes used by a foreign air carrier or foreign person in part 129 RVSM operations:

a) RVSM airspace is any defined portions of airspace where, based on the regional air navigation agreement, airplanes are separated by 1,000 feet (300 meters) vertically above flight level (FL) 290. In the United States, this will include FL 290 to FL 410, inclusive. Generally, aircraft and foreign air carriers or foreign persons that have not been authorized by the State of Registry and the State of Operator to conduct RVSM operations cannot operate at FLs where RVSM is applied. Exceptions to this requirement are published by individual Air Traffic Service (ATS) providers. ATS providers have elected to implement RVSM as a means to provide more fuel-/time-efficient altitudes and routes to operators, and to enhance en route airspace capacity.

b) The following FAA RVSM Web page, http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/enroute/rvsm/, shows some examples of major areas where RVSM has been operating, or is planned to be implemented.

B. RVSM Guidance—General. International Civil Aviation Organization (ICAO) guidance material relating to airplane equipment necessary for flight in RVSM airspace is contained in the ICAO Doc. 9574, Manual on Implementation of a 300 m (1,000 ft) Vertical Separation Minimum Between FL 290 and FL 410 Inclusive. Using the guidance provided in FAA AC 91-85, inspectors will ensure that foreign air carriers or operators and aircraft meet the standards of part 91 appendix G and the guidance contained in ICAO Doc. 9574.

C. Guidance and Sources of Information.

1) FAA RVSM Homepage. The FAA RVSM homepage provides information on RVSM programs in various areas of the world. It provides a link to the domestic RVSM Web page where information is posted on plans and programs to implement RVSM in the domestic United States. It also links to the RVSM Documentation page that provides specific information on aircraft and operator approval for RVSM operations. The Web address for the RVSM

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homepage is: http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/enroute/rvsm/.

2) RVSM Documentation Web Page. The RVSM Documentation Web page provides access to regulations, guidance, documents, and contacts. This Web page is maintained by the Flight Technologies and Procedures Division (AFS-400). Click on "RVSM Documentation" at the following Web address: http://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/enroute/rvsm/documentation.

3) Regulations. Section 91.706 applies to RVSM operations outside the United States by U.S.-registered aircraft. Section 91.180 applies to RVSM operations within the United States by any civil aircraft. Both sections require that the foreign air carrier or foreign person and their aircraft comply with the standards of part 91 appendix G, and that the foreign air carrier or foreign person obtain FAA authorization to conduct those RVSM operations. The RVSM Documentation Web page provides a link to §§ 91.180, 91.706, and part 91 appendix G.

4) ICAO Annex 6—Operation of Aircraft. Part I—International Commercial Air Transport—Aeroplanes, section 7.2, contains the standard for flights in defined portions of airspace where, based on the Regional Air Navigation Agreement, a vertical separation minimum (VSM) of 300 meters (1,000 feet) is applied above FL 290. This standard requires State of Operator authorization for flight in RVSM airspace. ICAO Annex 6, section 8.2, requires the operator to provide, for the use and guidance of maintenance and operational personnel concerned, a State of Registry-approved maintenance program containing the information required by ICAO Annex 6, section 11.3. This includes the additional maintenance program requirements for RVSM.

5) FAA Guidance.

a) Volume 4, Chapter 1, Section 5, provides an acceptable means to authorize the foreign air carrier or foreign person's airplanes to conduct flight in U.S. airspace designated as RVSM airspace, and to authorize the foreign air carrier or foreign person's U.S.-registered airplanes to operate in airspace designated as RVSM airspace outside the United States. It provides detailed guidance for aircraft manufacturers, other engineering organizations, and foreign air carriers and foreign persons to follow when developing programs intended to meet the standards of part 91 appendix G.

b) If a foreign air carrier or foreign person conducting operations under part 129 requests to deviate from the practices and procedures provided in Volume 4, Chapter 1, Section 5, the inspector should forward a request for assistance through their assigned FAA International Field Office (IFO) to AFS-400. AFS-400 will respond after coordination with the International Programs and Policy Division (AFS-50) and Aircraft Maintenance Division (AFS-300).

NOTE: FAA Interim Guidance (IG) 91-RVSM, which preceded AC 91-85, is used by operators and Civil Aviation Authorities (CAA) throughout the world. ICAO Doc. 9574 cites FAA Interim Guidance 91-RVSM as an acceptable means

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for RVSM approval. It was developed in compliance with the guidance material in Doc. 9574.

6) Relationship Between RVSM Authorization and Horizontal Navigation Authorizations. In designated oceanic airspaces, foreign air carriers or foreign persons are required to obtain both RVSM authorization and certain horizontal navigation authorizations from the State of Operator's CAA. These are separate, specific authorization actions. For example, to operate in North Atlantic High Level Airspace (NAT HLA), foreign air carriers or foreign persons are required to obtain both RVSM and NAT HLA authority.

7) Traffic Alert and Collision Avoidance System (TCAS). Information on TCAS as it relates to RVSM operations can be found on the RVSM Documentation Web page. Part 91 appendix G does not require that aircraft be equipped with TCAS for RVSM operations. Part 91 appendix G, section 2, does require, however, that if an aircraft is equipped with TCAS II and is used in RVSM operations, then it must be a TCAS II that meets Technical Standard Order (TSO) C–119b, Traffic Alert and Collision Avoidance System (TCAS) Airborne Equipment, TCAS II With Optional Hybrid Surveillance (Version 7.0) or a later version. TCAS equipage requirements can be found in part 129.

8) Determining Aircraft RVSM Compliance. The phrases, "determining aircraft RVSM compliance," and "initial RVSM Airworthiness approval," both appear in RVSM documents to indicate that the FAA has determined that the foreign air carrier or foreign person's aircraft comply with part 91 appendix G, RVSM standards.

9) Inspector Handbook Guidance. Part 91 appendix G and AC 91-85, paragraph 11d, provide guidance on inspector determination that aircraft are RVSM compliant. AC 91-85, paragraph 11d(1) and (2) discuss the documents that the foreign air carrier or foreign person must submit to the FAA to show that in-service aircraft or aircraft manufactured RVSM-compliant are in compliance with the RVSM requirements of part 91 appendix G.

a) For most in-service aircraft, the RVSM Airworthiness documents take the form of Service Bulletins (SB), Service Letters (SL), or Supplemental Type Certificates (STC). These documents contain requirements that are specific to individual aircraft types or groups and generally require inspections and/or hardware or software modifications. The foreign air carrier or foreign person must submit documents to the FAA to show that the required actions have been completed for each airframe that will operate in RVSM airspace.

b) For aircraft manufactured RVSM-compliant, the Aircraft Flight Manual (AFM) or Type Certificate Data Sheet (TCDS) must contain statements that show the aircraft to be eligible for RVSM operations.

D. Domestic U.S. RVSM Operational Policy/Procedures. Until the FAA publishes operational policy and procedures for RVSM in the domestic United States, foreign air carriers can use AC 91-85, Appendix 4 as the basis for their RVSM operations training and operating practices/procedures. The FAA will publish operational procedures such as those for en route failure of RVSM systems in domestic U.S. airspace in the Aeronautical Information Manual (AIM) and, in addition, AFS-400 will publish and distribute a sample pilot bulletin that can be

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incorporated into individual operator programs. Foreign air carriers will be responsible for incorporating this material into their programs prior to conducting RVSM operations in the United States. The FAA anticipates that operational procedures unique to domestic U.S. airspace will not be extensive.

E. Monitoring Programs.

1) Objective of Monitoring. The primary goal of monitoring is to provide a quality control (QC) check on the altitude-keeping performance of the wide variety of operators and aircraft. It has been determined that this may be accomplished by sampling a number of airframes of each aircraft type that an operator will operate in RVSM airspace. Altitude-keeping performance data is analyzed to determine that the aircraft fleet, as well as individual foreign air carrier or foreign person, exhibits performance that is consistent with RVSM standards.

2) Operator Plan and Monitoring Requirements. FAA AC 91-85 paragraph 11d(8) calls for each foreign air carrier or foreign person, when applying for RVSM authority, to submit a plan to participate in monitoring programs. It further notes that the current monitoring requirements for individual operators in specific RVSM areas of operation are published on the FAA RVSM Documentation Web site.

NOTE: Foreign air carriers and foreign persons are no longer required to complete monitoring prior to being granted operational approval.

3) Monitoring Procedures. Monitoring procedures for ground-based and Global Positioning System (GPS)-based monitoring systems are published on the RVSM Documentation Web page. Foreign air carrier or foreign person aircraft of a specific type or group are monitored after they have been determined to be RVSM compliant. Currently, the foreign air carrier or foreign person can have its aircraft monitored by either the ground-based height monitoring unit (HMU) or a portable GPS-based Monitoring Unit (GMU) that can be placed on the aircraft. Foreign air carriers or foreign persons may have the option of over flying the FAA ground-based monitoring system called the Aircraft Geometric Height Measurement Element (AGHME).

F. Program Tracking and Reporting Subsystem (PTRS) Entries — RVSM Approvals Database. (U.S.-registered aircraft only.) It is imperative that the PTRS be completed in a timely manner. The FAA Separation Standards Analysis Branch (ANG-E61) is retrieving PTRS information and compiling it into a database of RVSM aircraft and operator approvals. It is also forwarding the information to the international bodies tasked with tracking RVSM aircraft/operator approval.

NOTE: This information is being used to find and investigate aircraft that fly at RVSM FLs but are not RVSM-approved. The database of RVSM approvals is not, however, used in real time to grant or deny clearance into RVSM airspace.

1) Make separate PTRS entries, as follows for U.S.-registered aircraft:

a) In-service U.S.-registered aircraft. Refer to AC 91-85, paragraph 11d(1). When the foreign air carrier or foreign person provides documentation that RVSM work is

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completed on individual airframes in accordance with appropriate Airworthiness documents (e.g., SBs, STCs), the PTRS must be updated.

b) U.S.-registered aircraft manufactured RVSM-compliant. A PTRS entry is also required for "Initial Airworthiness Approval" of aircraft that are RVSM-compliant on delivery. When the POI issues the OpSpecs may also be used for the Airworthiness and avionics activity code.

c) OpSpecs issuance. When an inspector issues OpSpecs authority for each specific aircraft, the PTRS must be updated.

d) Other actions.

NOTE: When "Other" actions, as described in Table 12-3, are taken, the PTRS must be updated.

2) The IFO will update the system, at a minimum, with the specific items listed below.

3) Specific PTRS entries are as follows:

- Section I—Transmittal.
- Part 129.
- Status: Closed.
- Results: Completed or Assisted.
- Closed date: Date of Initial Airworthiness Approval or date OpSpecs were issued.
- Designator: Four-letter code.
- Tracking: Used for all operators, the date RVSM authorization was withdrawn.
- Miscellaneous: Manufacturer's aircraft serial number.

4) Section IV—Comments.

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Table 12-3. Program Tracking and Reporting Subsystem Codes

	INITIAL AIRWORTHINESS APPROVAL (U.S.-Registered Aircraft)	**OPSPECS GRANTED**	**OTHER***
Operations Activity Code	None	1411	1413
Airworthiness Activity Code	3411	None	3413
Avionics Activity Code	5411	None	5413
NOTE: For in-service aircraft, approval means required Service Bulletin (SB), Supplemental Type Certificate (STC), or aircraft service change work was accomplished. For aircraft manufactured Reduced Vertical Separation Minimums (RVSM)-compliant, Aircraft Flight Manual (AFM) or other appropriate documents found to show RVSM compliance.			
*"Other" may include actions such as: N-number change; withdrawing RVSM approval due to transfer of airframe to a different operator; investigation of oceanic navigation error report; etc.			

Table 12-4. Program Tracking and Reporting Subsystem Comment Codes

PART 129 OPERATORS	**PRIMARY AREA**	**KEY WORD**	**OPINION CODE**
Initial Airworthiness Approval	A or F	643	I
Full Reduced Vertical Separation Minimums (RVSM) Approval (OpSpecs Issued)	A or F	643	I
Other	A or F	699	I

5) Additional Section IV Comments.

a) For all foreign air carriers or foreign persons: Amplifying remarks why RVSM approval was withdrawn.

b) For all foreign air carriers or foreign persons: If available, Aircraft Mode S address code.

G. NAT HLA. Operations within NAT HLA by U.S.-registered aircraft requires FAA authorization. NAT HLA is defined as that volume of airspace (as defined by ICAO Doc 7030) between flight level (FL) 285 and FL 420 within the oceanic control areas of Bodo Oceanic, Gander Oceanic, New York Oceanic East, Reykjavik, Santa Maria, and Shanwick, excluding the

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Shannon and Brest Ocean Transition Areas. The PAI must make certain that the air carrier has appropriately installed the required long-range navigation and communication equipment on the aircraft (with the appropriate approvals). The inspectors must also verify that the AFM (or supplement) stipulates that the navigation equipment be specifically approved for operations in NAT HLA. The PAI should verify (and require) that the foreign carrier or foreign person incorporates into its FAA-approved maintenance program instructions for continued airworthiness (ICA) for the long-range navigation and communication equipment. The air carrier must meet the requirements for NAT HLA operations found in ICAO Doc 7030, Regional Supplementary Procedures – North Atlantic, Chapter 4, Navigation, or equivalent document.

NOTE: RVSM has been implemented at all flight levels in NAT HLA and airplanes must also be authorized to conduct RVSM operations in accordance with § 91.706. (See Volume 3, Chapter 18, Section 4, OpSpec B046.)

