VOLUME 1 GENERAL INSPECTOR GUIDANCE AND INFORMATION

CHAPTER 3 INSPECTOR RESPONSIBILITIES, ADMINISTRATION, ETHICS AND CONDUCT

Section 4 Inspector Training Requirements to Perform Job Functions

1-207 GENERAL. This section provides the system level perspective on ensuring aviation safety inspectors (ASI) have the required training prior to performing job tasks, as necessary.

A. The Federal Aviation Administration (FAA) assigns each newly hired ASI a specialty position, which becomes the inspector's primary job. This job forms the basis from which each new hire will be assigned tasks and associated training functions to complete for Flight Standards Service (AFS). The primary specialty positions for which inspectors are hired are:

- General Aviation Operations (GAOP);
- Air Carrier Operations (ACOP);
- General Aviation Airworthiness (GAAW);
- Air Carrier Airworthiness (ACAW);
- General Aviation Avionics (GAAV); and
- Air Carrier Avionics (ACAV).

B. Inspectors may be hired for these specialties at the field office, regional office, and/or headquarters (HQ). Under most circumstances new inspectors will follow a standard progression path from trainee to journeyman to principal inspector (PI).

1-208 PREREQUISITES. New inspectors will be programmed for initial and ongoing training based on their assigned specialty by Flight Standards Training Division (AFS-500). The inspectors' initial training is commonly referred to as new hire string training, basic indoctrination training, or initial training. The inspectors' initial new hire string courses are mandatory and must be completed satisfactorily. All inspectors' training is facilitated, monitored, and tracked via the FAA's Training Needs Assessment (TNA) and electronic Learning Management System (eLMS).

1-209 ON-THE-JOB TRAINING (OJT). Newly hired inspectors, and inspectors transitioning to a position that they have not previously received OJT for, are assigned an OJT trainer who is jointly responsible with the inspector for completion of OJT requirements.

A. The first level of training is familiarization with FAA guidance relevant to a particular task or job.

B. During the second level the inspector observes a qualified inspector performing the task.

C. In level three, a qualified inspector observes the trainee perform the task. The OJT training record is certified at each level and signed off when the inspector is competent at performing the task.

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D. The inspector's official training and OJT records are maintained by AFS for the duration of the inspector's employment. A copy of the AFS OJT Program Guide is available at: https://employees.faa.gov/org/linebusiness/avs/offices/afs/divisions/hq_region/afs500.

E. Regional Flight Standards division (RFSD) managers are responsible for ensuring that each of their field offices has implemented an appropriate OJT program designed to meet the needs of the specific office. Each office manager is responsible for designating an OJT program coordinator, instructor, or OJT program manager to develop and monitor the effectiveness of the office's OJT programs.

F. Newly hired or newly assigned inspectors will be considered qualified to complete job functions and/or tasks associated within their specialty when all training requirements, airman qualifications, and certifications have been satisfactorily completed, verified, and documented. For example, the following conditions must be met in order for an Air Carrier Operations ASI to be considered qualified to perform specific job functions without supervision:

1) Satisfactory completion of basic indoctrination training;

2) Additional FAA programmed and specialty training;

3) Satisfactory completion of an FAA Academy (AMA) or out-of-agency course on that job function, if required; and

4) Satisfactory completion of all OJT requirements for that job function, in accordance with the current edition of FAA Order 3140.20, Flight Standards Service National Training Program.

NOTE: In certain instances the inspector's manager may authorize the inspector to perform a required job function prior to completing all of the training associated with the inspector's specialty position assignment.

1-210 STANDARD METHODS USED.

- AMA Training –Mike Monroney Aeronautical Center (MMAC);
- Center for Management and Executive Leadership (CMEL);
- New hire string;
- Position essential;
- Continuing development;
- Decision tree;
- OJT;
- Web-based/interactive video teletraining (IVT);
- Correspondence;
- On-site facilitation; and
- Out-of-agency training.

RESERVED. Paragraphs 1-211 through 1-215.

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VOLUME 3 GENERAL TECHNICAL ADMINISTRATION

CHAPTER 3 ISSUE A CERTIFICATE OF WAIVER OR AUTHORIZATION—14 CFR SECTION 91.311 (BANNER TOWING)

Section 1 Issue a Certificate of Waiver or Authorization—Section 91.311 (Banner Towing)

3-61 PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODE. 1220.

3-62 OBJECTIVE. The objective of this task is to determine if an applicant is eligible for issuance of a certificate of waiver or authorization for banner tow operations. Successful completion of this task results in issuance of a certificate or disapproval of the application.

3-63 GENERAL.

A. Authority. Title 14 of the Code of Federal Regulations (14 CFR) part 91, § 91.311, provides for the issuance of a Certificate of Waiver or Authorization for aircraft banner tow operations.

B. Definition. A banner is an advertising medium supported by a temporary framework attached externally to the aircraft and towed behind the aircraft.

C. Eligibility. Operators of either standard or restricted category aircraft may apply for a certificate to engage in banner tow operations. Operators of restricted category aircraft may also be required to operate under the provisions of a waiver to § 91.313(e).

D. Federal Statutory Mandates. See Figure 3-14, PL 108-109, Section 521, Reference Information: Public Laws Associated with Tasks of this Handbook, for guidance regarding applicable statutory mandates for banner tow operations.

NOTE: NOTE: This information is subject to change or cancellation.

E. Forms Used. Federal Aviation Administration (FAA) Form 7711-2, Application for a Certificate of Waiver or Authorization (see Figure 3-6), is a multipurpose form used to apply for FAA Form 7711-1, Certificate of Waiver or Authorization (See Figure 3-7.) The Blocks that apply to banner tow operations are listed in subparagraph 3-68 C.

F. Submission. An applicant requesting a certificate is responsible for the completion and submission of FAA Form 7711-2. The application should be submitted a minimum of 30 days before the banner tow activity will take place.

G. Approval or Disapproval.

1) Applications for banner tow operations are processed at the Flight Standards District Office (FSDO) having jurisdiction over the area where the banner tow operator's principal business office is located. An approved FAA Form 7711-1 or disapproval of the application must be issued by the FSDO as soon as possible after receipt of the application. Upon

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approval, FAA Form 7711-2 becomes a part of FAA Form 7711-1. The jurisdictional FSDO manager or his/her designated representative, which may be either the assistant manager or another supervisor from within that jurisdictional FSDO, signs the certificate upon approval.

2) When an operator is issued an authorization for a specific geographic area and wishes to operate in another geographic area, there is no need to issue another authorization. The original issuing FSDO will amend the authorization to include the new jurisdiction by amending the authorization, keeping the original expiration date. If the operator wishes to operate nationally, it is acceptable to issue an authorization for the "Contiguous United States"

H. Expiration. FAA Form 7711-1 expires 24 calendar-months from the date of issuance. A certificate may be reissued after a properly completed FAA Form 7711-2 is submitted to and processed by the FSDO.

I. Enhanced Vital Information Database (eVID) Office File. The inspector should establish an operator eVID record of all operators issued certificates, except for those operators issued a certificate for a one-time operation.

3-64 REVIEW OF FAA FORM 7711-2. Upon receipt, the application should be reviewed for obvious discrepancies. The information submitted by the applicant on FAA Form 7711-2 must not be altered by the issuing office. In the event the application is not correct, it should be returned to the applicant immediately.

A. Blocks 1 and 2—Name of Organization/Name of Responsible Person. If the applicant is a representative of an organization, the organization's name should appear in Block 1. The name of the individual and his/her position or authority to represent the organization (e.g., the "responsible person") should appear in Block 2. If the applicant is not representing others, the term "N/A" should be entered in Block 1 and the applicant's name entered in Block 2.

B. Blocks 3, 4 and 5—Permanent Mailing Address and Pending/Denied Waiver. Applicant should state information as explained on each individual block.

C. Block 6—14 CFR Sections to be Waived. In many instances the applicant does not know or is not sure which sections of the regulations are involved. A conference with the applicant before acceptance of the application may be necessary.

D. Block 7—Description of Operations. It is sufficient for the applicant to use the terms "agricultural," "forest and wildlife," "aerial surveying," "patrolling," or "weather control," to describe the type of operation. However, the applicant should include detailed information on the type of operation.

E. Block 8—Area of Operations. A detailed description of any city, town, county, and/or state over which operations will be conducted. For powerline/pipeline operations, the routes must be depicted in cartographic or photographic form. This depiction should include every community, settlement, stadium, or other common gathering place located either side of the route. The depiction should also include the areas where powerlines and phone lines or any other obstructions cross the route.

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F. Block 9—Time Period. The applicant should list beginning and ending dates for the operation in this block. Cases involving one-time operations where the applicant has not indicated an alternate date, the inspector should advise the applicant to request alternate dates in order to save time and unnecessary paperwork.

G. Block 10—Aircraft and Pilots. At the time the application for a waiver is submitted, the applicant may not know the names of the pilots or the aircraft to be used in a particular operation. The application may be accepted with a notation in Block 10 that a list will be provided at a later, specified date.

3-65 CERTIFICATE ISSUANCE.