H. Basic Area Navigation (B-RNAV)/Area Navigation (RNAV 5) and Precision Area Navigation (P-RNAV)/RNAV 1. Operators of U.S.-registered aircraft operating solely outside the United States that require authorization to conduct RNAV operations in Europe (B-RNAV/RNAV5 or P-RNAV/RNAV 1) shall receive such an authorization in OpSpec D108. For additional guidance see Volume 3, Chapter 18, Section 4, OpSpec B034, paragraph B.

I. Instructions for Information Fields. Inspectors should complete OpSpec D108 as follows:

1) Make, Model, and Series (M/M/S), Aircraft Registration Number, and Aircraft Serial Number. For each applicable U.S.-registered M/M/S, Registration and Serial Number(s) entered into Web-based Operations Safety System (WebOPSS), “CHDO”, “Maintain Operator Data,” “Aircraft” when editing the aircraft information, under “Authorization” select “Maintenance”, move it with the green arrow from the left to the right column, and save your edits. Once entered, the information will be auto-filled into the table in OpSpec D108 when D108 is moved into workspace. If already in workspace and there is a need to add new aircraft, then the add new data icon can also be selected. This will redirect to the Operator – Aircraft screen where the data may be preloaded.

NOTE: An applicable aircraft for the purpose of D108 is a U.S.-registered aircraft continuously maintained to RVSM, NAT HLA, B-RNAV, P-RNAV, Required Navigation Performance (RNP)-4 and RNP-10 maintenance program as applicable.

2) RVSM Maintenance Program Document Name, Revision Date and Number, and Expiration Date. If aircraft is authorized RVSM, in the columns under the heading for operation in RVSM airspace, enter the approved maintenance program name, document revision date and number. If applicable, enter the program expiration date, otherwise enter N/A. If aircraft is not authorized RVSM, in the columns under the heading for operation in RVSM airspace, enter “not authorized” in each column.

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3) Airspace Requiring Navigation Performance. For navigation performance the following applies:

a) Not authorized. If not authorized by State of Operator to operate in airspace requiring navigation performance, then select "N/A" in the Navigation Equipment and Performance columns.

b) NAT HLA. Enter the long-range navigation system (LRNS) (manufacturer/model) authorized for operations in NAT HLA in the left column of the table under the heading of operation in airspace requiring navigation performance. For example: Boeing 747-400.

1. If the navigation equipment for the airplane type has a dual or redundant (separate and independent) LRNS systems, then in the right hand column, under Navigation Performance select "MNPS."

2. For flight operations in NAT HLA over routes *for use by aircraft not equipped with two LRNSS* (see Volume 4, Chapter 1, Section 5), select (in the right hand column, under Navigation Performance) the following: *MNPS only on routes for use by aircraft not equipped with two LRNSS.* This authorization permits revenue operations while positioning the airplane for repair of a malfunctioning navigational system. Additionally, other aircraft and navigational equipment combinations, which the air carrier may need to ferry over these routes in nonrevenue operations, should be listed. This is necessary because § 91.706 requires NAT HLA authorization regardless of revenue considerations.

NOTE: If MNPS is selected from the dropdown in the authorizations column, then subparagraph b must be checked. Subparagraph b speaks to suitable displays at each pilot's station.

NOTE: The standard for operation in any airspace is determined by the Air Navigation Service Provider (ANSP); for example, in the United States it would be FAA Air Traffic Organization (ATO). If the operator has RNP-4 capability, then they should be encouraged to request RNP-4 because RNP-4 aircraft could operate in both RNP-4 and RNP-10 airspace.

OPSPEC D301—AIRCRAFT NETWORK SECURITY PROGRAM. Linking OpSpec D301 to Volume 3, Chapter 61.

OPSPEC D485. DECOMMISSIONED.

RESERVED. Paragraphs 12-270 through 12-289.

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CHAPTER 2 FOREIGN AIR CARRIERS OPERATING TO THE U.S. AND FOREIGN OPERATORS OF U.S.-REGISTERED AIRCRAFT ENGAGED IN COMMON CARRIAGE OUTSIDE THE U.S.

Section 9 Lease and Interchange Agreements, and Charter Agreements

12-349 GENERAL. The leasing of large transport category aircraft between a U.S. and foreign air carrier or between two foreign air carriers is widely used. The Federal Aviation Administration (FAA) defines an aircraft lease as a contract by which one person grants the right of exclusive possession and use of a certain aircraft to another person for a specified period or a defined number of flights. Lease agreements can be characterized as a dry lease, an interchange agreement, or a wet lease. (Additional definitions may be found in Volume 3, Chapter 13, Section 2.)

12-350 DRY LEASE. The term "dry lease" means any arrangement whereby a lessor agrees to provide an entire aircraft without crew to an operator. The lessee operator of the aircraft must hold the necessary economic and operating authority for the aircraft, and it must exercise operational control over the aircraft. Accordingly, the lessee must provide the necessary flight and cabin crewmembers, ground personnel, dispatchers, and ground facilities to operate the leased aircraft.

A. Operations Specifications (OpSpecs). The dry leasing of U.S.- or foreign-registered aircraft (without crewmembers) by foreign air carriers operating to the United States and foreign persons engaged in common carriage outside the United States is a common practice. Where the lessor of the aircraft is a U.S. or foreign air carrier, the Federal Aviation Administration (FAA) must remove the leased aircraft from the lessor carrier's OpSpecs and list it on the lessee's OpSpecs, except when the lease is in the form of an interchange agreement.

B. Regulatory Compliance.

1) Each foreign air carrier operating to the United States must comply with Title 14 of the Code of Federal Regulations (14 CFR) part 129 and the applicable provisions of part 91.

2) When operating a U.S.-registered aircraft within or outside the United States in common carriage, each foreign air carrier and foreign person also must comply with:

a) All applicable regulatory requirements in 14 CFR, including, but not limited to, the following:

- Parts 21 (airworthiness), 43 (maintenance), and 65 (airmen other than flight crewmembers), as applicable.
- Parts 61 (in particular, §§ 61.3 and 61.77) and 63 (in particular, §§ 63.3, 63.23, and 63.42 (personnel licensing requirements for flightcrew members (pilot, flight engineer, and flight navigator)) (see Volume 5, Chapters 2 and 4)).

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- Part 91 (in particular, §§ 91.1, 91.701 through 91.704, and 91.706).
- Part 129, §§ 129.5, 129.7, 129.9, 129.11, 129.14, 129.20, and 129.24, and subparts B and C (U.S.-registered aircraft operated solely outside the United States in common carriage by the foreign person or foreign air carrier. Refer to § 129.1(b)).

b) Title 49 of the Code of Federal Regulations (49 CFR) part 175 (rules for loading and carrying dangerous articles and magnetized materials in any civil aircraft in the United States and in civil aircraft of U.S.-registry anywhere in air commerce).

c) All applicable orders and regulations of other U.S. agencies and courts, and with all applicable laws of the United States.

C. OpSpecs Applications and Amendments. Foreign air carriers should apply for OpSpecs or seek an amendment of their OpSpec authorizing the use of any dry-leased U.S.-registered aircraft in accordance with §§ 129.5, 129.7, 129.9, and 129.11. The FAA will process such applications in accordance with Volume 3, Chapter 1.

12-351 INTERCHANGE AGREEMENT. An interchange agreement is a form of a dry lease agreement. An interchange agreement permits two air carriers to connect two or more points on a route using the same aircraft but each operator's crewmembers. For example: operator "a" (the primary operator) operates an aircraft from point "x" to point "y" (the interchange point). At point "y," operator "b" (the interchange operator) assumes operational control of the same aircraft to fly from point "y" to point "z" with operator "b's" own crew.

A. Definitions. The following definitions apply to interchange agreements:

1) The Primary Operator. The primary operator under an interchange agreement is the U.S. or foreign air carrier that would normally operate the aircraft if the interchange were not in effect. The primary operator always retains responsibility for the maintenance control of an aircraft that is the subject of an interchange agreement.

2) The Interchange Operator. The interchange operator is the other U.S. or foreign air carrier party to the interchange agreement.

3) The Interchange Points. The interchange points are those airports where an aircraft may be transferred between the primary operator and the interchange operator. The transfer involves the replacement of the flightcrew of one operator with the flightcrew of the other operator.

B. Sample Scenarios. The following scenarios may arise when amending OpSpecs to document interchange agreements involving foreign air carriers and operations to the United States:

1) If the primary operator under an interchange agreement is either a U.S. operator or a foreign air carrier operating to the United States, the aircraft subject to the interchange will be identified in paragraph A029 of the primary operator's OpSpecs and included in the list of the primary operator's aircraft in paragraph A003 of its OpSpecs.

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2) If the primary operator under an interchange agreement does not provide service to the United States, then the interchange points must be located outside the United States. The FAA would not issue OpSpec A029 to the primary operator.

3) If the interchange operator provides service to the United States, the aircraft subject to the interchange will be identified in paragraph A029 of the interchange operator's OpSpecs. If the interchange operator does not serve the United States, the FAA would not issue OpSpec A029 to the interchange operator. The interchange points must be located outside the United States in that case.

4) When U.S.-registered aircraft are included under an interchange agreement between two part 129 air carriers, those aircraft shall also be listed in paragraph D085 of the primary operator's OpSpecs.

NOTE: The parties to the interchange agreement may transfer operational control of the aircraft only at an interchange point designated in the appropriate OpSpecs.

C. U.S. or Foreign Registry. Under an interchange agreement, the aircraft may be of either U.S. or foreign registry. However, if the aircraft is foreign-registered, it must specifically comply with 14 CFR part 121, § 121.153(c) or part 135, § 135.25(d), as appropriate, in order to be operated by a U.S. certificate holder. If the aircraft is of U.S. registry, the foreign air carrier or foreign person must comply with the applicable 14 CFR requirements while it has operational control of the aircraft (see Volume 3, Chapter 13, Section 5).

12-352 WET LEASE. As defined in 14 CFR part 110, § 110.2 and part 119, § 119.53, a wet lease is any leasing arrangement whereby a person agrees to provide an entire aircraft and at least one crewmember. A wet lease is a commercial arrangement whereby an aircraft owner leases both the aircraft and at least one crewmember to another person for his/her exclusive use for a specified period or a defined number of flights. A wet lease does not include a code-sharing arrangement.

NOTE: When an air carrier provides less than an entire aircraft crew, the wet lease is occasionally referred to as a "damp lease." Title 14 CFR authorizes only a wet lease or dry lease; therefore, the term "damp lease" is used for commercial purposes only.

A. Office of the Secretary of Transportation (OST) Characterization. When the OST characterizes a lease as a wet lease, the OST's definition of the term applies to economic authority. The OST's characterization of wet lease does not necessarily make the lessor responsible for operational control, which is one of the safety considerations for a wet lease authorized by the FAA. Therefore, the FAA's definition of "wet lease" in § 110.2 and in OpSpec A002 is different from the OST definition and applies solely to the safety authority falling under FAA's oversight.

B. FAA Restriction. A U.S. air carrier may not wet lease an aircraft from any foreign air carrier or foreign person, as described in part 119, § 119.53(b), part 121, § 121.153(c), and part 135, § 135.25(d). This restriction is based in part on the prohibition on cabotage under

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Title 49 of the United States Code (49 U.S.C.) Chapter 411, § 41703, and partially on safety oversight considerations under § 44701.

NOTE: OST may authorize a U.S. air carrier to obtain an entire aircraft with crew under certain arrangements characterized as wet lease agreements by parties involved. The FAA and OST refer to these agreements as provision of aircraft with crew arrangements. More details may be found in paragraph 12-354.

C. Operational Control. Depending on the laws of the State of Operator, a foreign air carrier may be able to wet lease aircraft from a U.S. air carrier or from another foreign air carrier. Although the FAA permits U.S. air carriers to wet lease aircraft to foreign air carriers and foreign persons, those operators usually prefer to dry lease aircraft in order to have operational control of the leased aircraft.

1) FAA's policy requires each U.S. air carrier to retain operational control of each wet-leased aircraft listed on its OpSpecs regardless of whether the aircraft is U.S.- or foreign-registered. This policy applies to aircraft wet-leased to any foreign air carrier and to any foreign person. If there is any ambiguity in the terms of the lease agreement (e.g., operational control, or whether the arrangement should be referred to OST for review as a provision of aircraft with crew or other charter agreement), the principal inspector (PI) should refer the lease to the Regional Counsel for a determination.

2) To make a proper determination of operational control, it may be necessary to ask the lessor to submit any clarifying or supplemental information regarding the lease arrangement. Section 119.53 provides that the FAA will determine that a party has operational control of flights if that party exercises authority and responsibility for a specified number of operational functions. In cases where doubt or controversy exists, the Administrator will also consider additional factors such as who is responsible for maintenance, servicing, and crewmember training.

D. OpSpecs Amendments. Prior to engaging in a wet lease operation to or from the United States, a foreign air carrier must apply for, or seek, an amendment of its OpSpecs to list the aircraft in OpSpec A028. The FAA requires such an amendment whether the other party to the wet lease is a U.S. or foreign air carrier. In support of the amendment, the foreign air carrier must submit to the FAA a copy of the wet lease arrangement or a written memorandum of the pertinent terms of the wet lease. The FAA will review the documents pertaining to the wet lease as follows:

1) Identify the aircraft that are subject to the wet lease. If the lessor is a foreign air carrier, OpSpec A003 of the lessor's OpSpecs must list the aircraft, and in addition, if the aircraft is U.S.-registered, OpSpec D085 must also list the aircraft. If the lessor is a U.S. air carrier, OpSpec D085 must list the aircraft.

2) Determine if the lessor or grantor transfers legal, or actual possession (i.e., custody) of the entire aircraft (see Volume 3, Chapter 18, Section 3, and OpSpec A028). If not, the arrangement is not covered by the § 119.53 wet lease prohibition, and the arrangement should be referred to OST (see paragraph 12-354).

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3) Determine which air carrier will exercise operational control over the wet lease operations. If the lessor is a U.S. air carrier, it must retain operational control of each wet-leased aircraft.

4) Confirm that each party to the wet lease arrangement holds the necessary operating and economic authority to conduct the wet lease. Each foreign air carrier must hold the appropriate economic authority from the OST to conduct wet lease operations to the United States.

E. FAA/OST Differences. Because of differences in the way the FAA and the OST define and apply the term "wet lease," the analysis of a wet lease transaction can be complicated. For example, the OST also includes wet lease transactions within the scope of what constitutes a charter (see paragraph 12-354).

F. Wet Lease Types. Operational control under an FAA-defined wet lease will be one of two types.

1) The Lessor/U.S Certificate Holder Will Have Operational Control of the Listed Aircraft. If the lessor certificate holder will have operational control, that certificate holder is authorized to conduct operations in accordance with each applicable wet lease arrangement identified in the first table of OpSpec A028.

a) The certificate holder issued this authorization must at all times be responsible for and maintain operational control and airworthiness of each aircraft identified in each lease arrangement. The first table of the OpSpec must list the lease arrangement(s).

b) The nationality, registration, and serial number of each aircraft used under the terms of the wet lease arrangement will be identified in paragraph D080 or D087, as applicable, and D085 of the certificate holder's OpSpecs.

c) While conducting operations under this authorization, the lessor may be authorized to use the call sign and flight number(s) of the lessee, provided that, for all flights the lessor certificate holder explains, in the remarks section of the applicable flight plan, that the lessor is conducting the flight under the call sign and flight number(s) of the lessee.

d) Both lessor and lessee certificate holders will have their role and information on the wet lease arrangement documented in OpSpec A028 of their respective OpSpecs.

2) The Lessor/U.S. Certificate Holder Will Not Have Operational Control of the Listed Aircraft. This type of arrangement is rare. For the FAA to approve such an arrangement, the parties will have to establish, to the FAA's satisfaction, how the lessee will exercise operational control of the aircraft. For the party to each applicable wet lease who will not have operational control, that determination must be stated in the second table of the respective certificate holder's OpSpec A028. Under this example, the lessor certificate holder not having

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operational control will exercise the wet lease arrangement(s) listed in the second table with the following limitations and provisions:

- The lessee, as the party exercising operational control, is solely responsible for the safety and regulatory compliance of the flights.
- The lessee, as the party having operational control in the wet lease arrangement listed in the second table, must at all times be responsible for, and maintain, the operational control and airworthiness of the aircraft identified in each wet lease arrangement listed.
- The lessor certificate holder is not authorized to have, and may not have, operational control of any operation conducted by the lessee certificate holder under this paragraph of the OpSpec.
- Both lessor and lessee certificate holders will have their role and information on the wet lease arrangement documented in OpSpec A028 of their respective OpSpecs.

12-353 CHARTERS.

A. Definition. A charter is an agreement whereby a person agrees to provide all, or part of, the lift capacity of an aircraft it operates to another person for a defined period of time or number of flights. In short, a charter is the provision of a flight service.

B. Elements. In a charter arrangement, the following elements are usually present and distinguish a charter from a wet lease arrangement.

- The provision of all or part of the aircraft's lift capacity to another person;
- The person contracting for the lift capacity is not the operator of the aircraft;
- A specific aircraft is not identified; and
- There is no transfer of exclusive possession and use of that aircraft to the other person. For example, the person providing the lift capacity either:
  - Retains the right to substitute other aircraft for the aircraft identified in the agreement; or
  - Retains the right to use the aircraft identified in the agreement for its own purposes when the aircraft is not needed by the operator receiving the lift capacity.

C. Economic Authority. A foreign air carrier conducting charter operations to or from the United States must hold the appropriate economic authority from OST under 14 CFR part 375. The FAA does not issue OpSpecs to those operators. However, part 129 operators conducting nonscheduled flights to or from any point in the United States must provide prior notification, in accordance with the reporting requirements of OpSpec A001.

12-354 PROVISION OF ENTIRE AIRCRAFT WITH CREW. Under an OST-approved provision of aircraft with crew arrangement, a foreign air carrier may provide an entire aircraft with crew to a U.S.-certificated air carrier without acting contrary to the FAA's regulations that generally prohibit a foreign air carrier from wet leasing aircraft to a U.S-certificated air carrier. This agreement has features that are characteristic of a charter; however, the parties to the

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agreement may characterize it as a wet lease. If the lessor/grantor never transfers legal possession of the entire aircraft, the arrangement is not a prohibited § 119.53 wet lease. Likewise, if the arrangement makes it clear that the lessor/grantor never transfers actual possession (custody) of the entire aircraft, the arrangement is not a § 119.53 wet lease. In both cases, the arrangement might actually be a charter (a services agreement for provision of a flight service to a customer).

A. Approval Process. Under regulatory guidance issued by the OST, the foreign operator providing the lift capacity for the U.S. air carrier will include in its application a copy of the agreement. The FAA will review the agreement against the essential elements in paragraph 12-354(B) and provide its recommendation to the OST. The OST will review the FAA's recommendations and determine if the operation meets the requirements of 14 CFR part 212, is in the public interest, and whether to grant the authorization.

NOTE: The responsible Flight Standards District Office (FSDO), International Field Office (IFO), and International Field Unit (IFU) for the operator providing the entire aircraft with crew must maintain a copy of the agreement as specified in Volume 12, Chapter 5, Section 1, paragraph 12-454.

B. Essential Elements of the Provision. The essential elements of a provision of an entire aircraft with crew arrangement by a foreign air carrier to a U.S. air carrier are as follows:

1) Operational control remains with the operator providing the lift capacity.

NOTE: The operational control determination will be based on the terms of the agreement and all other relevant factors, such as authority over initiating, conducting, or terminating a flight.

2) Legal, and actual possession (custody) of the aircraft remains with the operator providing the lift capacity. Factors relevant to the determination of legal and actual possession include:

- The right to substitute other aircraft for the aircraft identified in the agreement; or
- The right to use the aircraft identified in the agreement for its own purposes when the aircraft is not needed by the operator receiving the lift capacity.

3) The country that issued the air operator certificate (AOC) of the operator providing the lift capacity will oversee the operations and would be continuously rated as Category 1 under the FAA's International Aviation Safety Assessment (IASA) program.

4) The U.S. air carrier obtaining the lift capacity has assessed the level of safety of the service to be provided by the foreign air carrier involved and has found it to be satisfactory.

5) Both parties to the agreement must apply to the OST for any necessary amendments to their economic permits.

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NOTE: The operator providing the lift capacity must provide all necessary flight and ground crew, crew training, ground handling, communications, dispatch of the aircraft, decision of the particular aircraft to be used in any given operation, and authority over the pilot in command (PIC) in all matters concerning flight operations, and be carried out in accordance with standards and practices as set out in its Flight Operations Manual (FOM).

NOTE: Agreements between part 129 air carriers, or between a foreign person and a part 129 air carrier to wet lease aircraft, or provide an entire aircraft with crew must also be reviewed against the principles described in paragraphs 12-353 and 12-354 to determine whether the arrangement is a wet lease, typical charter, or provision of an entire aircraft with crew.

12-355 ARTICLE 83 BIS. Under international law, the State of Registry of an aircraft is responsible for overseeing the airworthiness of the aircraft, the licensing of its flightcrew members, and compliance by the operator of the aircraft with the applicable rules of the air.

A. Diminished Ability to Carry Out Oversight Responsibilities. When an operator certificated in one country operates an aircraft registered in another country, the ability of the State of Registry to carry out its oversight responsibilities may be diminished or less efficient. In such cases, the State of Registry and the State of Operator may enter into an agreement pursuant to Article 83 bis of the Convention on International Civil Aviation (the Chicago Convention), transferring some or all of the oversight responsibilities of the State of Registry to the State of Operator.

NOTE: The term “bis” is a Latin term used throughout the convention to designate the articles created between existing sequentially numbered articles. For further information on the Chicago Convention, see Volume 12, Chapter 1.

B. Transfer of Oversight Responsibility. Among the visible effects of a transfer of oversight responsibilities pursuant to an Article 83 bis agreement are the following:

1) If the State of Registry transfers its airworthiness oversight responsibilities under the Article 83 bis agreement, the State of Operator will issue a certificate of airworthiness to the aircraft and oversee the continuing airworthiness of the aircraft in accordance with its laws and regulations.

2) If the State of Registry transfers its personnel licensing oversight responsibilities under an Article 83 bis agreement, the flightcrew members will hold airman certificates issued or validated by the State of Operator pursuant to its laws and regulations. Each person acting as a flightcrew member must hold a certificate or license that shows the person’s ability to perform duties in connection with the operation of the aircraft.

3) An aircraft that is subject to an Article 83 bis agreement will continue to be registered in the State of Registry and to bear that State’s registration marks. The State of Registry will issue the registration certificates, which must be carried aboard the aircraft. A copy of the Article 83 bis agreement may also be carried aboard the aircraft.

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C. Article 83 Bis Agreement. A State of Registry and State of Operator are not required to enter into an Article 83 bis agreement as to a particular aircraft. However, once they execute such an agreement, it becomes effective as to third party States only when they register it with the International Civil Aviation Organization (ICAO) and when ICAO makes it public, or when one of the parties to the agreement communicates the existence and scope of the agreement to those third party States.

D. Certification Oversight of Air Carriers Transfer of Responsibilities. The State of Operator cannot transfer the responsibilities for the certification and oversight of an air carrier to another State pursuant to an Article 83 bis agreement.

RESERVED. Paragraphs 12-356 through 12-370.

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CHAPTER 5 INTERNATIONAL FIELD OFFICE RECORDKEEPING—FOREIGN AIR CARRIERS

Section 1 Recordkeeping

12-453 GENERAL. Each responsible Federal Aviation Administration (FAA) International Field Office (IFO) or Flight Standards District Office (FSDO) ensures that appropriate records on each Title 14 of the Code of Federal Regulations (14 CFR) part 129 foreign air carrier are maintained in accordance with this section and that they contain at least the documents listed in paragraph 12-454 or 12-455, as appropriate. These records should be maintained in accordance with the current edition of FAA Order 1350.14, Records Management. Managers should develop checklists or other documentation to reflect their review/acknowledgement of missing or unrecoverable documents. For issues regarding accidental destruction of records, refer to Order 1350.14.

12-454 FOREIGN AIR CARRIER WITH FAA-ISSUED PART 129 OPERATIONS SPECIFICATIONS (OPSPECS) CONDUCTING OPERATIONS WITHIN THE UNITED STATES. The IFO responsible for the foreign air carrier's OpSpecs maintains the following records, as appropriate, for each foreign air carrier that operates aircraft of U.S. registry or foreign registry, or both. Records may be maintained either in paper form or electronically, provided that, for electronically maintained records, adequate electronic backup is maintained to prevent loss of required records.

A. Permanent Record.

1) Copy of current foreign Air Operator Certificate (AOC).

2) Copy of current foreign OpSpecs and/or other special provisions.

3) Current economic authority (permit, exemption, or registration, as appropriate).

4) Current FAA-approved minimum equipment list (MEL) (U.S.-registered aircraft only).

5) Current FAA-approved maintenance program (U.S.-registered aircraft only).

6) Copy of current lease agreement or written memorandum (conveyance) of the terms of a lease for U.S.-registered aircraft, including amendments.

7) Copy of current lease agreement or written memorandum (conveyance) required for aircraft wet lease or interchange operations, including amendments.

8) Copy of current application package for each Special Purpose Pilot Authorization (SPPA) (foreign air carriers using U.S.-registered aircraft).

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NOTE: For subparagraphs 12-454A9)–13), destroy any 5-year-old superseded or canceled case files.

9) Original application package resulting in the issuance of FAA OpSpecs.

10) Copy of original or superseded economic authority (permit, exemption, or registration, as appropriate).

11) Copy of original FAA-issued OpSpecs, unless electronically maintained (e.g., in the Web-based Operations Safety System (WebOPSS)).

12) Copy of amended FAA-issued OpSpecs, unless electronically maintained (e.g., in WebOPSS).

13) Subsequent requests for amendment of FAA OpSpecs.

B. General Correspondence Files. Destroy any 2-year-old routine correspondence, reports, and safety-related documents pertaining to the administration of programs for the safety of flight of civil aircraft by assuring the airworthiness of aircraft, the competence of airmen, the adequacy of flight operations and maintenance activities, and the evaluation of in-flight facility performance, but *excluding* files described elsewhere listed below.

C. Legal Enforcement Case Files. These are case files relating to legal actions taken with respect to alleged violations of 14 CFR, consisting of violation reports, technical analyses, evidentiary materials, sanction documents, and related correspondence. Transfer these to the Federal Records Center (FRC) 2 years after the case is closed in the Enforcement Information System (EIS). (Refer to Order 1350.14.)

1) For cases resulting in no action, destroy 30 days after (or no more than 90 days after) the case is closed in the EIS.

2) For cases resulting in administrative enforcement action, destroy information that identifies the individual 2 years after the case is closed in the EIS.