A. Inspector Considerations.

1) The inspector must determine whether a banner will create a hazard to persons or property if deliberately or inadvertently dropped. A banner tow operation is conducted "around" an open air assembly rather than "over" an open air assembly of persons, so the likelihood of dropping a lead banner pole on an assembly of persons is reduced. Most banners are constructed so that they perform as a self contained parachute with the weighted lead pole descending at an arrested rate when released.

2) The inspector must be satisfied that all pilots listed on the application are competent to perform their duties by confirming each pilot has:

- A reliable record of past experience;
- Demonstration of sample pickup to a FSDO operations inspector; and
- A reliable record of successful completion of a banner towing training program.

3) At least one pickup and drop of the maximum number of letters (panels) to be used by the certificate holder must be demonstrated. This demonstration should be observed from the ground to allow the inspector to evaluate the competence of any essential ground personnel as well as the flight operation.

4) When banner tow operations are conducted for compensation or hire, the pilot must have at least a limited commercial pilot certificate (without an instrument rating) and at least a valid second class medical certificate. An instrument rating is not a requirement for this operation.

5) Satisfactory coordination of ground crew signals can be critical to banner tow operations. Ground crews lay out the banner, elevate the top of the lead pole for pickup, retrieve the banner after the drop, and, if necessary, signal the correct approach to the pilot.

B. Guidelines for Issuance of the Certificate.

1) Requests for exemptions to the minimum safe altitudes of § 91.119 must be denied without exception.

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2) The operator is responsible for knowing state and local ordinances that may prohibit or restrict banner tow operations. FSDO knowledge of state and local ordinances is helpful in assisting applicants.

a) If an issue or question arises concerning state or local government regulations that regulate FAA authorized banner towing in a way that affects airspace management or aircraft flight and operations, or interfere with other federal policies or regulations, the inspector must immediately contact the Regional Counsel's Office. That office, in coordination with the Office of the Chief Counsel, FAA headquarters (HQ), has responsibility for responding to the issue or question.

b) The inspector must not insert any language relating to the application of State or local law (including regulations, ordinances, etc. into the "Special Provisions" section of FAA Form 7711-1) to banner tow operations authorized by the certificate, including the legal responsibilities of banner tow operators to comply with State or local regulations prohibiting or restricting banner tow operations.

c) On the first page of the Certificate of Waiver or Authorization Form 7711-1, between "Standard Provisions" and "Special Provisions" appears a note concerning waiver of State law or local regulations that has no legal effect and should be disregarded by inspectors. This is a disclaimer of responsibility by the FAA for the enforcement of state or local ordinances. Direct any questions received concerning this note to the Regional Counsel's Office.

d) The FAA does not regulate the content or messages displayed on banners towed by aircraft. Contact the Regional Counsel's Office for further information.

e) A site inspection should be conducted before the initial issuance of a certificate to engage in banner tow.

3) The authorized area should be limited to the issuing FSDO's geographic area. If the applicant requests operations outside of the jurisdictional FSDO, the issuing FSDO must amend the authorization to include the requested jurisdiction as well as assure that there is coordination between the affected FSDO(s). The noncertificating FSDO should be made aware of operations in its district. While the operator's responsible for making the notification, the FSDO that issued the certificate should follow up to ensure that the noncertificating FSDO was informed. The operator is responsible for contacting the added jurisdictional FSDO to be issued the necessary special provisions for that specific geographic area.

C. Banner Pickup and Drop. Some airports are not large enough for the pilot to maneuver into a proper wind orientation and do not have a suitable staging area for banner tow operations. Therefore, the inspector must ensure that pickups and drops can be made without compromising the safety of persons, equipment, or property on the surface. The pickup and drop must be in an area free from use by the public, employees other than ground crew, and from property on the surface. Preferably, the pickup and drop area should be located away from active runways and taxiways, unless the banner tow operator has an agreement with the airport operator to use these areas. If a runway or taxiway is used, the banner tow operator and the airport operator should cooperate in the preparation of an appropriate Notice to Airmen (NOTAM). The

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airport should have a clear approach path to the drop area that allows a safe banner drop operation. The operator should take into account the lowest point on the trailing banner when determining a helicopter's correct flight altitude. For safety purposes, the altitude should be sufficient for the aircraft and trailing banner to comply with § 91.119(b)(c). Some banners may extend more than 250 feet behind the aircraft.

1) During pickups, a moderately steep maximum performance climb should be used to snatch the banner and avoid dragging it. In no case should the lead pole contact the ground after pickup.

a) For aerial pickup the banner should be laid out flat on the ground within 30 degrees to the wind. Check the attach points at the top of the poles to ensure that the rope will slip off the top smoothly. The slip loop should travel freely so the grapple hook can engage and tighten the slip hook.

b) For ground pickup, the banner should be laid out within 30 degrees of the aircraft heading. This prevents banner entanglement.

2) The drop approach path should be into the wind and conducted at a sufficiently high altitude to allow the pilot to descend at a moderately steep angle when approaching the drop zone. If the release mechanism fails, the pilot must be in a position to make an aborted drop ("go around") and climb so that the lead pole does not hit the ground. The pilot must maintain sufficient speed and altitude to maneuver in the case of an aborted drop and recover without the banner contacting the ground.

D. Helicopter Banner Towing. The inspector must ensure that means are provided to prevent the banner from becoming entangled in the helicopter's tail rotor during all phases of flight, including autorotations.

NOTE: NOTE: The only way to prevent the banner from tangling in the tail rotor during autorotation may be to jettison the banner.

1) Part 133 operator may tow a banner using an external-load attaching means without a certificate of waiver. However, the 14 CFR part 133 operator must have at least a Class B authorization on the part 133 operating certificate and comply with part 133 during the aerial advertising operation.

2) Every banner tow certificate involving the use of a helicopter should include the following special provision: "The provisions of § 91.119(d) are not applicable when operating under the terms of this waiver. Operations over congested areas or open air assemblies of persons must not be lower than 1,000 feet above the highest obstacle within a horizontal radius of 2,000 feet and operations elsewhere will be conducted in compliance with § 91.119(c)." Figure 3-8 contains additional, suggested special provisions that may be included with a helicopter banner tow certificate.

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E. Restricted Category Civil Aircraft. Restricted category civil aircraft or aircraft that have been issued special operating limitations cannot be operated over congested areas unless a waiver to § 91.313(e) has been issued. Some aircraft equipped with banner tow hitches and most aircraft equipped with industrial nighttime light signs are certificated as restricted category aircraft.

F. Weather Limitations. Normally, banner tow operations are limited to day, visual flight rules (VFR)-only operations. However, the inspector may wish to consider additional weather limitations (e.g., crosswinds or high winds) based on the area of operation and equipment/aircraft used.

G. Special Provisions. These provisions may be issued because the proposed operation uses nonstandard equipment or for other reasons such as geographical considerations, pilot limitations, ATC limitations, or weather conditions. Provisions appropriate to the safety of the operation should be prescribed by the FSDO. Noncompliance with the provisions attached to the certificate is noncompliance with the certificate (see Figure 3-8 for a sample of special provisions).

H. Change of Pilots and Aircraft. The certificate holder must maintain a list of all pilots and aircraft to be used in the operation. For ease of update, pilots and aircraft should be listed on a separate page and attached to the certificate. Whenever there is a change of pilots or aircraft, the FSDO must be notified at least 5 days in advance of the first date the aircraft or pilot is scheduled to operate. The FSDO must approve the change before the operation involving the new pilot or aircraft takes place. In the case of newly acquired aircraft, especially a restricted category aircraft, an airworthiness inspector may choose to inspect the aircraft.

I. Operator Responsibility. Operators who hold a certificate have the responsibility of training each new pilot in banner tow operations and in the special provisions of the waiver.

J. Adherence. The FAA inspector determines compliance with the certificate and the attached special provisions by an on-site inspection. Failure to comply with the certificate and the attached special provisions may constitute justification for rescinding the certificate.

3-66 PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. This task requires knowledge of FAA policies, the regulatory requirements of 14 CFR parts 61 and 91, and qualification as an ASI (Operations).

B. Coordination. This task requires coordination with the airworthiness unit and/or the Aircraft Certification Office (ACO).

3-67 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- Title 14 CFR parts 1, 61, and 91.
- PTRS Procedures Manual (PPM).
- FAA/FS-I-8700-1, Information for Banner Tow Operations.

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B. Forms:

- FAA Form 7711-2, Application for Certificate of Waiver or Authorization (see Figure 3-6).
- FAA Form 7711-1, Certificate of Waiver or Authorization (see Figure 3-7).
- FAA Form 8000-36, Program Tracking and Reporting Subsystem Data Sheet.

C. Job Aids:

- Sample letters and figures.
- Banner Tow Operations Job Aid.

NOTE: NOTE: Figure 3-13 is a banner tow training guide for information. This is not to be considered the only format or the only topics to be covered. The principal operations inspector (POI) will be the final authority of what will be required for training for his/her jurisdictional area and operators.

3-68 PROCEDURES.

A. Initial Contact.

1) Provide the applicant with a copy of FAA Form 7711-2 (see Figure 3-6) and a copy of instructions for completion of FAA Form 7711-2 (See Figure 3-9).

2) Advise the applicant to complete Blocks 1 through 10 and item 17 and that the application must be submitted in duplicate (the original and one copy) to the FSDO at least 30 days before the planned banner tow operation or 30 days before renewal.