12-455 FOREIGN PERSON OR FOREIGN AIR CARRIER WITH FAA-ISSUED PART 129 OPSPECS CONDUCTING OPERATIONS WITH U.S.-REGISTERED AIRCRAFT SOLELY OUTSIDE THE UNITED STATES. The IFO responsible for the foreign air carrier or operator's OpSpecs maintains the following records, as appropriate, for each foreign air carrier or operator that operates aircraft of U.S. registry. Records may be maintained either in paper form or electronically, provided that for electronically maintained records adequate electronic backup is maintained to prevent the loss of any required records.

A. Permanent Record.

1) Copy of current foreign AOC.

2) Copy of current foreign OpSpecs and/or other special provisions.

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3) Current FAA-approved MEL.

4) Current FAA-approved maintenance program.

5) A copy of current lease agreement or written memorandum (conveyance) of the terms of a lease.

6) A copy of current lease agreement or written memorandum (conveyance) required for aircraft wet lease or interchange operations.

7) Copy of current application and renewal (or computerized list) for each SPPA.

NOTE: For subparagraphs 12-455A8)–11), destroy 5-year-old superseded or canceled case files.

8) Original application resulting in issuance of FAA OpSpecs (all forms and documents submitted).

9) Copy of current foreign-issued OpSpecs or special provisions, kept until superseded.

10) Copy of original FAA-issued OpSpecs, unless electronically maintained (e.g., in WebOPSS).

11) Subsequent requests for amendment of FAA OpSpecs.

B. General Correspondence Files. Destroy any 2-year-old routine correspondence, reports, and safety-related documents pertaining to the administration of programs for the safety of flight of civil aircraft by assuring the airworthiness of aircraft, the competence of airmen, the adequacy of flight operations and maintenance activities, and the evaluation of in-flight facility performance, but *excluding* files described elsewhere listed below.

C. Legal Enforcement Case Files. These are case files relating to legal actions taken with respect to alleged violations of 14 CFR, consisting of violation reports, technical analyses, evidentiary materials, sanction documents, and related correspondence. Transfer these files to the FRC 2 years after the case is closed in the EIS. (Refer to Order 1350.14.)

1) For cases resulting in no action, destroy 30 days after (or no more than 90 days after) the case is closed in the EIS.

2) For cases resulting in administrative enforcement action, destroy information that identifies the individual 2 years after the case is closed in the EIS.

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12-456 RECORD RETENTION REQUIREMENTS.

A. Hand-Signed OpSpecs.

1) Once both the IFO and the foreign air carrier or operator agree on the proposed OpSpecs, the IFO puts the authorizing document in "Signed" status, moves it to "Active," prints two copies, and signs both. Both copies are then delivered to the foreign air carrier or operator for signature. When the foreign air carrier or operator has signed both copies, the IFO retains one copy and the foreign air carrier or operator retains the other. When the foreign air carrier or operator signs the OpSpec as received, it is acknowledging that it has reviewed the OpSpecs and agrees to comply with the specifications appearing in the authorizing document.

2) Principal inspectors (PI) will keep a current, signed copy of all OpSpec documents, including the table of contents, on file in the IFO. The signed OpSpec authorizing documents that are currently in effect for the foreign air carrier or operator will be filed together. Superseded, surrendered, or revoked OpSpec-authorizing documents and tables of contents will be retained in the IFO office for at least 5 years. If a foreign air carrier or operator's OpSpecs are surrendered or revoked, the OpSpecs will be retained in the IFO files for at least 5 years. The electronic version of the OpSpecs will remain in effect within WebOPSS until amended. When amended, the previous active OpSpecs will be electronically archived.

B. Electronically Signed OpSpecs (e.g., WebOPSS).

1) After the foreign air carrier or operator has completed a new or amended OpSpec authorizing document and placed it in "Draft" status in WebOPSS, the IFO reviews the proposed authorizing document in the workspace area and makes or suggests any proposed changes. Once both the IFO and foreign air carrier or operator agree on the proposal, the foreign air carrier or operator electronically signs the authorizing document and advises the IFO that the "Industry Signature" has been accomplished. When the "Industry Signature" has been accomplished, the foreign air carrier or operator is acknowledging that it agrees to comply with the specifications appearing in the authorizing document. The IFO then electronically signs the authorizing document and moves the authorizing document to the "Cert. Holder" area in WebOPSS.

2) Once the OpSpec authorizing document is in the "Cert. Holder" area, the IFO may wish to print a paper copy of the authorizing document for data retention purposes. However, a printed copy is not required, as the active OpSpecs will be retained in the WebOPSS database. When an OpSpec is amended, the previous active OpSpec will be electronically archived.

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Figure 12-11. Recordkeeping Job Aid

Each responsible FAA International Field Office (IFO) or Flight Standards District Office (FSDO) ensures that appropriate records on each foreign air carrier are maintained in accordance with the current editions of FAA Order 8900.1, Volume 12, Chapter 5, Section 1. These records should be maintained in accordance with the current edition of FAA Order 1350.14, Records Management.

Managers should develop checklists or other documentation to reflect their review/acknowledgement of missing or unrecoverable documents. For accidental destruction of records, refer to Order 1350.14.

Name of Foreign Air Carrier	**FAA Designator**	**State of Operator**
IFO/FSDO Manager		
Principal Operations Inspector (POI)	**Principal Maintenance Inspector (PMI)**	**Principal Avionics Inspector (PAI)**

Part A: Foreign Air Carrier with FAA-Issued 14 CFR Part 129 Operations Specifications (OpSpecs) Conducting Operations Within the United States

PERMANENT RECORD (KEPT UNTIL SUPERSEDED OR CANCELED)	**FILE LOCATION HARDCOPY/ELECTRONIC/CD**
1. Copy of current foreign Air Operator Certificate (AOC).	
2. Copy of current foreign OpSpecs or other foreign AOC special provisions.	
3. Current economic authority (permit, exemption, or registration, as appropriate).	
4. Current FAA-approved minimum equipment list (MEL) (U.S.-registered aircraft only).	
5. Current FAA-approved maintenance program (U.S.-registered aircraft only).	

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6. Copy of current lease agreement or written memorandum (conveyance) of the terms of a lease for U.S.-registered aircraft, including amendments.	
7. Copy of current lease agreement or written memorandum (conveyance) required for aircraft wet lease or interchange operations, including amendments.	
8. Copy of application and/or renewal (package or computerized list) for each current Special Purpose Pilot Authorization (SPPA) or Special Purpose Airman Certificate—foreign air carriers using U.S.-registered aircraft.	
CASE FILES—KEPT FOR AT LEAST 5 YEARS	**FILE LOCATION HARDCOPY/ELECTRONIC/CD**
9. Original application package resulting in issuance of FAA OpSpecs.	
10. Copy of original or superseded economic authority (permit, exemption, or registration, as appropriate).	
11. Copy of original FAA-issued OpSpecs (unless electronically maintained in the Web-based Operations Safety System (WebOPSS)).	
12. Copy of amended FAA-issued OpSpecs (unless electronically maintained in WebOPSS).	
13. Subsequent applications for amendment of FAA WebOPSS.	
CASE FILES—KEPT FOR AT LEAST 2 YEARS	**FILE LOCATION HARDCOPY/ELECTRONIC/CD**
General Correspondence Files. Routine correspondence, reports, and safety-related documents pertaining to the administration of programs for the safety of flight of civil aircraft by assuring the airworthiness of aircraft, the competence of airmen, the adequacy of flight operations and maintenance activities, and the evaluation of in-flight facility performance.	

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LEGAL ENFORCEMENT CASE FILES	FILE LOCATION HARDCOPY/ELECTRONIC/CD
Legal Enforcement Case Files. Case files relating to legal actions taken with respect to alleged violations of 14 CFR, consisting of violation reports, technical analyses, evidentiary materials, sanction documents, and related correspondence. Transfer to Federal Records Center (FRC) 2 years after case is closed in the Enforcement Information System (EIS). (Refer to Order 1350.14.) For cases resulting in no action, destroy 30 days after (or no more than 90 days after) the case is closed in the EIS. For cases resulting in administrative enforcement action, destroy information that identifies the individual 2 years after the case is closed in the EIS.	

Part B: Foreign Person or Foreign Air Carrier with FAA-Issued Part 129 OpSpecs Conducting Operations with U.S.-Registered Aircraft Operated Solely Outside the United States in Common Carriage

PERMANENT RECORD (KEPT UNTIL SUPERSEDED OR CANCELED)	FILE LOCATION HARDCOPY/ELECTRONIC/CD
1. Copy of current foreign AOC.	
2. Copy of current foreign OpSpecs or other foreign AOC special provisions.	
3. Current FAA-approved MEL.	
4. Current FAA-approved maintenance program.	
5. Copy of current lease agreement or written memorandum (conveyance) of the terms of a lease for U.S.-registered aircraft, including amendments.	
6. Copy of current lease agreement or written memorandum (conveyance) required for aircraft wet lease or interchange operations.	
7. Copy of application and/or renewal (package or computerized list) for each current SPPA.	
8. Original application package resulting in issuance of FAA OpSpecs.	

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CASE FILES—KEPT FOR AT LEAST 5 YEARS	FILE LOCATION HARDCOPY/ELECTRONIC/CD
9. Copy of original FAA-issued OpSpecs (unless electronically maintained in WebOPSS).	
10. Copy of amended FAA-issued OpSpecs (unless electronically maintained in WebOPSS).	
11. Subsequent applications for amendment of FAA OpSpecs.	
CASE FILES—KEPT FOR AT LEAST 2 YEARS	**FILE LOCATION HARDCOPY/ELECTRONIC/CD**
General Correspondence Files. Routine correspondence, reports, and safety-related documents pertaining to the administration of programs for the safety of flight of civil aircraft by assuring the airworthiness of aircraft, the competence of airmen, the adequacy of flight operations and maintenance activities, and the evaluation of in-flight facility performance.	
LEGAL ENFORCEMENT CASE FILES	**FILE LOCATION HARDCOPY/ELECTRONIC/CD**
Law Enforcement Case Files. Case files relating to legal actions taken with respect to alleged violations of 14 CFR, consisting of violation reports, technical analyses, evidentiary materials, sanction documents, and related correspondence. Transfer to the FRC 2 years after case is closed in the EIS. (Refer to Order 1350.14.) For cases resulting in no action, destroy 30 days after (or no more than 90 days after) the case is closed in the EIS. For cases resulting in administrative enforcement action, destroy information that identifies the individual 2 years after the case is closed in the EIS.	

RESERVED. Paragraphs 12-457 through 12-471.

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VOLUME 13 FLIGHT STANDARDS DESIGNEES

CHAPTER 3 DESIGNATED AIRCRAFT DISPATCHER EXAMINER

Section 4 Aircraft Dispatcher Practical Test

13-221 PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES. None.

13-222 OBJECTIVE. This section sets forth policies and procedures for the administration of an aircraft dispatcher practical test by a Designated Aircraft Dispatcher Examiner (DADE).

13-223 GENERAL. Only one applicant at a time will be administered the practical test in accordance with the testing policy. No more than two practical tests per day (excluding retests) are allowed. All notes will be removed. The applicant should use reference material as outlined in the practical test standards (PTS).

NOTE: The option to "stagger" the tests (start the first test, and start the second test in conjunction with the first test) will be allowed only if approved by the specialist.

A. Observers. A Federal Aviation Administration (FAA) specialist may monitor a certification test given by a DADE. Other observers may monitor the test only when their presence has been coordinated with and agreed to by both the applicant and the FAA specialist or the DADE. In no case will another applicant be allowed to monitor the test as an observer.

B. Testing Sequence.

1) Set the stage as if the DADE is the incoming dispatcher accepting a shift briefing. This is a good time to ask questions about regulations.

2) Next, have the applicant plan the flight and prepare the necessary documentation (release, flight plan, weight, and balance). Act as the pilot in command (PIC) and have the applicant explain every step of the flight plan and release, asking what, why, how, when, and where.

3) Launch the flight and develop en route situations, such as mechanicals, medical emergencies, missed approaches, etc.

C. Time Limits.

1) No more than six hours should be allowed for the applicant to complete the practical test. An average of two hours each should be planned for the knowledge and skill portions of the test. Due to the extensive knowledge requirement of the PTS, the test should not be less than four hours.

2) One way to evaluate the applicant's progress is to determine the number of correct answers. A minimum of 70 percent is considered acceptable.

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D. Knowledge Portion. The knowledge portion of the PTS is conducted to determine whether the applicant has acquired adequate practical knowledge. The questions should be phrased in simple, focused, and specific terms. DADEs will choose their questions from the entire range of appropriate topics rather than concentrate on only a few topics. The knowledge portion can be conducted during any phase of the practical test.

13-224 APPLICANT ELIGIBILITY.

A. Age. The applicant should be at least 23 years old; however, the applicant may take the practical test before meeting the age requirement of 23. See paragraph 13-230 below for more information.

B. Experience. Only evaluate students from an approved Title 14 of the Code of Federal Regulations (14 CFR) part 65 dispatch course/school, unless prior approval has been given from the FAA specialist to test applicants other than part 65 graduates.

C. English Requirements. Before accepting the application and beginning the practical test, the DADE must evaluate the applicant's English fluency using the appropriate guidance. The current edition of Advisory Circular (AC) 60-28, English Language Skill Standards Required By 14 CFR Parts 61, 63, and 65, provides guidance for airman applicants, designated examiners, and aviation safety inspectors (ASI) in determining English language skills required for airman certification.

D. Identification. Listed below are samples of minimum required identification documents. Once accepted, these documents should be annotated on FAA Form 8400-3, Application for an Airman Certificate and/or Rating, and attached as appropriate.

NOTE: Copies of documentation do not have to accompany the application package; they merely need to be referenced in the appropriate block on the back of Form 8400-3.