B. Open PTRS. Make appropriate PTRS entries.

C. Review FAA Form 7711-2. Using the information provided by the applicant and the background in section 1, review FAA Form 7711-2 for all pertinent information for the proposed banner tow operation. Accept strikeovers that are minor in nature and initialed by the applicant. Blocks 11 through 16 apply to airshow and air race waiver requests only.

1) Blocks 1 and 2—Name of Organization/Name of Responsible Person. Ensure that the applicant has indicated the name of the organization or individual applying and the name of a person responsible for matters concerning the application.

2) Block 3—Permanent Mailing Address. Ensure that the applicant indicates the permanent mailing address of the organization or individual named in Block 1 or 2.

3) Block 6—14 CFR Sections to be Waived. Ensure that the applicant has listed all sections of the regulations that need to be waived.

4) Block 7—Description of Operations. Ensure that the applicant has indicated the type of operation to be conducted.

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5) Block 8—Area of Operations.

a) Ensure that the applicant has listed specific locations and altitudes of the proposed operation.

b) Ensure that the area of operation is within the jurisdiction of the district office.

6) Block 9—Time Period.

a) Ensure that the applicant has included a beginning date and hour and an ending date and hour for the planned operation.

b) Ensure that the requested dates do not exceed 24 calendar-months.

7) Block 10—Aircraft and Pilots. Check for aircraft make and model, pilot names, certificate numbers and ratings, and full home addresses. Block 10 may be accepted with a statement, "A list containing aircraft and pilot information will be furnished on [applicant enters a specific date]."

8) Block 17—Certification. Ensure that the applicant has signed and dated each page of the application.

9) Accident/Violation Data Retrieval. Consult the Enforcement Information System/Accident Incident Data System (EIS/AIDS) database for the accident/violation history of the applicant and/or pilots.

10) Non-Completion of FAA Form 7711-2. If FAA Form 7711-2 has not been completed, perform the following tasks:

a) Mark the application "Disapproved" and list the reasons for disapproval in the "Remarks" section of FAA Form 7711-2;

b) Prepare a letter of disapproval (see Figure 3-10) that includes a suspense date for submission of a corrected FAA Form 7711-2;

c) Retain a copy of the original FAA Form 7711-2 that the applicant submitted for comparison to any subsequent applications; and

d) Return the application and the letter of disapproval to the applicant.

11) For Initial Issuance. If FAA Form 7711-2 has been completed and the application is for initial issuance of a certificate to engage in banner tow, conduct a site inspection.

12) Not for Initial Issuance. If FAA Form 7711-2 has been completed and the application is not for initial issuance, prepare FAA Form 7711-1 (See Figure 3-7).

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D. Pre-Inspection Activities.

1) Schedule Site Inspection. Contact the applicant by telephone and/or letter to schedule a date and time to conduct the site inspection.

2) Coordinate Site Inspection. Coordinate with the airworthiness unit to inspect the aircraft, aircraft records, confirm the appropriate airworthiness certificate for the proposed operation and/or aircraft modification(s) (if any), hitch, and hitch installation.

E. Conduct Site Inspection. Use the Part 91 Banner Tow Waiver Issuance and Operations Surveillance Job Aid (see Figure 3-11) to conduct the site inspection. The airworthiness of the aircraft, hitch, and hitch installation must be determined by an airworthiness inspector.

1) Standard or Restricted Category Aircraft. If the operation includes standard or restricted category aircraft, review the aircraft's special operating limitations. During the banner tow operation, the aircraft must have a placard by the main entrance door of the aircraft. The placard must show, in letters at least 2 inches high, the operating category of the aircraft. (See Volume 3, Chapter 4, Section 1, Issue a Certificate of Waiver for Restricted Category Civil Aircraft.)

2) Installed Non-Original Factory Tow Hitch. If the tow hitch is not a part of an original factory installation, inspect aircraft records before initial operation to ensure that FAA Form 337, Major Repair and Alteration (Airframe, Powerplant, Propeller, or Appliance), which describes the installation of the tow hitch, is part of the aircraft maintenance records. There may also be a Supplemental Type Certificate (STC) for this installation.

3) Verification of Pilot and Medical Certificates. Verify that all pilots of banner tow operations for compensation or hire have at least a commercial pilot certificate and at least a valid second class medical certificate. An instrument rating is not a requirement for this operation.

4) Verification of Registration and Airworthiness Certificates. Verify that the registration certificate, the airworthiness certificate, and any placards are on board the aircraft. If the aircraft is a restricted category aircraft, the operating limitations must also be onboard the aircraft.

a) **Banner and Lead Pole Inspection.** Inspect the banner and lead pole to ensure that:

- The weights are secured within the lead pole and that the weights (usually lead pellets) at the bottom are secure and cannot fall out;
- The tow ropes are not frayed, twisted, or knotted;
- The banner panels and their attachments are secure;
- The tail flag is intact; and
- The attaching rope has no indication of knots and is the appropriate length for the operation.

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5) Attaching Device/Hitch Inspection. Inspect the attaching device or hitch to ensure that:

- The release cable mechanism operates easily and is snug to prevent premature or inadvertent release; and
- The hitch loop fits tightly.

6) Demonstration of Pilot Proficiency. The certificate holder must conduct at least one pickup and drop to demonstrate pilot proficiency. The pickup and drop shall contain the maximum number of letters (panels) the operator plans to use.

7) Adherence of Pickup and Drop. Ensure that each pickup and drop by a pilot meets the requirements in subparagraphs 3-65C1) and 2).

8) Pre-Arranged Communication Signal. If a ground crew is used, ensure that a prearranged communication signal has been established so the ground crew can notify the pilot and/or banner tow operator of problems or malfunctions with the equipment or banner.

9) Adherence of Pickup and Drop Site. Ensure that the pickup/drop site meets the requirements of subparagraph 3-65C.

F. Unsatisfactory Inspection. If the site inspection is unsatisfactory:

- Mark the application "Disapproved" and explain the reasons for disapproval in the "Remarks" section of FAA Form 7711-2;
- Prepare a letter of disapproval (see Figure 3-12) that includes a suspense date for correction of any discrepancies found during the inspection and a date for a followup inspection;
- Retain a copy of the application and the part 91 job aid for future comparison;
- Return the original application and the letter of disapproval to the operator; and
- Make appropriate PTRS entries.

G. Satisfactory Inspection. If the site inspection is satisfactory:

1) Approved Section. Mark the appropriate section of FAA Form 7711-2 "Approved," date, and sign it.

2) Special Provisions. Develop special provisions based on any special equipment involved, particular geographic or meteorological considerations, maximum number of letters to be used, wind limitations, and airport limitations.

3) Signature of FAA Form 7711-1 Sections. Prepare the appropriate sections of FAA Form 7711-1, date the form, and then submit it to the FSDO manager or designated representative for signature. The designated representative may be no lower than the unit supervisor.

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H. FSDO File.

1) FSDO File Preparation. Prepare the FSDO file on the applicant that includes a copy of the following documents:

- FAA Form 7711-1 and any special provisions;
- FAA Form 7711-2;
- Part 91 Banner Tow Waiver Issuance and Operations Surveillance Job Aid (until all PTRS entries are made, then discard);
- Letter of disapproval, if applicable; and
- Any other correspondence.

2) Send originals of FAA Form 7711-1, the special provisions, and FAA Form 7711-2 to the operator.

I. Close PTRS. Make appropriate PTRS entries.

J. eVID. Establish part 91 operator eVID record.

3-69 TASK OUTCOMES. Completion of this task results in one or more of the following:

- Issuance of a Certificate of Waiver or Authorization with attached special provisions.
- Disapproval of an application.
- An indication on the part 91 job aid of a satisfactory or an unsatisfactory inspection.
- A letter of disapproval.

3-70 FUTURE ACTIVITIES.

- Followup site inspection.
- Reissuance of the Certificate of Waiver or Authorization.
- Update of part 91 operator eVID entry.

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Figure 3-6. FAA Form 7711-2, Application for a Certificate of Waiver or Authorization

No certificate may be issued unless a completed application form has been received (14 C.F.R. 91. 101. and 105).

US Department of Transportation
Federal Aviation Administration

APPLICATION FOR CERTIFICATE OF WAIVER OR AUTHORIZATION

From Approved: O.M.B. No.2120-0027 08/31/2008

APPLICANTS - DO NOT USE THESE SPACES

Region	Date

Action
☐ Approved ☐ Disapproved – *"Explain under "Remarks"*

Signature of authorized FAA representative

INSTRUCTIONS

Submit this application in triplicate (3) to any FAA Flight Standards district office.

Applicants requesting a Certificate of Waiver or Authorization for an aviation event must complete all the applicable items on this form and attach a properly marked 7.5 series Topographic Quadrangle Map(s), published by the U.S. Geological Survey (scale 1:24,000), of the proposed operating area. The map(s) must include scale depictions of the flightlines, showlines, race courses, and the location of the air event control point, Police dispatch, ambulance, and fire fighting equipment. The applicant may also wish to submit photographs and scale diagrams as supplemental material to assist in the FAA's evaluation of a particular site. Application for a Certificate of Waiver or Authorization must be submitted 45 days prior to the requested date of the event.

Applicants requesting a Certificate of Waiver or Authorization for activities other than an aviation event will complete items 1 through 10 only and the certification, item 17, on the reverse.

1. Name of organization	2. Name of responsible person
AAA AERIAL SIGN CO. INC.	JAMES A. JOHNSON

3. Permanent mailing address	House number and street or route number	City	State and ZIP code	Telephone No.
	# 3 AIRPORT DRIVE SUITE 202	SPRINGFIELD	FLORIDA 33033	305-555-1234

4. State whether the applicant or any of its principal officers/owners has an application for waiver pending at any other office of the FAA.

5. State whether the applicant or any of its principal officers owners has ever had its application for waiver denied, or whether the FAA has ever withdrawn a waiver from the applicant or any of its principal officers/owners.

6. FAR section and number to be waived
NONE

7. Detailed description of proposed operation *(Attach supplement if needed)*
AERIAL ADVERTISING / BANER TOWING

8. Area of operation *(Location, altitudes, etc.)*
STATES OF FLORIDA, GEORGIA AND SOUTH CAROLINE

9a. Beginning *(Date and hour)*	b. Ending *(Date and hour)*
09/01/2002	08/31/2003

10. Aircraft make and model (a)	Pilot's Name (b)	Certificate number and rating (c)	Home address (Street, City, State) (d)
THE APPLICANT MAY SUBMIT	THIS INFORMATION AT A LATER DATE	ON A SEPARATE SHEET.	

FAA Form 7711 -2 (8-08) Supersedes Previous Edition

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Figure 3-6. FAA Form 7711-2, Application for a Certificate of Waiver or Authorization (continued)

▶ *ITEMS 11 THROUGH 16 TO BE FILLED OUT FOR AIR SHOW/AIR RACE WAIVER REQUESTS ONLY.*

11. The air event will be sponsored by:

12. Permanent mailing address	House number and street or route number	City	State and ZIP code	Telephone No.

13. Policing *(Describe provisions to be made for policing the event.)*

14. Emergency facilities *(Mark all that will be available at time and place of air event.)*

☐ Physician ☐ Fire truck ☐ Other - Specify _____

☐ Ambulance ☐ Crash wagon _____

15. Air Traffic control *(Describe method of controlling traffic, including provision for arrival and departure of scheduled aircraft.)*

16. Schedule of Events *(include arrival and departure of scheduled aircraft and other periods the airport maybe open.)*

Hour (a)	Date (b)	Event (c)

If sufficient space is not available, the entire schedule of events may be submitted on separate sheets, in the order and manner indicated above.

Please Read > The undersigned applicant accepts full responsibility for the strict observance of the terms of the Certificate of Waiver or Authorization, and understands that the authorization contained in such certificate will be strictly limited to the above described operation.

17. Certification - I CERTIFY that the foregoing statements are true.

Date	Signature of Applicant

Remarks

FAA Form 7711-2 (8-08) Supersedes Previous Edition

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Figure 3-7. FAA Form 7711-1, Certificate of Waiver or Authorization

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

CERTIFICATE OF WAIVER OR AUTHORIZATION

ISSUED TO

AAA AERIAL SIGN CO. INC.

ADDRESS

 # 3 AIRPORT DRIVE
SPRINGFIELD, FLORIDA 33033

This certificate is issued for the operations specifically described hereinafter. No person shall conduct any operation pursuant to the authority of this certificate except in accordance with the standard and special provisions contained in this certificate, and such other requirements of the Federal Aviation Regulations not specifically waived by this certificate.

OPERATIONS AUTHORIZED

IN ACCORDANCE WITH SECTION 91.311 OF TITLE 14 OF THE CODE OF FEDERAL REGULATIONS, THE FOLLOWING OPERATIONS ARE AUTHORIZED:

AERIAL ADVERTISINGBANNER/ TOWING

AERA OF OPERATIONS:

STATES OF FLORIDA, GEORGIA, AND SOUTH CAROLINA

LIST OF WAIVED REGULATIONS BY SECTION AND TITLE

NONE

STANDARD PROVISIONS

1. A copy of the application made for this certificate shall be attached to and become a part hereof.
2. This certificate shall be presented for inspection upon the request of any authorized representative of the Administrator of the Federal Aviation Administration, or of any State or municipal official charged with the duty of enforcing local laws or regulations.
3. The holder of this certificate shall be responsible for the strict observance of the terms and provisions contained herein.
4. This certificate is nontransferable.

NOTE.---This certificate constitutes a waiver of those Federal rules or regulations specifically referred to above. It does not constitute a waiver of any State law or local ordinance.

SPECIAL PROVISIONS

Special Provisions Nos. 1 to 11 inclusive, are set forth on the reverse side hereof. "See Attached" ☐

This certificate is effective from SEPTEMBER 1, 2002 to AUGUST 31, 2004, inclusive, and is subject to cancellation at any time upon notice by the Administrator or his authorized representative.

BY DIRECTION OF THE ADMINISTRATOR

SOUTHERN
(Region)

[SHOULD BE SIGNED BY THE FSDO MANAGER,
(Signature)
BUT MAY BE DELEGATED]

SEPTEMBER 1, 2002
(Date)

(Title)

FAA Form 7711-1 (7-74) AFS Electronic Forms System - JetForm FormFlow - 12/1998

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Figure 3-8. Sample of Special Provisions for Banner Tow Operations

All banner tow operations shall be conducted in VFR weather conditions as required by 14 CFR part 91, § 91.155. Operations shall be conducted only between the hours of official sunrise and official sunset.

1. The certificate holder shall obtain the airport manager's approval to conduct banner tow operations at that respective airport.

2. If the airport involved has an FAA control tower, the holder shall coordinate all banner tow operations and operate in coordination with the FAA control tower during banner tow operations.

3. Appropriate airport officials will be notified in advance when banner tow operations will be in close proximity to an uncontrolled airport.

4. Tow attachment and release mechanisms on the aircraft shall be approved by the FAA.

5. A thorough inspection of the aircraft and special equipment shall be made prior to each day's operation.

6. Only essential crew members will be carried during banner tow operations.

7. When banner tow operations are conducted around congested areas, due care will be exercised so that, in the event of emergency release of the banner and/or tow rope, it will not cause undue hazard to persons or property on the surface.

8. Banner pickup or banner drop should be in a predesignated area not closer than 500 feet to taxiways, runways, persons, buildings, parked automobiles, and other aircraft whenever possible. If the tow plane lands with the banner attached, due care should be exercised to avoid obstacles and endangering other aircraft in the air or persons, property, or aircraft on the surface.

9. Only the aircraft on the attached list may be used under the terms of this certificate while being flown by the pilot(s) listed. The certificating FSDO must be notified in writing of any changes to the attached lists at least 5 days in advance of the first date the aircraft or pilot is scheduled to operate.

10. For nonrevenue flights, the pilot of the tow aircraft shall hold at least a valid private pilot certificate and have a minimum of 200 hours pilot-in-command (PIC) time.

11. For operations outside the geographic area of the issuing FSDO or operating in another FSDO's jurisdiction under a "Contiguous United States" authorization, the operator will coordinate with the appropriate jurisdictional FSDO in advance. If there are special provisions for the added geographic area, those provisions will be added to those originally issued by the original certificating FSDO. The operator will comply with all special provisions attached to its authorization.

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12. A current copy of the following is to be carried onboard all aircraft:

- Certificate of Waiver or Authorization, and
- List of all approved pilots and aircraft.

13. For helicopter banner tow operations the provisions of § 91.119(d) are not applicable when operating under the terms of this waiver. Operations over congested areas or open air assemblies of persons must not be lower than 1,000 feet above the highest obstacle within a horizontal radius of 2,000 feet and operations elsewhere shall be in compliance with § 91.119(c).

14. Operators must comply with all current NOTAMs.

Figure 3-9. Instructions for Completion of FAA Form 7711-2

PREPARING FAA FORM 7711-2.

Blocks from FAA Form 7711-2 are explained below for the purpose of uniformity of use. However, not all Blocks on the form may be applicable to the application request for the banner tow operation. Blocks 11 through 16 apply to airshow and air race waiver requests only.

a. **Blocks 1 and 2—Name of Organization/Name of Responsible Person.** If you are a representative of an organization, then the organization's name should appear in block 1. Your name and title or position, as the organization's representative, for application purposes should appear in Block 2. If you are not representing an organization, the term "N/A" should be entered in Block 1 and your name in Block 2.

b. **Block 3—Permanent Mailing Address.** Self-explanatory.

c. **Block 4—Pending Waiver application.** Self-explanatory.

d. **Block 5—Denial and/or Withdrawal of Previous Application.** Self-explanatory.

e. **Block 6—14 CFR Section and Number To Be Waived.** All applicable 14 CFR sections and numbers that are to be waived for the operation to be conducted must be listed in this block. If you are unsure which 14 CFR sections will need to be waived, contact the FSDO for guidance.

f. **Block 7—Detailed Description of Proposed Operations.** It is sufficient to use the term "pipeline patrol," "powerline patrol," etc., for a description. However, additional detailed information may be included.

g. **Block 8—Area of Operation.** A detailed description of any city, town, county, and/or state over which the operations will be conducted and the minimum altitude essential to accomplish the operation should be included in this block. The routes for powerline/ pipeline operations must be depicted in cartographic or photographic form. This depiction should include every community, settlement, stadium, or other common gathering place