1) For a U.S. citizen, attach two forms of valid photo identification. Examples include:

- Passport,
- Driver's License,
- Government issued identification card, and/or
- Identification issued by employer.

2) For a non-U.S citizen, attach two forms of valid photo identification. Examples include a valid passport/visa.

NOTE: A foreign passport must be accompanied by another form of identification containing at least a matching physical description and signature of the applicant. Attach copies of the identification to the certification package.

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3) For a naturalized citizen, attach two forms of valid photo identification. Examples include:

a) Valid passport, including either one of the following items.

b) Certificate of Naturalization. *Do not copy this document.* Information required to document this form of identification is:

- Court Docket No.,
- Date certificate was issued,
- Name and location of court, and
- Name of the Commissioner of Immigration.

c) Certificate of Citizenship. *Do not copy this document.* Information required to document this form of identification is:

- Certificate of Citizenship No. (this is the number above the word Citizenship),
- Date he/she became a citizen,
- Date the certificate was issued, and
- Name of the Commissioner of Immigration.

NOTE: Please keep in mind that a Certificate of Citizenship will not have a court docket number. The Certificate of Citizenship is issued to a person who arrived in this country under his or her parents' passport. When the parents become citizens, the children who were on their passport were also given citizenship and were issued a Certificate of Citizenship.

E. Forms. The applicant must provide a completed FAA Form 8400-3. The applicant's signature certifies the information on the application is accurate and that the applicant meets the eligibility requirements of the certificate. The applicant must provide the original embossed knowledge test report prior to beginning the practical test. The applicant will also provide a written statement of graduation for the part 65 course which is valid for 90 days. The course operator may revalidate the graduation certificate for additional 90 days if the course operator determines the student has remained proficient in the subject areas listed in part 65 appendix A.

13-225 PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. This task requires knowledge of 14 CFR part 61, 65, 121, and/or 183 regulations and FAA policies, and qualification as an ASI (Operations) with designee oversight responsibilities.

B. Coordination. This task may require coordination between the managing FAA office, the regional Flight Standards division (RFSD), and/or the Air Transportation Division (AFS-200).

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13-226 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- Title 14 CFR parts 1, 61, 65, 91, 119, 121, and 183.
- Title 49 of the United States Code (49 U.S.C.).
- PTRS Procedures Manual (PPM).

B. Forms:

- FAA Form 8000-36, PTRS Data Sheet.
- FAA Form 8060-4, Temporary Airman Certificate.
- FAA Form 8060-5, Notice of Disapproval of Application.
- FAA Form 8400-3, Application for an Airman Certificate and/or Rating.
- FAA Form 8710-6, Examiner Designation and Qualification Record.

C. Job Aids. None.

13-227 PREPARATION.

A. Test Scenarios. The DADE will notify the FAA specialist prior to scheduling the test. The DADE should have at least three approved flight plan test scenarios developed which use actual operational data to simulate actual problems. The test scenarios should be reviewed by the FAA specialist and updated as necessary at least once a year. The DADE will provide at least the following items for the applicant:

- Weather, to include Aviation Routine Weather Reports (METAR), Terminal Area Forecasts (TAF), Winds Aloft, appropriate charts, and Pilot Weather Reports (PIREP);
- Notices to Airmen (NOTAM);
- Flight leg (city pair);
- Weight and Balance Forms (see Figure 13-18);
- Flight Plan Form (see Figure 13-19); and
- Captain Briefing Forms (see Figure 13-20).

NOTE: Check aircraft dispatcher PTS for student supply requirements.

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Figure 13-18. Sample Weight and Balance Form

Dispatch Release Worksheet

FLT____A/C_TYPE_____DATE_____

The most restrictive of the following weights is the maximum takeoff weight (MTOW):

A. _____ + _____ = _____
Maximum Landing Weight En Route Fuel Burn Structural Landing Weight

OR

_____ + _____ = _____
Landing Climb Limit Weight En Route Fuel Burn Performance Limited Landing Weight

Flaps_ Temp.° C

B. _____ + _____ = _____
Maximum Zero Fuel Weight En Route Fuel Burn Structural Zero Fuel Weight

C. Maximum Structural Takeoff Weight _____

D. Takeoff Runway Analysis Weight_____

Rwy_____ Temp_____°C Flaps_____Performance Limited Takeoff Weight

E. Maximum En Route Takeoff Weight _____
Method 1 Takeoff Weight
Note: Method 1 not limiting if Method 2 Authorized

Or Driftdown Alternates (Method 2)

FROM	TO	Driftdown Airport
_____	_____	_____
_____	_____	_____
_____	_____	_____

F. Minimum Equipment List Restrictions

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Figure 13-19. Sample Flight Plan Form

Typically, a sheet is given to the applicant with only the origin, destination, and estimated time of departure provided, and the applicant provides the following information:

- Name/Date,
- Aircraft Type,
- MTOW,
- MLW,
- MZFW,
- BOW,
- Max fuel (pounds/gallons),
- Max altitude,
- Alternate, if required, and
- ATC routing.

The general instructions to the applicant are:

Plan maximum allowable payload for weather conditions;

Plan nearest suitable alternate if required; and

Complete the following for the above flight and prepare a weather briefing for the pilot in command:

- Flight Time Analysis (FAA Form 8200-6 or equivalent).
- A computerized flight plan may be used, but the Designated Aircraft Dispatcher Examiner must evaluate the applicant has the knowledge of how each number on the flight plan is derived from the aircraft operations manual.
- Dispatch Release.
- ATC Flight Plan.
- Weight and Balance.
- Retrieve all weather information and graphics from current weather (or the DADE may provide weather and Notices to Airmen (NOTAM) information).

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Figure 13-19. Sample Flight Plan Form (Continued)

Complete the following information for the aircraft you plan to use for your aircraft dispatcher practical test:

AIRCRAFT TYPE: _____

MTOW _____

MLW _____

MZFW _____

EOW _____

MAX FUEL _____ gallons/_____ pounds

MAX ALT _____

ORIGIN* DESTINATION* ALTERNATE IF REQUIRED

_____ _____ _____

ETD* ETA

_____ _____

* - DADE/Inspector completed fields

ATC ROUTING

_____

_____

_____

INSTRUCTIONS and TASKINGS

1. Retrieve all weather and NOTAM information for the flight.
2. Plan the maximum allowable payload for the flight for the appropriate weather conditions.
3. Plan the nearest suitable alternate if required.
4. Flight Plan Time/Fuel Analysis or Computer Flight Plan.
5. ATC Flight Plan.
6. Company Dispatch Release Form.
7. Weight and Balance Load Manifest.
8. Weather Briefing.

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NOTE: All regulatory requirements for the flight must be considered. Noncompliance with Federal aviation regulations during the testing exercise is considered unsatisfactory performance in accordance with the PTS.

Figure 13-20. Sample Captain Briefing Form

Dispatch/Release Date:_____

Release Flight _____ IFR A/C # _____ EOW _____ PZFW _____

DEP ___/____ DST ____/_____ ALTN ___ ETE_____
(Origin) (ETD UTC) (Destination) (ETA UTC) (Alternate) (Estimated Time En Route)

MTOW _/_____ RWY ___ TEMP _____° C FLAPS_____

Taxi Fuel_____

Estimated En Route Fuel Burn_____

Estimated Alternate Fuel Burn_____

FAR Fuel Reserve_____

Contingency Fuel_____

Hold Fuel_____

MINIMUM FUEL_____

ATC Routing
_____
_____

MEL ITEMS
_____

Remarks _____
_____

Dispatcher
_____
(Print Name) Signature

Pilot in Command
_____
(Print Name) Signature

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B. Testing Environment. The DADE should set the environment for the test. Ensure the testing environment is private and eliminate all possible distractions. The DADE is encouraged to keep a copy of the FAA Form 8400-3 or a record of the practical tests administered. (See Figure 13-15, Sample Practical Exam Tracking Form.)

13-228 EVALUATION OF THE APPLICANT. The applicant will be informed of the level of performance expected before beginning the test. When it becomes obvious during the test that an applicant cannot perform at an acceptable level and has already failed on that subject area, the DADE may discontinue testing in that subject area and go on to the next subject area. There may be cases when the DADE may stop the test. In most cases it would be advantageous to continue the test to the end so the applicant will know his or her strengths and weaknesses when preparing for the retest. There is no maximum number of questions that may be evaluated in each subject area.

13-229 WHEN THE APPLICANT PASSES. Record the results of the practical test on the back of the FAA Form 8400-3, documenting the subject areas with an "S" for satisfactory. Enter the date the test was completed in the "Evaluation Record" section along with the DADE's signature and designation number. The DADE will prepare an FAA Form 8060-4, Temporary Airman Certificate, in duplicate and give a copy of the temporary certificate to the applicant.

A. Required Documents. The DADE will attach the following documents to the application form:

- Original copy of the FAA Form 8060-4,
- Knowledge test report,
- Written statement of graduation, and
- FAA Form 8000-36, PTRS Data Sheet.

NOTE: Applicant is issued a copy of the temporary airmen certificate.

B. Forwarding Paperwork. DADEs will forward the paperwork to the designated certificate-holding district office (CHDO) within 7 calendar-days of the test.

NOTE: At the time of issuance of the temporary airman certificate, the examiner will request a telephone number (or email or other means to contact the applicant) where the applicant may be reached during the next 120 days in the event of application problems. The contact information can be recorded in the "REMARKS" area on the reverse side of the FAA Form 8400-3.

13-230 APPLICANTS UNDER THE AGE OF 23. An applicant under the age of 23 years may take the dispatch practical test, but must be informed that if they successfully pass the test, the temporary certificate will not be issued until the applicant's 23rd birthday.

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A. Successful Applicants. Successful applicants who are under the age of 23 will be issued a Letter of Aeronautical Competency by the supervising FAA office. The DADE will notify the specialist of an applicant under the age of 23 in the "REMARKS" section of Form 8400-3, with a comment:

> "THE APPLICANT IS UNDER THE AGE OF 23, AND WILL REQUIRE A LETTER OF AERONAUTICAL COMPETENCY TO BE ISSUED BY THE SUPERVISING FAA OFFICE."

B. Required Documents. The DADE will attach the following documents to the application form:

- Knowledge test report,
- Written statement of graduation, and
- FAA Form 8000-36.

C. Forwarding Paperwork. DADEs will forward the paperwork to the designated CHDO within 7 calendar-days of the test.

D. Issuing the Certificate. Once the applicant has reached the age of 23, he/she will present the original Letter of Aeronautical Competency, proof of age, and an updated Form 8400-3 (under practical test report, item 10c will be omitted), to any CHDO for issuance of the temporary certificate.

13-231 IF THE APPLICANT FAILS.

A. Record the Results. Record the results of the practical test on the back of the FAA Form 8400-3, documenting the subject areas with a "U" for unsatisfactory. In addition, list the specific failed areas from the PTS in the "Remarks" section of the FAA Form 8400-3, in the "Remarks" section of the PTRS data sheet, and on FAA Form 8060-5. Enter the date the test was completed in the "Evaluation Record" section along with a signature and designation number.

B. Prepare Form 8060-5. The DADE will instruct the applicant to retain the written test results and the written statement of graduation. The DADE will prepare an FAA Form 8060-5, Notice of Disapproval of Application (see Figure 13-21), and give a copy to the applicant.

C. Attach Documents. The DADE will attach the following documents to the application form:

- FAA Form 8060-5, and
- FAA Form 8000-36, PTRS Data Sheet (see Figure 13-13).

D. Forward the Paperwork to the CHDO. DADEs will forward the paperwork to the designated CHDO within 7 calendar-days of the test.

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Figure 13-21. FAA Form 8060-5, Notice of Disapproval of Application

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION – FEDERAL AVIATION ADMINISTRATION

NOTICE OF DISAPPROVAL OF APPLICATION

NOTE

PRESENT THIS FORM UPON APPLICATION FOR REEXAMINATION

NAME AND ADDRESS OF APPLICANT	CERTIFICATE OR RATING SOUGHT

On the date shown, you failed the examination indicted below:

FLIGHT ORAL PRACTICAL

AIRCRAFT USED *(Make and Model)*	FLT. TIME RECORDED IN LOGBOOK		
	PILOT-IN-COMM. OR SOLO	INSTRUMENT	DUAL

UPON REAPPLICATION YOU WILL BE REEXAMINED IN THE FOLLOWING:

I have personally tested this applicant and deem his or her performance unsatisfactory for the issuance of the certificate or rating sought.

DATE OF EXAMINATION	SIGNATURE OF EXAMINER OR INSPECTOR	DESIGNATION OR OFFICE NO.

FAA Form 8060-5 (4-82)

13-232 RETEST.

A. Scheduling. If a retest is required, the DADE will notify the FAA specialist when the retest is scheduled. It is recommended to have the retest administered by another DADE or inspector.

B. Areas to Retest. An applicant should receive credit for those areas which were satisfactorily completed. However, a DADE may retest an applicant on any areas required for the certificate, if the DADE has reason to doubt the applicant's competence.

C. Verify Forms. The DADE will confirm the FAA Form 8400-3 is correctly filled out with an instructor's recommendation sign-off by a certificated aircraft dispatcher. In addition, the DADE will confirm the written statement of graduation is still valid.

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D. Attach Documents. If the retest is successful, the inspector or DADE will attach the following documents to the application form:

- Original copy of the FAA Form 8060-4;
- Knowledge test report;
- FAA Form 8000-36; and
- Written statement of graduation.

NOTE: Applicant is issued a copy of temporary airmen certificate.