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located either side of the route. The depiction should also include the areas where powerlines and phone lines or any other obstructions cross the route.

h. Block 9—Time Period. List the beginning dates and hours and the ending dates and hours the operation will be conducted. Maximum time period for operations is 24 calendar-months (e.g., June 12, 1996 to June 30, 1998), except for NAFTA operations, in which the maximum time period for operations is 12 calendar-months. The application should be submitted to the FSDO at least 45 days before the beginning date of the operation. For a onetime operation, consideration should be given to alternate dates. A request for alternate dates may prevent a delay and/or unnecessary paperwork. These alternate dates should be included in this block.

i. Block 10—Aircraft Make and Model. List the names of all pilots, their certificate numbers and ratings, full home address, and all aircraft by make and model that will be used in the operation. If the type of aircraft and/or the names of the pilots are not known at the time the application is submitted, the FAA will accept the application with the statement, "A list containing aircraft and/or pilot information will be furnished on [insert date.]"

j. Block 11—Sponsorship. Not required.

k. Block 12—Permanent Mailing Address of Sponsor. Not required.

l. Block 13—Policing. Not required.

m. Block 14—Emergency Facilities. Not required.

n. Block 15—Air Traffic Control. Not required.

o. Block 16—Schedule of Events. Not required.

p. Block 17—Certification. As the applicant or an organization's representative, you must sign in this block and on each page of the application.

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Figure 3-10. Sample Letter of Disapproval of an Application

FAA Letterhead

[date]

[name of applicant]

[address of applicant]

[city, state, zip code]

Dear [name of applicant]:

This letter is to inform you that the application you submitted on [date] has been disapproved for the reasons listed in the Remarks section of FAA Form 7711-2.

Please make the corrections noted and return to this office within 15 days of receipt of this letter.

If you have any questions or comments, please feel free to contact this office at [telephone number].

Sincerely,

[POI's signature]

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Figure 3-11. Part 91 Banner Tow Waiver Issuance and Operations Surveillance Job Aid

Operator Name _____

Base of Operation _____

Name of Pilot _____

Certificate Number _____

Aircraft Type _____ Aircraft N-number _____

Initial Application _____ Surveillance _____ Date Completed _____

Check		S	U	N/A
1. FSDO Application File				
a. Verify that all aircraft are listed in the waiver (make/model and N-number) (Use back of job aid if additional space is required.)				
Make/Model	N-number			
Make/Model	N-number			
Make/Model	N-number			
Make/Model	N-number			
Make/Model	N-number			
b. Verify that all pilots are listed in the waiver (certificate type and number) (Use the back of job aid if additional space is required.)				
Certificate Grade	Number			
Certificate Grade	Number			
Certificate Grade	Number			
Certificate Grade	Number			
Certificate Grade	Number			
c. Verify that aircraft and pilots used are listed on the waiver.				
2. Check Pilot/Operator				
a. Certificate appropriate to operation				
b. Medical certificate appropriate to the certificate				
c. Enforcement Information Subsystem/Accident Incident Data Subsystem (EIS/ AIDS) checked				
3. Aircraft Inspection				
a. Manual				
b. Certificate and documents				

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Registration			
Airworthiness			
Special Limitations (Restricted)			
c. Hitch and release mechanism			
d. Hitch installation documentation			
e. Sign mounting and light operation			
f. Placards (Restricted category)			
REMARKS:			

Figure 3-12. Sample Letter of Disapproval

FAA Letterhead

[date]

[name of applicant]

[address of applicant]

[city, state, zip code]

Dear [name of applicant]:

This letter is to inform you that the following discrepancies were found during the facility inspection conducted at your facility on [date].

[List all the discrepancies found during the inspection.]

Please correct the discrepancies noted above within 30 days of receipt of this letter. After correction of the discrepancies, please contact this office to schedule a followup inspection.

If you have any questions or comments, please feel free to contact this office [telephone number].

Sincerely,

[POI's signature]

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Figure 3-13. Banner Tow Operations Job Aid

BANNER TOW PILOT TRAINING		
NAME OF OPERATOR:	PILOT'S NAME:	
GROUND		
Aircraft Type		
	Date	Instructor
Fuel System		
Aircraft Speeds		
Preflight Procedures, including:		
Banner procedures		
Release mechanism		
Banner assembly and layout		
Part 91		
Part 61		
Certificate of Waiver Special Provisions		
FLIGHT		
Full Stalls (if appropriate)		
Flight at Critically Slow Airspeeds		
Banner Pickup/Banner Drop (Takeoff with banner attached, if appropriate)		
Emergency Procedures 1) Failure of banner release system 2) Loss of rudder control 3) Partial power loss 4) Engine failure with banner		
Total Ground Hours		
Total Flight Hours		
Pilot's Signature _____ Date _____ Certificate No. _____	Instructor's Signature _____ Date _____ Certificate No. _____	

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Figure 3-14. Public Laws Associated With Banner Tow Operations

Although banner tow operators are responsible for complying with appropriate regulations and airspace related restrictions, inspectors need to be aware of the following information concerning banner tow operations.

After the terrorist attacks of September 11, 2001, FAA issued Notices to Airmen (NOTAM) restricting flight access to certain airspace. In February 2003, the United States Congress passed a public law effectively prohibiting aerial advertising flights at certain events, stadiums, or other venues during specified times. The law prohibited certain operations within specified airspace limits. Then it rescinded waivers for the specified events. Finally, it permitted certain operators who met specified conditions to reapply for a waiver for non-banner tow operations at the listed events. The law was effective for one year. In January 2004, Congress, in Public Law 108-109, Title V, Section 521 January 23, 2004 in Title V General Provisions, Section 521, extended those restrictions indefinitely. The following is a reprint of Section 521:

Sec. 521.

(a) In General.- The Secretary of Transportation-

(1) shall, without regard to any fiscal year limitation, maintain in full force and effect the restrictions imposed under Federal Aviation Administration Notices to Airmen FDC 3/2122, FDC 3/2123, and FDC 2/0199; and

(2) may not grant any waivers or exemptions from such restrictions, except

(A) as authorized by air traffic control for operational or safety purposes;

(B) with respect to an event, stadium, or other venue

(i) for operational purposes;

(ii) for the transport of team members, officials of the governing body, and immediate family members and guests of such team members and officials to and from such event, stadium, or venue;

(iii) in the case of a sporting event, for the transport of equipment or parts to and from such sporting event;

(iv) to permit a broadcast rights holder to provide broadcast coverage of such event, stadium, or venue; and

(v) for safety and security purposes related to such event, stadium, or venue; and

(C) to allow the operation of an aircraft in restricted airspace to the extent necessary to arrive at or depart from an airport using standard air traffic control procedures.

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(b) Limitations on Use of Funds. None of the funds appropriated or otherwise made available by title I of this Act may be obligated or expended to terminate or limit the restrictions imposed under the Federal Aviation Administration Notices to Airmen referred to in subsection (a), or to grant waivers of, or exemptions from, such restrictions except as provided under subsection (a)(2).

(c) Broadcast Contracts Not Affected. Nothing in this section shall be construed to affect contractual rights pertaining to any broadcasting agreement.

RESERVED. Paragraphs 3-71 through 3-85.

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VOLUME 3 GENERAL TECHNICAL ADMINISTRATION

CHAPTER 4 ISSUE A CERTIFICATE OF WAIVER FOR RESTRICTED CATEGORY CIVIL AIRCRAFT

Section 1 Issue a Certificate of Waiver for Restricted Category Civil Aircraft

3-86 PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODE. 1230.

3-87 OBJECTIVE. The objective of this task is to determine whether or not an applicant is eligible for a certificate of waiver in accordance with Title 14 of the Code of Federal Regulations (14 CFR) part 91, § 91.313(e) for operating a restricted category civil aircraft. Successful completion of this task results in the issuance of a Certificate of Waiver, or disapproval of the waiver application.

A. Public Aircraft. On October 25, 1994, the President signed the Independent Safety Board Act Amendments, which contained a major change in the definition of "public aircraft." Public aircraft are exempt from many types of Federal Aviation Administration (FAA) regulations. However, the general operating rules of part 91 will apply to public aircraft, unless otherwise stated in the rule.

B. Advisory Circular (AC) 00-1.1, Government Aircraft Operations (current edition). This AC includes the FAA's interpretation of key statutory terms in reference to the new definition. The AC will assist operators of government owned aircraft in determining whether their former public aircraft operations remain public under the new definition. It is important for aviation safety inspectors (ASI) to obtain the AC and understand its contents.

3-88 GENERAL.

A. Definitions.

1) Restricted Category Civil Aircraft. In many cases only minor modifications of a standard category aircraft are made to install special equipment which will require the aircraft to be placed in a restricted category. This minor modification may actually have little or no effect on the performance or structural integrity of the aircraft and, therefore, issuance of a waiver may be a relatively simple procedure with little need for strict limitations in the special provisions section of the waiver. On the other hand, a standard aircraft or surplus military aircraft may have extensive modifications to install special equipment or to increase its operating weight. In this instance a waiver may be issued, but require more restrictive special provisions. Any special provision considered necessary for safety should be included when issuing a waiver of § 91.313(e).

2) Special Purpose Operations. Generally, aircraft that have been certificated in the restricted category have been modified for special purpose operations. Title 14 CFR part 21, § 21.25 defines special purpose operations as:

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- Agricultural (spraying, dusting, seeding, and livestock and predatory animal control);
- Forest and wildlife conservation;
- Aerial surveying (photography, mapping, and oil and mineral exploration);
- Patrolling (pipelines, power lines, and canals);
- Weather control (cloud seeding);
- Aerial advertising (skywriting, banner towing, airborne signs, and public address systems); and
- Any other operation specified by the Administrator.

3) Surplus Military Aircraft. Problems have been encountered by operators who purchase surplus military aircraft and attempt to have them certificated in the standard airworthiness category. In many instances, although the aircraft may have type-certificated (TC'd) counterparts, these surplus aircraft are certificated in the restricted category because the cost involved in meeting requirements for standard airworthiness certificates is prohibitive. These aircraft may have been extensively modified or operated in combat conditions. In other cases, they may have been operated and maintained to the highest possible standards. This should be considered when processing an application for waiver of § 91.313(e) involving surplus military aircraft with regard to necessary special provisions. Any questions regarding airworthiness (such as performance, structural integrity, etc.) should be referred to an Airworthiness inspector or the Aircraft Certification Service (AIR).

B. Authority. Restricted category civil aircraft may not be operated over a densely populated area, in a congested airway, or near a busy airport where passenger transport operations are conducted, except under the provisions of a certificate of waiver (§ 91.313(e)).

C. Aircraft Operating Limitations.

1) Restricted category civil aircraft must be operated in accordance with a FAA Form 8130-7, Special Airworthiness Certificate, and its associated operating limitations.

2) For turbine-powered airplanes, piston-powered aircraft with over 800 horsepower (hp), rotorcraft, large airplanes (over 12,500 pounds), and any other aircraft as deemed necessary, a limitation concerning pilot qualifications may have been prescribed. An example of this limitation is "The pilot in command of this aircraft must, as applicable, hold an appropriate category/class rating, have an aircraft type rating, or possess a letter of authorization issued by a Flight Standards Inspector."

3) The FAA Airworthiness inspector/aircraft engineer may also prescribe additional operating limitations as deemed necessary for the special purpose involved. The additional limitations will be enumerated on a separate sheet, dated, signed, and attached to FAA Form 8130-7.

D. Special Provisions. Since each application needs to be evaluated on an individual basis, it would be impractical to list all special provisions that might be necessary when issuing a waiver to § 91.313(e). However, the following is a partial list of subjects that may require special provisions:

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- Specific routes;
- What runways can be used;
- What airports may be used;
- The number of operations where applicable;
- Minimum weather criteria; and/or
- Considerations for diminished aircraft performance.

E. Waiver Application and Approval. Applications for operation of restricted category civil aircraft in accordance with § 91.313 are processed at the local Flight Standards District Office (FSDO).

F. Forms Used. FAA Form 7711-2, Application for a Certificate of Waiver or Authorization (see Figure 3-15), is a multi-purpose form used to apply for FAA Form 7711-1, Certificate of Waiver or Authorization (See Figure 3-16). All Blocks on the form may not be applicable to the application.

G. Submission. The completion and submission of FAA Form 7711-2 is the responsibility of the applicant. FAA Form 7711-2 should be submitted at least 5 days before the proposed operation.

H. Approval or Denial. At least 3 days before the event, the district office must approve or disapprove the application. Once approved, FAA Form 7711-2 becomes a part of FAA Form 7711-1. The jurisdictional FSDO Manager or their designated representative, which may be either the assistant manager or another supervisor from within that jurisdictional FSDO, will sign the waiver upon approval.

I. Expiration Date. An FAA Form 7711-1 expires not later than 24 calendar-months from the date of issuance or the termination of the proposed operation. A certificate of waiver must be re-applied for and then re-issued by the FSDO.

J. Enhanced Vital Information Database (eVID) Office File. The inspector should establish an operator eVID record of all operator issued waivers for a 12 calendar-month period, i.e., industrial operator with a lighted advertising sign. However, an eVID record is not required for operator issued waivers for a one-time operation.

K. Assistance. Regional coordinators have been selected to assist in answering any of your questions concerning this issue and may be contacted through your Regional Office (RO). Until further notice, questions concerning enforcement and legal interpretations will be forwarded to the Washington headquarters (HQ). Regional coordinators will forward such questions to the hotline. If unable to contact your regional coordinator you may call the hotline at (703) 661-0333 (extension 5054 or 5055). It is important to keep the regional coordinator advised in this case.

3-89 STATUTORY PROVISIONS. Under the new statute, many former public aircraft operations may now be subject to the regulations applicable to civil aircraft operations. For example, aircraft used to transport passengers will no longer be considered public aircraft in some circumstances. Unless they receive an exemption from the Administrator, the operators of

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such aircraft will need to meet civil aircraft requirements such as those pertaining to aircraft certification, aircraft maintenance, pilot certification, and pilot currency. The new law became effective April 23, 1995.

A. Aircraft Owned and Operated by the Armed Forces. Aircraft owned and operated by the Armed Forces and intelligence agencies of the United States, however, will retain their public aircraft status unless operated for commercial purposes.

B. Government-Owned Aircraft Operators Transporting Crewmembers. Government-owned aircraft operators transporting (for other than commercial purposes) crewmembers or other persons aboard the aircraft whose presence is required to perform, or is associated with performing a government function, such as fire fighting, search and rescue, law enforcement, aeronautical research, or biological or geological resource management, would still be considered a public aircraft operation. It is not sufficient to show that the passengers are being transported to perform a government function; use of the aircraft must be necessary to perform the mission.

C. Exemptions. Field office personnel have no authority to allow government operators to conduct operations which do not comply with the regulations. A government agency may, in appropriate circumstances, seek either a regulatory or statutory exemption. An applicant for an exemption should follow the process in 14 CFR part 11. Agencies applying for statutory exemptions should submit their aviation safety program (ASP) with the petition for exemption. Agencies are required to show that they have an acceptable ASP to ensure safe operations. The FSDO having jurisdiction over the applicants' operation will be asked to review the safety program and give an opinion as to whether the program meets the requirements for issuing an exemption. The FSDO will be expected to provide written justification for its recommendations.

NOTE: The Independent Safety Board Act Amendments of 1994 authorize exemptions from the United States Code (U.S.C.); specifically, the Federal Aviation Act of 1958 (FA Act), as amended and recodified, rather than from the regulations. The Amendments authorize such exemptions only for operations whose status has changed as a result of the revised definition of public aircraft. This authorization does not apply to operations conducted for commercial purposes, in as much as they were considered civil aircraft operations under both the original and revised definitions.

3-90 AIRCRAFT USED FOR DUAL PURPOSES. Government agencies may conduct both public and civil aircraft operations with the same aircraft. However, the operator will be required to maintain the aircraft in accordance with the appropriate regulations applicable to civil aircraft operations. Aircraft which hold airworthiness certificates should be handled as follows:

A. Public Aircraft Operation. For public aircraft operation with no modifications made to the aircraft, the airworthiness certificate may be displayed in the aircraft as required by § 91.203(b).

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B. Temporarily Altering the Aircraft. When the public aircraft operation involves altering the aircraft temporarily, it is not necessary for the operator to surrender the airworthiness certificate or remove it from the aircraft. However, an inspection and log book entry will be required prior to the aircraft operating as a civil aircraft. For example, when the public aircraft operation requires the removal of a door during the "public aircraft" operation, the door installation and return to service must be performed by an authorized individual before the aircraft is operated as a civil aircraft.

C. Substantial Modification. Where the modification involves more than the simple removal and/or installation of equipment, the operator should obtain the required FAA approval before conducting civil aircraft operations. Where the modification is such that it permanently invalidates the airworthiness certificate of the aircraft, the FSDO should seek the voluntary surrender of the certificate. If the aircraft owner refuses to surrender the certificate, the FSDO should follow the procedures in the current edition of FAA Order 2150.3, FAA Compliance and Enforcement Program.

D. Permanent Installations and Modifications Approved by the FAA. The FAA has allowed a certificate holder who also conducts public aircraft operations to retain the aircraft on its operations specification (OpSpec) when certain requirements have been met. Generally, those requirements provide that permanent installations and modifications are approved by the FAA. Temporary alterations must be corrected and the appropriate inspection and maintenance entries must be made before the aircraft is returned to service.

3-91 GOVERNMENTAL FUNCTIONS. The accepted functions include "fire fighting, search and rescue, law enforcement, aeronautical research, or biological or geological resource management" or other comparable functions. In each instance, the use of an aircraft must be necessary to perform the function. In some cases, training flights may be considered acceptable where the training is being performed aboard the aircraft and the aircraft is necessary for the performance of the training. AC 00-1.1 provides examples of situations which may be encountered by the field inspector. If an inspector has any questions regarding other functions comparable to those listed above or the nature of an operation, he/she should seek assistance from the regional coordinator or the public aircraft hotline.