E. Forward the Paperwork. DADEs will forward the paperwork to the designated CHDO within 7 calendar-days of the retest.

13-233 LETTER OF DISCONTINUANCE. This letter will be issued when a practical test is terminated for reasons other than unsatisfactory performance. There are numerous reasons that an exam may need to be discontinued. The DADE will advise the applicant of the current status of the exam and areas successfully completed. (See Figure 13-22 for a sample Letter of Discontinuance.)

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Figure 13-22. Sample Letter of Discontinuance

Dear ___,

On this date, _____, you successfully completed a portion of the practical test indicated below:

_____ Aircraft Dispatcher

The following areas of the practical test standards (PTS) were completed satisfactorily.
(List completed Areas of Operations and other associated tasks from the PTS.)
_____
_____
_____
_____
_____
_____
_____
_____
_____

The practical test was discontinued because of: _____
_____

If application is made by (enter 60 days from date of test) , this letter may be used to show the following portions of the practical test which have been satisfactorily completed:

After (expiration date) , you must complete the ENTIRE TEST. This letter does not extend the expiration date for your knowledge test results or the oral evaluation date.

Sincerely,

_____ Designation Number:_____
DADE

RESERVED. Paragraphs 13-234 through 13-250.

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VOLUME 14 COMPLIANCE AND ENFORCEMENT

CHAPTER 1 FLIGHT STANDARDS SERVICE COMPLIANCE POLICY

Section 3 Providing Written Compliance Philosophy Explanation and Pilot's Bill of Rights Notification

14-1-3-1 GENERAL. This section supersedes and cancels the policy formerly in Volume 7, Chapter 8, Section 1, General, and the older Volume 14 and 15 references to Public Law (PL) 112-153, Pilot's Bill of Rights Act (PBR or "the Act"). This section conforms Flight Standards Service (AFS) PBR policy to Federal Aviation Administration (FAA) Compliance Philosophy (CP); adds information on the new CP and PBR Brochure (hereinafter, "the Brochure"); and clarifies AFS policy on proactive CP information sharing (safety promotion) and PBR compliance requirements. This section takes precedence over any older AFS PBR policy until the older policies are revised to conform to this section.

A. Purpose. This section provides guidance on using the Brochure and providing airmen with air traffic data under PBR. It also provides guidance on the written notification required by the PBR to be provided to individuals who are the subject of an investigation relating to the approval, denial, suspension, modification, or revocation of an Airman Certificate under Title 49 of the United States Code (49 U.S.C.) chapter 447.

B. Scope. This guidance applies to all AFS safety promotion activities (including any airman contacts, safety seminars, and aviation events); investigations of an individual's qualifications to hold an Airman Certificate or rating (including review of submitted applications and reexamination of an airman's qualifications) under Volume 5; and investigations related to an individual airman's apparent deviation from requirements in 49 U.S.C and Title 14 of the Code of Federal Regulations (14 CFR). FAA 8000-series forms containing PBR information (such as FAA Form 8710-1, Airman Certificate and/or Rating Application) are not affected by this change. Forms without PBR information (such as FAA Form 8610-1, Mechanic's Application for Inspection Authorization, at the time of this section's publication) must be accompanied by the PBR information as described in paragraph 14-1-3-9 until the older forms are revised.

NOTE: The PBR requires that airmen be provided with *written notification*. Verbal notification does not comply with the law. See paragraph 14-1-3-7 for specific instructions on use of the Brochure to meet the written notification requirement.

14-1-3-3 BACKGROUND. On August 3, 2012, the PBR became effective, requiring the FAA to provide certain timely written notifications to individuals who are the subject of an investigation relating to a certificate suspension, revocation, or modification action or the approval or denial of an Airman Certificate. The law also requires that the FAA provide such individuals timely access to the air traffic data as described in paragraph 14-1-3-7 that would facilitate the individual's ability to productively participate in a proceeding relating to such an investigation.

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A. PBR Requirements. Except as provided in paragraph 14-1-3-13, the PBR requires timely written notification to the individuals described in paragraph 14-1-3-3 of the following, as applicable:

- The nature of the investigation;
- That an oral or written response to a Letter of Investigation (LOI) from the Administrator is not required;
- That no action or adverse inference can be taken against the individual for declining to respond to an LOI from the Administrator;
- That any response to an LOI from the Administrator or to an inquiry made by a representative of the Administrator by the individual may be used as evidence against the individual;
- That the releasable portions of the Administrator's investigative report will be available to the individual; and
- That the individual is entitled to access or otherwise obtain air traffic data described in paragraph 14-1-3-15.

NOTE: For purposes of the PBR and this section, airmen and their associated certificates and ratings include: (1) pilots, (2) flight instructors, (3) Flight Engineers (FE), (4) aircraft dispatchers, (5) mechanics, (6) mechanics with inspection authorizations, (7) repairmen, (8) parachute riggers, and (9) control tower operators. However, holders of ground instructor and flight attendant (F/A) certificates are not airmen as defined by statute or regulation. An investigation related solely to a ground instructor certificate or an F/A certificate does not require the PBR notification described in this chapter.

B. Creation of the CP and PBR Brochure. In response to AFS policy changes on PBR notification with the introduction of the FAA CP in 2015, industry advocates suggested that providing PBR notification at first contact with airmen was the most transparent and collaborative course of action for AFS. Based on this and other feedback from internal and external stakeholders, AFS created the CP and PBR Brochure (see Appendix 14-1, Compliance Philosophy and Pilot's Bill of Rights Brochure) to more efficiently and effectively share CP information and comply with PBR notification requirements. The Brochure was designed for use in most AFS interactions with airmen as described below.

14-1-3-5 USING THE CP AND PBR BROCHURE.

A. Availability of the Brochure. AFS offices must ensure that color printed copies of the Brochure (Appendix 14-1) are available to inspectors for immediate use while conducting surveillance and throughout the normal course of business. Offices may print and distribute copies of the Brochure and direct the public to find it at www.faa.gov/go/cp.

B. Safety Promotion Activities and Routine Airman Contacts. AFS encourages frequent sharing of the Brochure to educate airmen and other interested parties about the FAA CP. All personnel are encouraged to provide the Brochure during appropriate contacts with airmen in the course of other duties (such as in FAA facility waiting areas), at public aviation events, and at any other opportunity to share safety or policy information. When the Brochure is

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shared for routine or safety promotion purposes, the space inside the form to describe the apparent noncompliance remains blank. There is no AFS national requirement to document these uses of the Brochure in the Program Tracking and Reporting Subsystem (PTRS) or the Safety Assurance System (SAS).

C. Inquiries and Investigative Uses. Brochure use applicability for PBR notification is described in general here and in detail in paragraphs 14-1-3-7 through 14-1-3-15.

1) All Airman Contacts. During an inquiry into an apparent deviation or noncompliance when an LOI or reexamination letter is not used, the inspector must:

a) Write a brief description of the nature of the investigation in the space provided in the Brochure before giving the Brochure to the airman;

b) Provide the inspector's contact information to the airman; and

c) Document the description of the event and the date the Brochure was given to the airman in the PTRS activity record for the event under investigation, and include the information in an Enforcement Investigative Report (EIR) if one is opened.

2) Telephonic Contact Additional Considerations. If initial investigative contact is made with an airman over the telephone (such as after AFS notification of a possible pilot deviation (PD) by air traffic personnel), AFS personnel should verify the airman's current email or mailing address, provide an electronic or hard copy of the Brochure, and validate that the airman received the Brochure before substantively discussing the issue or event. The brief description requirement of subparagraph 14-1-3-5C1)a) may be entered in the body text of the email in lieu of including the description on the Brochure.

3) PTRS Activity Number and Records. There is no specific activity number associated with required uses of the Brochure or PBR notification. If the investigatory path or outcome is not clear at the start of the inquiry, or if the inquiry finds no noncompliance, the required documentation in this section can be placed in the underlying activity record that lead to the inquiry (such as a PTRS surveillance record comment or SAS Data Collection Tool (DCT) Inspector Action Taken field). Once an investigation begins, the required documentation in this section is placed in an appropriate investigatory record where it can be readily located in the future (e.g., complaint, occurrence, PD, incident, accident, reexamination, compliance action, or enforcement action). The goal is to retain information showing when and why PBR notification was given.

14-1-3-7 WHEN WRITTEN PBR NOTIFICATION IS REQUIRED. Except for instances when giving the required notification under the PBR would threaten the integrity of the investigation as described in paragraph 14-1-3-13, AFS personnel provide timely written notification of investigation in these circumstances:

A. Providing the PBR Notification via the Brochure. When AFS personnel first inquire into the nature and circumstances of apparent noncompliance, they provide the Brochure to the airman. AFS personnel note the nature of the investigation in the space provided in the Brochure. AFS personnel provide the Brochure even if they initially expect to resolve the

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noncompliance with compliance action. AFS personnel provide the Brochure to encourage open and transparent discussion under CP, to inform the airman of his or her rights under PBR, and to preserve FAA legal rights to use the information collected if enforcement action is later determined necessary.

1) Inquiries Involving Air Traffic Data. Where an FAA inquiry into apparent noncompliance involves air traffic data, time is of the essence because some air traffic data is routinely destroyed or disposed of in the ordinary course of business (see Volume 7, Chapter 1, Section 2 for additional information on data collection from FAA and contractor sources and coordination with Air Traffic personnel). In such a case, inspectors provide the Brochure to involved airmen in a timely manner. The inspector documents the date the Brochure was provided in the investigative PTRS record and includes this information in the EIR if one is opened. See additional information on air traffic data in paragraph 14-1-3-15.

NOTE: If initial contact is made with an airman over the telephone, comply with subparagraph 14-1-3-5C before substantively discussing the issue or event.

2) Inquiries Arising During Routine Contact with Airmen. Inspectors frequently have contact with airmen in the ordinary course of FAA oversight responsibilities (e.g., during a ramp inspection or during surveillance of a certificate-holding entity where the airman is employed). The PBR does not apply during routine contacts with airman because these contacts are not airman-focused investigations which could lead to certificate action. However, if in the course of routine contact, the inspector becomes aware of what may be a deviation from a statutory or regulatory requirement by an airman and the inspector wants to continue interviewing the airman, the inspector at that point would be conducting an “investigation” as that term is used in the PBR. Accordingly, to comply with the PBR, the inspector must provide timely written notification using the Brochure, unless, as described in paragraph 14-1-3-13, providing the notification at that time would threaten the integrity of the investigation. Before providing the Brochure to the airman, AFS personnel note the nature of the investigation in the space provided in the Brochure. Date of the airman’s receipt of the Brochure must be entered by the inspector in an appropriate PTRS or SAS record (the surveillance activity which led to the discovery or an investigation record opened for the inquiry) and included in the EIR if one is later opened.

3) Additional Training. Written PBR notification is required using the Brochure when an aviation safety inspector (ASI):

a) Makes a remedial training (RT) offer to an airman per Volume 15, Chapter 6, Section 1; and

b) Requires an airman to complete other additional training conducted by operator/agency/airport certificate holders under their approved or required employee training programs as described in Volume 14, Chapter 3, Section 2.

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NOTE: If the required PBR notification was previously provided to the airman and documented by AFS as part of the initial inquiry or investigation that led to the additional training requirement, the Brochure does not have to be provided again.

B. Providing the PBR Notification via an LOI to an Airman. When it becomes apparent that administrative or legal enforcement action is appropriate, AFS personnel issue an LOI. The LOI includes the required written notification under the PBR. Inspectors must use Figure 14-1-3A, Sample Letter of Investigation for Airman Certificate Actions, for any investigation for which there is an EIR opened on an airman that might result in the suspension, revocation, or modification of an Airman Certificate, including any rating or inspection authorization. Modification of a certificate would include the suspension or revocation of a rating, or the imposition of a limitation on an Airman Certificate (e.g., no circling approaches or no passengers). Any LOI issued to an individual as described in this paragraph must include the written notifications in the sample LOI in Figure 14-1-3A; therefore, the Brochure is not provided with an LOI.

1) Timing. Except as provided in paragraph 14-1-3-13, the LOI referenced in subparagraph 14-1-3-7B must be issued to the individual in a timely manner.

2) Return Receipt. The inspector must send the LOI via certified mail, or hand-deliver the letter and have the airman sign for receipt, in order to record the date the notification was received. If the airman is personally served but refuses to sign for an LOI, the inspector will document in writing that the PBR information was provided. The acknowledgement template on the last page of the Figure 14-1-3B, Sample Written Notification to an Airman Applicant, can be used for this purpose after deleting the phrase "…at the time of this application" from the airman's certification statement. The inspector must complete and retain their portion of the documentation of the applicant's receipt of the written notification regardless of whether the applicant signs the acknowledgment of receipt.

C. Other Circumstances. AFS must provide written PBR notification to airmen in the following other circumstances:

- At the time an individual submits an application for an Airman Certificate, rating, or inspection authorization. See paragraph 14-1-3-9.
- In a letter requesting reexamination of an airman's qualifications to hold an Airman Certificate, rating, or inspection authorization. See paragraph 14-1-3-11.

14-1-3-9 APPLICATION FOR AN AIRMAN CERTIFICATE, RATING, OR INSPECTION AUTHORIZATION. Under 49 U.S.C. § 44703(a), the Administrator issues an Airman Certificate if, after an investigation, the Administrator determines the individual is qualified for and physically able to perform the duties related to the position to be authorized by the certificate. The examination of an applicant for an Airman Certificate, rating, or inspection authorization is considered an investigation of the individual's qualifications to hold the Airman Certificate, rating, or inspection authorization for which the individual has applied. Because such investigations are not for the purpose of determining whether a deviation occurred, the inspector does not issue an LOI and, therefore, only the notifications in Figure 14-1-3B need to be

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provided to an individual who applies for an Airman Certificate, rating, or inspection authorization. Documentation of the applicant's receipt of the required written notifications at the time of the application must be retained with the individual's application. The inspector (or Designated Examiner (DE)) conducting the examination must complete the examiner's portion of Figure 14-1-3B.