3-92 SURVEILLANCE ACTIVITIES. Government-owned aircraft operators, holding any type of FAA certification, will be included in the normal surveillance activities such as, spot inspections of the aircraft and aircraft records. This includes any aircraft exclusively leased to the federal government. Any aircraft or operation certificated by the FAA is subject to this surveillance regardless of whether they are operating as "public or civil." For example, if an operator's operation is considered "public" and they hold an airworthiness certificate, their maintenance records are eligible for review. If you encounter an operator who states they are operating under the "public" status and you have questions concerning that operation, contact your regional public aircraft coordinator for assistance.

NOTE: Government-owned aircraft operators who are conducting public aircraft operations must be included in the FSDO's annual planned surveillance activities to ensure that their status remains unchanged.

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3-93 REVIEW FAA FORM 7711-2. Pertinent Blocks are discussed below for purposes of clarity and uniformity. The application should be reviewed upon receipt for obvious discrepancies. The information submitted by the applicant on FAA Form 7711-2 must not be altered by the issuing office.

A. Blocks 1 and 2. If the applicant is a representative of an organization, the organization's name should appear in Block 1. The name of the individual and his/her position or authority to represent the organization (e.g., the "responsible person") should appear in Block 2. If the applicant is not representing others, the term "N/A" should be entered in Block 1 and the applicant's name entered in Block 2.

B. Blocks 3, 4 and 5. Applicant should state information as explained on each individual block.

C. Block 6. In many instances the applicant does not know or is not sure which sections of the regulations are involved. A conference with the applicant before acceptance of the application may be necessary.

D. Block 7. It is sufficient for the applicant to use the terms "agricultural," "forest and wildlife," "aerial surveying," "patrolling," or "weather control," to describe the type of operation. However, the applicant should include detailed information on the type of operation.

E. Block 8. A detailed description of any city, town, county, and/or state over which operations will be conducted. For powerline/pipeline operations, the routes must be depicted in cartographic or photographic form. This depiction should include every community, settlement, stadium, or other common gathering place located either side of the route. The depiction should also include the areas where powerlines and phone lines or any other obstructions cross the route.

F. Block 9. The applicant should list beginning and ending dates for the operation in this block. Cases involving one-time operations where the applicant has not indicated an alternate date, the inspector should advise the applicant to request alternate dates in order to save time and unnecessary paperwork.

G. Block 10. At the time the application for a waiver is submitted, the applicant may not know the names of the pilots or the aircraft to be used in a particular operation. The application may be accepted with a notation in Block 10 that a list will be provided at a later, specified date.

3-94 PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. This task requires knowledge of regulatory requirements in part 91, and FAA policies and qualification as an Operations ASI.

B. Coordination. This task requires coordination with the airworthiness unit within the district office, and may require coordination with the AIR, appropriate Air Traffic Facilities, and the RO.

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3-95 REFERENCES, FORMS, AND JOB AIDS.

A. References:

- PTRS Procedures Manual (PPM).
- Appropriate chapters of 8900.1.

B. Forms:

- FAA Form 7711-1, Certificate of Waiver or Authorization (Figure 3-16).
- FAA Form 7711-2, Application for a Certificate of Waiver or Authorization (Figure 3-15).
- FAA Form 8000-36, PTRS Data Sheet.

C. Job Aids. Sample letters and figures.

3-96 PROCEDURES.

A. Initial Contact.

1) Provide the applicant with a copy of FAA Form 7711-2 and Instructions for Completion of FAA Form 7711-2 (See Figure 3-15).

2) Advise the applicant to complete Blocks 1 through 10 and Block 17 on FAA Form 7711-2. Blocks 11-16 are not required.

3) Inform the applicant that FAA Form 7711-2 must be submitted in duplicate (an original and one copy) to the FSDO at least 5 days before the proposed operation.

B. Open PTRS. Make appropriate PTRS entries.

C. Review FAA Form 7711-2. Using the information provided by the applicant and the background in Section 1 of this chapter, review FAA Form 7711-2 for all pertinent information for the proposed operation of a restricted category civil aircraft.

1) Blocks 1 and 2—Name of Organization/Name of Responsible Person. Ensure that the applicant has indicated the name of the organization or individual applying, and the name of the person responsible for matters concerning the application.

2) Block 3—Permanent Mailing Address. Ensure that the applicant indicates the permanent mailing address of the organization or individual named in Block 1.

3) Block 4—Pending Waiver Application. Self-explanatory.

4) Block 5—Denial and/or Withdrawal of Previous Application. Self-explanatory.

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5) Block 6—14 CFR Sections to be Waived. Ensure that the applicant has listed the applicable 14 CFR sections that need to be waived.

6) Block 7—Description of Operations. Determine that the applicant has indicated the type of operation to be conducted under the waiver.

7) Block 8—Area of Operations. Ensure that the applicant has listed the specific locations and altitudes of the proposed operation. Ensure that the area of operation is within the jurisdiction of the district office.

8) Block 9—Time Period. Check for a beginning and ending date for the operation.

9) Block 10—Aircraft and Pilots. Check for aircraft make and model, pilot names, certificate numbers and ratings, and full home address. Block 10 may be accepted with a statement, "A list containing aircraft and pilot information will be furnished on [applicant enters a specific date]."

10) Block 17—Certification. Ensure that the applicant has signed and dated the application.

11) If discrepancies or deficiencies are found:

- List the reasons for disapproval in the "Remarks" section on the reverse side of FAA Form 7711-2.
- Return the application to the applicant with a letter of disapproval (See Figure 3-18). Include in the letter a suspense date for submission of a corrected application.
- Make appropriate PTRS entries.
- If there are no discrepancies or deficiencies, continue the task.

D. Review FAA Form 8130-7. Review the aircraft's Special Airworthiness Certificate, FAA Form 8130-7, and its associated operating limitations.

E. Prepare FAA Form 7711-1.

1) Complete the appropriate section of FAA Form 7711-2.

2) Develop any special provisions that are not covered in the applicant's Special Airworthiness Certificate operating limitations if necessary.

3) Submit FAA Form 7711-1 to the district office manager, or designated representative, for his or her signature. The designated representative may be no lower then the operations unit supervisor.

F. District Office File.

1) Place a copy of FAA Form 7711-1 and any special provisions, FAA Form 7711-2 and any other documents of correspondence, in the district office file.

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2) Send the originals of FAA Form 7711-1 and FAA Form 7711-2 to the operator:

G. Close PTRS. Make appropriate PTRS entries.

H. eVID. Establish a part 91 operator eVID record, if appropriate.

3-97 TASK OUTCOMES. Completion of this task results in one or more of the following:

- The issuance of a Certificate of Waiver;
- Disapproval of an application;
- Letter of disapproval; and/or
- Part 91 Operator eVID record.

3-98 FUTURE ACTIVITIES:

- Re-issue a Certificate of Waiver;
- Cancellation of a Certificate of Waiver;
- Surveillance of any operations approved by the Certificate of Waiver; and
- Possible enforcement investigation.

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Figure 3-15. FAA Form 7711-2, Application for Certificate of Waiver or Authorization

No certificate may be issued unless a completed application form has been received (14 C.F.R. 91. 101. and 105).

US Department of Transportation
Federal Aviation Administration

APPLICATION FOR CERTIFICATE OF WAIVER OR AUTHORIZATION

From Approved: O.M.B. No.2120-0027 08/31/2008

APPLICANTS - DO NOT USE THESE SPACES

Region	Date

Action
☐ Approved ☐ Disapproved – *"Explain under "Remarks"*

Signature of authorized FAA representative

INSTRUCTIONS

Submit this application in triplicate (3) to any FAA Flight Standards district office.

Applicants requesting a Certificate of Waiver or Authorization for an aviation event must complete all the applicable items on this form and attach a properly marked 7.5 series Topographic Quadrangle Map(s), published by the U.S. Geological Survey (scale 1:24,000), of the proposed operating area. The map(s) must include scale depictions of the flightlines, showlines, race courses, and the location of the air event control point, Police dispatch, ambulance, and fire fighting equipment. The applicant may also wish to submit photographs and scale diagrams as supplemental material to assist in the FAA's evaluation of a particular site. Application for a Certificate of Waiver or Authorization must be submitted 45 days prior to the requested date of the event.

Applicants requesting a Certificate of Waiver or Authorization for activities other than an aviation event will complete items 1 through 10 only and the certification, item 17, on the reverse.

1. Name of organization	2. Name of responsible person
Duncan and Daughners Surveying	Elizabeth DUncan

3. Permanent mailing address	House number and street or route number	City	State and ZIP code	Telephone No.
	# 3 AIRPORT DRIVE SUITE 202	SPRINGFIELD	FLORIDA 33033	305-555-1234

4. State whether the applicant or any of its principal officers/owners has an application for waiver pending at any other office of the FAA.
Self explanatory

5. State whether the applicant or any of its principal officers owners has ever had its application for waiver denied, or whether the FAA has ever withdrawn a waiver from the applicant or any of its principal officers/owners.
Self explanatory

6. FAR section and number to be waived
14 CF 91.313(e)

7. Detailed description of proposed operation *(Attach supplement if needed)*
(The applicant must describe in detail the exact operation, e.g. Aerial Surveying. THe applicant may place on separate sheet of paper and attach it to the application)

8. Area of operation *(Location, altitudes, etc.)*
(The applicant must include a detailed description of city, town, etc., over which the aircraft will operate. The applicant may attach a map or chart.