NOTE: FAA Form 8710-1, version 4-16, contains the required PBR written notification as part of pages *i* through *iii* and in Block V, Applicant's Certification. Figure 14-1-3B should be used only if the application form itself does not already include the required written notification under the PBR and a place for the applicant to acknowledge receipt of the written notification. When Figure 14-1-3B is used, FAA inspectors (or DEs) must complete and retain their portion of the documentation of the applicant's receipt of the written notification regardless of whether the applicant signs the acknowledgment of receipt.

14-1-3-11 LETTERS REQUESTING REEXAMINATION UNDER 49 U.S.C. § 44709. Letters requesting reexamination under 49 U.S.C. § 44709 involve FAA investigations of an individual's qualifications to continue to hold an Airman Certificate, rating, or inspection authorization. Because reexaminations of an individual's qualifications are not investigations for the purpose of determining whether a deviation occurred, only some of the written notifications under the PBR apply. Therefore, inspectors must use Volume 5, Chapter 7, Section 1, Figure 5-140, Letter of Notification of Reexamination Under Title 49 U.S.C. § 44709, for any airman who is the subject of a reexamination of his or her qualifications to continue to hold an Airman Certificate, rating, or inspection authorization. If needed, Volume 5, Chapter 7, Section 2 contains sample letters that provide the required notification for an airman placing his or her certificate on temporary deposit pending reexamination.

NOTE: The inspector must send the letter requesting reexamination (Volume 5, Chapter 7, Section 1, Figure 5-140) via certified mail, or hand-deliver the letter, in order to record the date the airman received the information required by the PBR.

14-1-3-13 DELAYING NOTIFICATION UNDER THE PBR. The Administrator may delay timely written notification required under the Act if he or she determines that such notification may threaten the integrity of the investigation. Notification must be provided once the threat to the integrity of the investigation has ceased. If time permits, an inspector should consult with and get the concurrence of his or her Front Line Manager (FLM) and FAA enforcement counsel before deciding to delay providing the written notifications under this exception. Examples of circumstances where the integrity of the investigation could be threatened by providing written notification to an airman include:

A. Destruction/Concealment. Providing the required notification under the PBR presents a risk of:

1) Destruction of evidence.

2) Concealment of evidence.

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NOTE: Once the risk of destruction or concealment of evidence has passed, the Administrator must provide the required written notification.

B. Death or Serious Bodily Harm. Giving the required notification under the PBR might lead to a risk of death or serious bodily injury, or destruction of property.

NOTE: Once the risk has abated, the Administrator must provide the required written notification.

NOTE: Any inspector invoking the exception to delay providing an individual with written notification of investigation must explain the basis for doing so in the related PTRS record and in Section B of the EIR, if one is required.

14-1-3-15 ACCESS TO AIR TRAFFIC DATA UNDER THE PBR. The PBR requires that the Administrator provide an individual who is the subject of an investigation described in paragraph 14-1-3-3 "with timely access to any air traffic data in the possession of the Federal Aviation Administration that would facilitate the individual's ability to productively participate in a proceeding relating to" the investigation. In addition, an individual may obtain air traffic data in the possession of a government contractor that provides operational services to the FAA by submitting a request to the Administrator that describes the facility at which such information is located and identifies the date on which such information was generated. When that happens, the PBR requires the Administrator to request the air traffic data from the government contractor and upon receiving such information provide it to the individual in a timely manner. By law, AFS personnel must provide all air traffic data as described in subparagraph A below (from both FAA and contractor sources) in a timely manner when requested by an airman. In the interest of transparency and as a matter of policy, AFS personnel will provide all air traffic data in the investigating inspector's possession when sending an LOI to an airman. The data may be provided to the airman's counsel if the counsel requests it on behalf of the airman. A description of each air traffic data package provided and the date of any requests for data must be recorded in the appropriate PTRS record (such as a PD activity record) that led to the collection of the data.

NOTE: See Volume 7, Chapter 1, Section 2 for additional information on data collection from FAA and contractor sources and coordination with air traffic.

A. Air Traffic Data. The term "air traffic data" as used in the PBR consists of relevant air traffic communication tapes, radar information, air traffic controller statements, flight data, releasable portions of investigative reports, and any other air traffic or flight data that would facilitate the individual's ability to productively participate in a proceeding. The following is considered air traffic data:

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1) Relevant air traffic communication tapes including the following:

- Communication recordings between the flightcrew of the subject aircraft and air traffic control (ATC);
- Communication recordings among air traffic controllers concerning the subject aircraft; and
- Communication recordings between air traffic controllers and other aircraft in the area of the subject aircraft.

2) Radar information including radar data regarding the subject aircraft and other aircraft in the vicinity.

3) Air traffic controller statements, including the statements, if any, by supervisory controllers concerning the subject aircraft and the subject event.

4) Flight data including:

- Communications other than taped communications between air traffic controllers and the flightcrew of the subject aircraft;
- Other nonradar data in the possession of FAA's Air Traffic Organization (ATO) that identifies the location of the subject aircraft at relevant times during the flight operation under investigation;
- Weather reports; and
- Relevant Notices to Airmen (NOTAM) in effect on the date of the flight operation under investigation.

5) Releasable portions of investigative reports related to air traffic data including:

- FAA Form 8020-17, Preliminary Pilot Deviation Report; and
- Statements from Flight Service Station (FSS) briefers provided to the FAA in connection with a flight operation under investigation.

6) Any other air traffic or flight data in the FAA's possession that would facilitate the individual's ability to productively participate in a proceeding related to the flight operation under FAA investigation.

B. Inspector Responsibility to Obtain, Maintain, and Provide Relevant Air Traffic Data. Relevant air traffic data as described in this paragraph refers to air traffic data that either tends to prove or disprove whether an operational deviation that is under investigation occurred. Inspectors are responsible for gathering the relevant air traffic data associated with an apparent operational deviation during their investigation, consistent with current orders and guidance.

1) General. All relevant air traffic data (as described in subparagraph 14-1-3-15A) obtained by the inspector in the course of an investigation of an operational deviation must be provided to the airman and included in the EIR if the FAA takes administrative or legal enforcement action. In addition, such air traffic data obtained by AFS personnel must be retained

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in accordance with retention requirements in the current edition of FAA Order 1350.14, Records Management.

2) Authority to Release. AFS personnel have the authority to release FAA facility or government contractor air traffic data to an airman or, if the request is made by the airman's counsel, to the airman's counsel during the investigation.

3) Providing Requested Air Traffic Data to the Individual While the Investigation is Pending. The inspector who provides an individual with the notifications required under the PBR (see subparagraph 14-1-3-5C and paragraph 14-1-3-7) will also serve as the point of contact (POC) for that individual and will request access to air traffic data in the possession of the FAA or in the possession of a government contractor relating to an apparent operational deviation by the individual.

4) Providing Air Traffic Data with the LOI. AFS personnel must provide all relevant air traffic data, as described in subparagraph 14-1-3-15A, in the possession of AFS at the time when sending the airman an LOI. Any concerns regarding the release of such air traffic data during the investigation should be discussed with the appropriate FAA enforcement counsel.

5) Providing Air Traffic Data When Requested By An Airman. AFS personnel must provide relevant air traffic data as described in subparagraph A above when requested by an airman. An ASI must carefully review an airman's request for the data to ensure that the ASI fully responds to that request. For example, in a particular case, the ASI provided data to the airman with the LOI before the airman requested such data. The airman then requested the ASI to provide all ATC data relevant to that airman's case. The ASI is responsible for determining whether additional ATC data exists that the ASI did not provide with the LOI and which would be responsive to the airman's request. If such additional ATC data does exist, the ASI is responsible for providing that data to the airman. Any concerns regarding the release of air traffic data during the investigation should be discussed with the appropriate FAA enforcement counsel.

6) Identifying Air Traffic Data in the EIR. Any air traffic data released by the investigating office during the investigation must be specifically identified in the EIR (if administrative or legal enforcement action is taken) as having been released by the inspector, including the date of release. In addition, all air traffic data obtained in the investigation must be included in the EIR.

7) Providing Air Traffic Data after an EIR Has Been Forwarded by the Investigating Office. Any air traffic data obtained after an EIR has been forwarded to FAA enforcement counsel must also be forwarded to FAA enforcement counsel. See subparagraph 14-1-3-15D coordination requirements.

8) PTRS Documentation. The date of all requests from individuals for air traffic data, and the specific data and date(s) released, must be documented in the investigative PTRS record for the activity that generated the collection of the data.

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C. Air Traffic Data in the Possession of a Government Contractor.

1) The PBR also states that the individual can obtain air traffic data in the possession of a government contractor providing operational services to the FAA (including contract control towers and FSSs) that would facilitate the individual's ability to productively participate in a proceeding related to an investigation, provided that the individual submits a request to the FAA identifying the:

a) Facility at which such information is located; and

b) Date on which such information was generated.

2) Personnel receiving a request from an individual for air traffic data in the possession of a specifically identified government contractor must document the date of the individual's request in the investigative PTRS record and promptly seek the requested information from the government contractor.

3) See subparagraph 14-1-3-15D coordination requirements.

D. Airman Notification of Air Traffic Data Availability and Coordination with FAA Enforcement Counsel. The PBR provides that, except in an emergency case, the Administrator may not proceed against an individual who is the subject of an investigation relating to the approval, denial, suspension, modification, or revocation of an Airman Certificate during the 30-day period beginning on the date on which the air traffic data described in paragraph 14-1-3-15 is made available to the individual.

1) The National Transportation Safety Board (NTSB) has interpreted "proceed" to mean the issuance of a notice of proposed civil penalty for non-emergency cases. A delay in the provision of air traffic data could negatively affect the prosecution of a case. Accordingly, AFS personnel are to provide air traffic data to airmen as soon as practicable after it is requested by the airman, and when an LOI is sent.

2) AFS personnel must inform FAA enforcement counsel of any requests for air traffic data received after an EIR has been forwarded to FAA enforcement counsel. In such cases, AFS personnel must coordinate the release of air traffic data with FAA enforcement counsel to ensure the 30-day waiting period is observed before the issuance of a notice of proposed certificate action.

14-1-3-17 VOLUNTARY SURRENDER OF CERTIFICATE. If an airman elects to voluntarily surrender his or her certificate for cancellation and the FAA accepts the surrender in accordance with the guidance in the current edition of FAA Order 2150.3, FAA Compliance and Enforcement Program, Chapter 5, subparagraph 14b, then no notification is required under the PBR. In this situation, there is no investigation relating to the approval, denial, suspension, modification, or revocation of an Airman Certificate, nor any inquiry of the airman that might elicit a response that could be used in an Airman Certificate action. See Volume 5, Chapter 7, Section 2 for the temporary surrender of a certificate pending reexamination.

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Figure 14-1-3A. Sample Letter of Investigation for Airman Certificate Actions

NOTE: The italicized portions are mandatory and must not be changed.

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

_____

_____

_____

_____

Dear _____:

Personnel of this office are investigating a flight that involved the operation of a Cessna 172S aircraft, N1234Z, under Instrument Flight Rules (IFR), from KFXE (Fort Lauderdale Executive Airport) en route to TNCC (Hato Airport, Curacao) on August 1, 2012. Our office was informed that you were identified as Pilot in Command (PIC) of this flight. Further, it has been noted that you do not hold an instrument rating on your pilot certificate. Operations of this type may be contrary to Title 14 of the Code of Federal Regulations (14 CFR).

This letter is to inform you that this matter is under investigation by the Federal Aviation Administration (FAA). In accordance with the Pilot's Bill of Rights (PBR), we are informing you that:

(1) The nature of this investigation (is to determine if you operated civil aircraft N1234Z) as described above in violation of the Federal Aviation Regulations, and if so, what, if any, enforcement action should be taken.

(2) Oral or written response to this Letter of Investigation (LOI) is not required, and no action can be taken or adverse inference made against you for declining to respond to this LOI.

(3) Any response by you to this LOI or to an inquiry made by a representative of the FAA Administrator may be used as evidence against you.

(4) If this investigation results in a legal enforcement action against your Airman Certificate, the releasable portions of the Administrator's investigative report will be made available to you upon your written request addressed to the FAA's legal counsel handling the enforcement action.

[If applicable to the nature of the investigation, include the following notification re: air traffic data —]

(5) You are entitled to access air traffic data in the possession of the FAA that would facilitate your ability to productively participate in a proceeding relating to this investigation. We have included with this letter all relevant air traffic data in our possession at this time. You are also entitled to obtain air traffic data in the possession of a government contractor providing operational services to the FAA (e.g., contract control towers and FSSs) provided that you submit a request to the Administrator that describes the facility at which such information is located and you identify the date on which such information was generated. During this

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investigation, you may submit your request to access or obtain air traffic data as described in this notification by contacting me at the address and telephone number noted in this letter. Because air traffic data is routinely destroyed or disposed of in the ordinary course of business, it is important that you submit your request for such data as soon as possible.

We would appreciate receiving any evidence or statements you might care to disclose regarding this incident within 10 days of receipt of this letter. Any discussion and/or written statements furnished by you will be given consideration in our investigation. If we do not hear from you within the specified time, our report will be processed without the benefit of your statement.

Sincerely,

[name]

Aviation Safety Inspector

Enclosure

Privacy Act Notice

This notice is provided in accordance with Section (e)(3) of the Privacy Act, 5 U.S.C. Section 552a(e)(3), and concerns the information requested in the correspondence or form with which this notice is enclosed.

A. Authority: This information is solicited pursuant to 49 U.S.C. § 40113(a) and the regulations issued under that statutory provision codified in 14 CFR part 13, Investigative and Enforcement Procedures.

B. Principal purposes:

1. The request for information is intended to provide you with an opportunity to participate in the investigation of an apparent deviation from the Federal Aviation Regulations, or other statutes, standards, or procedures.

2. The requested information will be used to help determine the root cause(s) of the subject event, identify safety concerns, and determine whether or not there has been a deviation from the Federal Aviation Regulations or other statutes, standards, or procedures, and if so, what, if any, action should be taken. The requested information will be used for safety risk assessment and risk mitigation, and for finding and fixing safety issues in the National Airspace System (NAS).

C. Routine uses: Records from this system of records may be disclosed in accordance with the following routine uses that appear in Department of Transportation (DOT)/FAA 847, Aviation Records on Individuals (current edition), available at https://www.transportation.gov/individuals/privacy/privacy-act-system-records-notices:

1. To provide basic Airman Certificate and qualification information to the public upon request.

2. To disclose information to the National Transportation Safety Board (NTSB) in connection with its investigation responsibilities.

3. To provide information about airmen to Federal, State, and local law enforcement agencies when engaged in the investigation and apprehension of drug law violators.

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4. To provide information about actions arising out of apparent deviations from the Federal Aviation Regulations or other statutes, standards, or procedures to government agencies, the aviation industry, and the public upon request.

5. To disclose information to another Federal agency, or to a court or an administrative tribunal, when the government or one of its agencies is a party to a judicial proceeding before the court or involved in administrative proceedings before the tribunal.

D. Effect of failure to respond: Submission of information is voluntary. The FAA cannot impose any penalties upon you if you choose not to respond to this information request. If you choose not to respond, however, the FAA will make determinations about possible action for this matter without the benefit of your comments.

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Figure 14-1-3B. Sample Written Notification to an Airman Applicant

NOTE: The italicized portions are mandatory and must not be changed.

PILOT'S BILL OF RIGHTS (PBR) WRITTEN NOTIFICATION OF INVESTIGATION

The information you submit on the attached FAA Form _____ [insert form number and the title of the Airman Certificate application] *will be used by the Administrator of the FAA as part of the basis for issuing an Airman Certificate, rating, or inspection authorization to you under Title 49, United States Code (U.S.C.) section 44703(a), if the Administrator finds, after investigation, that you are qualified for, and physically able to perform the duties related to the certificate, rating, or inspection authorization for which you are applying. Therefore, in accordance with the PBR, the Administrator is providing you with this written notification of investigation of your qualifications for an Airman Certificate, rating, or inspection authorization:*

- *The nature of the Administrator's investigation, which is precipitated by your submission of this application, is to determine whether you meet the qualifications for the Airman Certificate, rating, or inspection authorization you are applying for under Title 14 Code of Federal Regulations (CFR) part 61, 63, or 65.*
- *Any response to an inquiry by a representative of the Administrator by you in connection with this investigation of your qualifications for an Airman Certificate, rating, or inspection authorization may be used as evidence against you.*
- *A copy of your airman application file for this date is available to you upon your written request addressed to:*

Federal Aviation Administration
Airmen Certification Branch, AFS-760
P.O. Box 25082
Oklahoma City, OK 73125-0082

(If you make a written request for your airman application file, please provide your full name, date of birth, or Airman Certificate number for identification purposes, and also the date of the application.)

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Figure 14-1-3B. Sample Written Notification to an Airman Applicant (Continued)

[To Be Retained by the FAA Inspector/Designated Examiner]

ACKNOWLEDGMENT OF RECEIPT OF PBR WRITTEN NOTIFICATION

I acknowledge that I received the Pilot's Bill of Rights Written Notification of Investigation at the time of this application.

_____ Airman Certificate No._____
Applicant's Name (Print) (if applicable)

Applicant's Date of Birth._____

_____ DATE:_____
Signature of Applicant MM/DD/YYYY

* * * * *

To Be Completed by the FAA Inspector/Designated Examiner —

I have personally delivered the Written Notification under the PBR to

_____ on _____
[print name of the individual] MM/DD/YYYY

_____ FAA Office: _____
FAA Inspector/Designated Examiner (Print)

_____ FAA Office: _____
FAA Inspector/Designated Examiner (Signature)

14-1-3-19 through 14-1-3-33 RESERVED.

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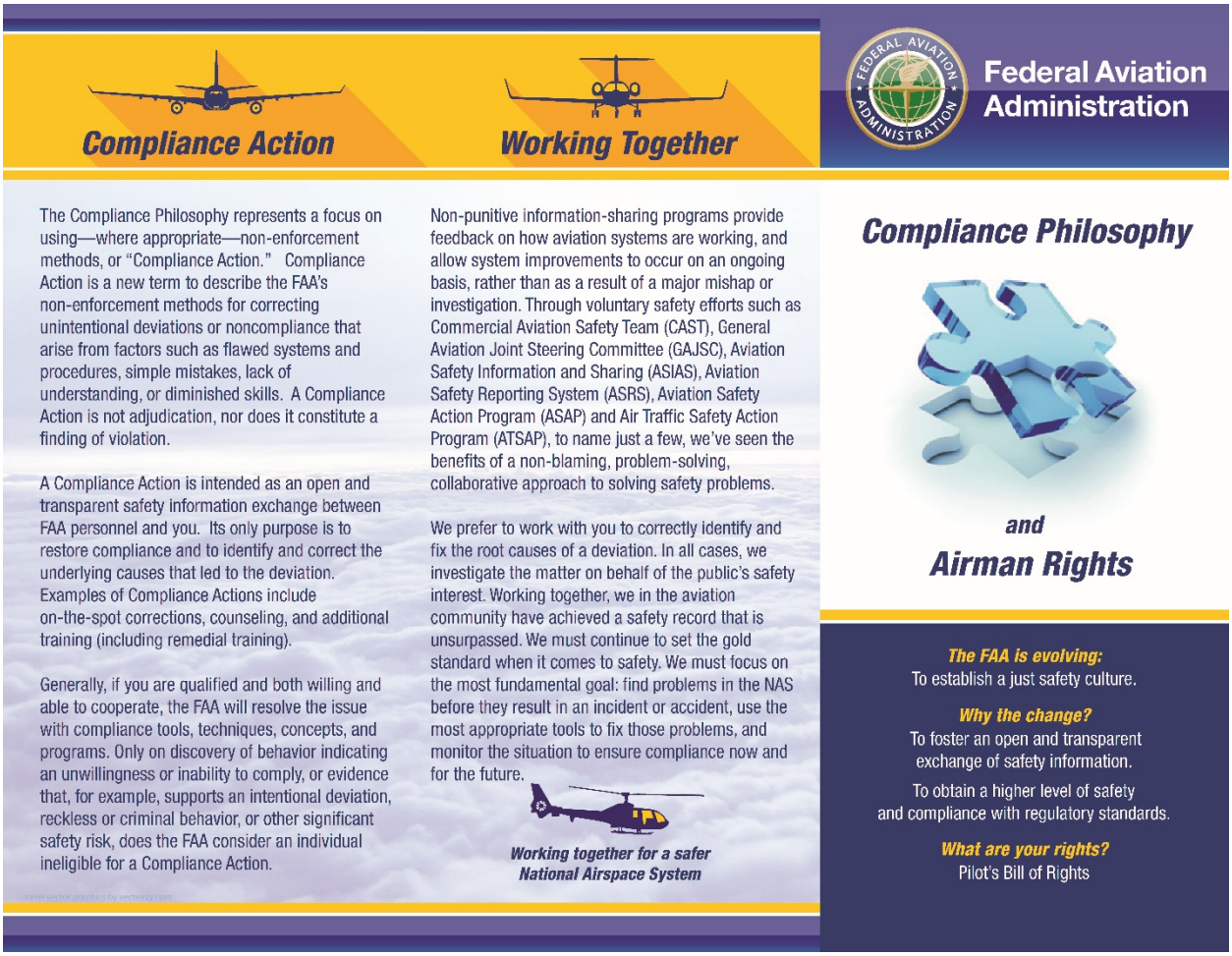
Appendix 14-1 Compliance Philosophy and Pilot's Bill of Rights Brochure

NOTE: The below Brochure is available in a printable PDF file at www.faa.gov/go/cp.



Compliance Action

The Compliance Philosophy represents a focus on using—where appropriate—non-enforcement methods, or "Compliance Action." Compliance Action is a new term to describe the FAA's non-enforcement methods for correcting unintentional deviations or noncompliance that arise from factors such as flawed systems and procedures, simple mistakes, lack of understanding, or diminished skills. A Compliance Action is not adjudication, nor does it constitute a finding of violation.

A Compliance Action is intended as an open and transparent safety information exchange between FAA personnel and you. Its only purpose is to restore compliance and to identify and correct the underlying causes that led to the deviation. Examples of Compliance Actions include on-the-spot corrections, counseling, and additional training (including remedial training).

Generally, if you are qualified and both willing and able to cooperate, the FAA will resolve the issue with compliance tools, techniques, concepts, and programs. Only on discovery of behavior indicating an unwillingness or inability to comply, or evidence that, for example, supports an intentional deviation, reckless or criminal behavior, or other significant safety risk, does the FAA consider an individual ineligible for a Compliance Action.

Working Together

Non-punitive information-sharing programs provide feedback on how aviation systems are working, and allow system improvements to occur on an ongoing basis, rather than as a result of a major mishap or investigation. Through voluntary safety efforts such as Commercial Aviation Safety Team (CAST), General Aviation Joint Steering Committee (GAJSC), Aviation Safety Information and Sharing (ASIAS), Aviation Safety Reporting System (ASRS), Aviation Safety Action Program (ASAP) and Air Traffic Safety Action Program (ATSAP), to name just a few, we've seen the benefits of a non-blaming, problem-solving, collaborative approach to solving safety problems.

We prefer to work with you to correctly identify and fix the root causes of a deviation. In all cases, we investigate the matter on behalf of the public's safety interest. Working together, we in the aviation community have achieved a safety record that is unsurpassed. We must continue to set the gold standard when it comes to safety. We must focus on the most fundamental goal: find problems in the NAS before they result in an incident or accident, use the most appropriate tools to fix those problems, and monitor the situation to ensure compliance now and for the future.

Working together for a safer National Airspace System

Federal Aviation Administration

Compliance Philosophy

and

Airman Rights

The FAA is evolving:
To establish a just safety culture.

Why the change?
To foster an open and transparent exchange of safety information.

To obtain a higher level of safety and compliance with regulatory standards.

What are your rights?
Pilot's Bill of Rights

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Compliance Philosophy

In 2015, the FAA in an effort to embrace a "just culture" implemented a new Compliance Philosophy. A "just culture" is one that has both an expectation of, and an appreciation for, self-disclosure of errors. A "just culture" allows for due consideration of honest mistakes, especially in a complex system like the NAS. But even unintentional errors can have a serious adverse impact on safety, and so we must ensure that the underlying safety concern is fixed in all cases.

Our objective is to identify safety issues that underlie deviations from standards and correct them as effectively, quickly, and efficiently as possible. Our view of compliance stresses a problem-solving approach (i.e., engagement, root-cause analysis, transparency, and information exchange) where the goal is to enhance the safety performance of individual and organizational certificate holders. An open and transparent exchange of information requires mutual cooperation and trust that can be challenging to achieve in a traditional, enforcement-focused regulatory model.

Airman Rights

This philosophical evolution towards a "just culture" is not intended to mislead or deny you of your rights. You are free to exercise your Airman Rights without repercussions. Refusal to speak or correspond with FAA personnel, or obtaining legal counsel immediately after an event, does not rule out Compliance Action.

Under the compliance philosophy, we hope to work with you to resolve any noncompliance with the regulations (14 CFR) without the need for a legal enforcement action. While legal enforcement action is generally not anticipated, the Pilot's Bill of Rights (Public Law 112-153) requires that you receive this information:

The nature of this investigation is to identify safety issues that underlie the apparent regulatory noncompliance in connection with:

_____

_____

_____

If we confirm your noncompliance with FAA regulations, we will use the information gathered in this investigation to determine the most efficient and effective means to return you to full compliance and to prevent recurrence.

Any response you make to an inquiry by a representative of the FAA Administrator in connection with this investigation may be used as evidence if legal enforcement action becomes necessary.

Airman Rights (cont'd)

You are entitled to access or otherwise obtain air traffic data in the possession of the FAA that would facilitate your ability to productively participate in a proceeding relating to this investigation.

You are also entitled to obtain air traffic data in the possession of a government contractor providing operational services for the FAA (e.g., contract control tower and flight service station), provided that you submit a request to the FAA that describes the facility at which such information is located and you identify the date on which such information was generated.

Anytime during this investigation, you may submit your request to access or obtain air traffic data by contacting the FAA personnel working with you to resolve the deviation. Because air traffic data is routinely destroyed or disposed of in the ordinary course of business, it is important that you submit your request for such data as soon as possible.

If this investigation results in a legal enforcement action against your airman certificate, rating, or inspection authorization, the releasable portions of the Administrator's investigative report will be made available to you upon your written request addressed to the FAA's legal counsel handling the enforcement action.

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