9a. Beginning *(Date and hour)*	b. Ending *(Date and hour)*
09/01/2002	08/31/2003

10. Aircraft make and model (a)	Pilot's Name (b)	Certificate number and rating (c)	Home address (Street, City, State) (d)
B-L7	margaret Duncan	Commercial 456123789	13 Elm Street Warrentown, VA
THE APPLICANT MAY SUBMIT	THIS INFORMATION AT A LATER DATE	ON A SEPARATE SHEET.	
(The applicant must sign the	application in Block 17 on the reverse side	of FAA Form 7711-2)	

FAA Form 7711 -2 (8-08) Supersedes Previous Edition

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Figure 3-15. FAA Form 7711-2, Application for a Certificate of Waiver or Authorization (continued)

▶ *ITEMS 11 THROUGH 16 TO BE FILLED OUT FOR AIR SHOW/AIR RACE WAIVER REQUESTS ONLY.*

11. The air event will be sponsored by:

12. Permanent mailing address	House number and street or route number	City	State and ZIP code	Telephone No.

13. Policing *(Describe provisions to be made for policing the event.)*

14. Emergency facilities *(Mark all that will be available at time and place of air event.)*

☐ Physician ☐ Fire truck ☐ Other - Specify _____

☐ Ambulance ☐ Crash wagon _____

15. Air Traffic control *(Describe method of controlling traffic, including provision for arrival and departure of scheduled aircraft.)*

16. Schedule of Events *(include arrival and departure of scheduled aircraft and other periods the airport maybe open.)*

Hour (a)	Date (b)	Event (c)

If sufficient space is not available, the entire schedule of events may be submitted on separate sheets, in the order and manner indicated above.

Please Read > The undersigned applicant accepts full responsibility for the strict observance of the terms of the Certificate of Waiver or Authorization, and understands that the authorization contained in such certificate will be strictly limited to the above described operation.

17. Certification - I CERTIFY that the foregoing statements are true.

Date	Signature of Applicant

Remarks

FAA Form 7711-2 (8-08) Supersedes Previous Edition

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Figure 3-16. FAA Form 7711-1, Certificate of Waiver or Authorization

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

CERTIFICATE OF WAIVER OR AUTHORIZATION

ISSUED TO
Duncan and Daughters Surveying

ADDRESS
52 Aviation Rd. Warrenton, VA

This certificate is issued for the operations specifically described hereinafter. No person shall conduct any operation pursuant to the authority of this certificate except in accordance with the standard and special provisions contained in this certificate, and such other requirements of the Federal Aviation Regulations not specifically waived by this certificate.

OPERATIONS AUTHORIZED
(Describe in detail all operations authorized by the waiver: specific locations, altitudes, distances, etc. Use a seperate sheet of paper if necessary.)

LIST OF WAIVED REGULATIONS BY SECTION AND TITLE
14 CFR section 91.313, Restricted Category Civil Aircraft: Operating Limitations

STANDARD PROVISIONS

1. A copy of the application made for this certificate shall be attached to and become a part hereof.
2. This certificate shall be presented for inspection upon the request of any authorized representative of the Administrator of the Federal Aviation Administration, or of any State or municipal official charged with the duty of enforcing local laws or regulations.
3. The holder of this certificate shall be responsible for the strict observance of the terms and provisions contained herein.
4. This certificate is nontransferable.

NOTE—This certificate constitutes a waiver of those Federal rules or regulations specifically referred to above. It does not constitute a waiver of any State law or local ordinance.

SPECIAL PROVISIONS

Special Provisions Nos. 1 to 10 inclusive, are set forth on the reverse side hereof. "See Attached" ☐

This certificate is effective from _____ (Begining date/time) to _____ (Ending date/time), inclusive, and is subject to cancellation at any time upon notice by the Administrator or his authorized representative.

BY DIRECTION OF THE ADMINISTRATOR

(Self-explanatory)
(Region)

Signed by district office manager
(Signature)

November 23 1999
(Date)

but may be delegated no lower than operations unit supervisor.
(Title)

FAA Form 7711-1 (7-74) AFS Electronic Forms System - JetForm FormFlow - 12/1999

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Figure 3-17. Instructions for Completing FAA Form 7711-2

1. PREPARING FAA FORM 7711-2. Blocks from FAA Form 7711-2 are discussed below for purposes of clarity and uniformity of its use. Blocks 11 through 16 apply to air show and air race waiver requests only.

q. **Blocks 1 and 2—Name of Organization/Name of Responsible Person.** If you are a representative of an organization, then the organization's name should appear in block 1. Your name and title or position, as the organization's representative, for application purposes should appear in Block 2. If you are not representing an organization, the term "N/A" should be entered in Block 1 and your name in Block 2.

r. **Block 3—Permanent Mailing Address.** Self-explanatory.

s. **Block 4—Pending Waiver Application.** Self-explanatory.

t. **Block 5—Denial and/or Withdrawal of Previous Application.** Self-explanatory.

u. **Block 6—14 CFR Section and Number To Be Waived.** All applicable 14 CFR sections and numbers that are to be waived for the operation to be conducted must be listed in this block. If you are unsure which 14 CFR sections will need to be waived, contact the FSDO for guidance.

v. **Block 7—Detailed Description of Proposed Operations.** It is sufficient to use the term "pipeline patrol," "powerline patrol," etc., for a description. However, additional detailed information may be included.

w. **Block 8—Area of Operation.** A detailed description of any city, town, county, and/or state over which the operations will be conducted and the minimum altitude essential to accomplish the operation should be included in this block. The routes for powerline/pipeline operations must be depicted in cartographic or photographic form. This depiction should include every community, settlement, stadium, or other common gathering place located either side of the route. The depiction should also include the areas where powerlines and phone lines or any other obstructions cross the route.

x. **Block 9—Time Period.** List the beginning dates and hours and the ending dates and hours the operation will be conducted. Maximum time period for operations is 24 calendar-months (e.g., June 12, 1996 to June 30, 1998), except for NAFTA operations, in which the maximum time period for operations is 12 calendar-months. The application should be submitted to the FSDO at least 45 days before the beginning date of the operation. For a onetime operation, consideration should be given to alternate dates. A request for alternate dates may prevent a delay and/or unnecessary paperwork. These alternate dates should be included in this block.

y. **Block 10—Aircraft Make and Model.** List the names of all pilots, their certificate numbers and ratings, full home address, and all aircraft by make and model that will be used in the operation. If the type of aircraft and/or the names of the pilots are not known at the time the application is submitted, the FAA will accept the application with the

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statement, "A list containing aircraft and/or pilot information will be furnished on [insert date.]"

z. Block 11—Sponsorship. Not required.

aa. Block 12—Permanent Mailing Address of Sponsor. Not required.

bb. Block 13—Policing. Not required.

cc. Block 14—Emergency Facilities. Not required.

dd. Block 15—Air Traffic Control. Not required.

ee. Block 16—Schedule of Events. Not required.

ff. Block 17—Certification. As the applicant or an organization's representative, you must sign in this block and on each page of the application.

Figure 3-18, Sample Letter of Disapproval

FAA Letterhead

[date]

[name of applicant]

[address of applicant]

[city, state, and zip code]

Dear [name of applicant]: This letter is to inform you that the application you submitted on [date] has been disapproved for the reasons listed in the Remarks section of FAA Form 7711-2, Application for a Certificate of Waiver or Authorization.

Please make the corrections noted, and return to this office within 15 days of receipt of this letter.

If you have any questions or comments, please feel free to contact this office at the following telephone number [telephone number].

Sincerely,

[principal operations inspector's (POI) signature]

RESERVED. Paragraphs 3-99 through 3-115.

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VOLUME 3 GENERAL TECHNICAL ADMINISTRATION

CHAPTER 5 ISSUE A CERTIFICATE OF WAIVER FOR AN AEROBATIC PRACTICE AREA OR AN AEROBATIC CONTEST BOX

Section 1 Issue a Certificate of Waiver or Authorization for an Aerobatic Practice Area or an Aerobatic Contest Box

3-116 PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

A. Aerobatic Practice Areas. Enter 1232 in the activity code box of the PTRS Data Sheet and AP in the National Use Box.

B. Aerobatic Contest Box. Enter 1233 in the activity code box of the PTRS Data Sheet and AC in the National Use box.

3-117 OBJECTIVE. The objective of this task is to evaluate Federal Aviation Administration (FAA) Form 7711-2, Application for a Certificate of Waiver or Authorization (see Figure 3-19), and issuing an FAA Form 7711-1, Certificate of Waiver or Authorization (see Figure 3-20), for the purpose of establishing an aerobatic practice area and/or an aerobatic contest box. Completion of the task results in the approval or disapproval of the applicant's FAA Form 7711-2. If approval is granted, FAA Form 7711-1 with attached special provisions is issued to the applicant.

NOTE: As per Volume 1, Chapter 1, Section 1, subparagraph 1-3C of this handbook, no regional supplements to aviation event policy are permitted.

3-118 GENERAL. In this section, waiver preparation for an aerobatic practice area and an aerobatic contest box will be discussed separately in both paragraphs 3-119 and 3-120.

A. Background. Background and special provisions unique to evaluating an application and issuing a waiver for aerobatic practice areas or aerobatic contests include the requirements for the application process, the issuance of the waiver, and the surveillance of the activity. These special provisions can be found in paragraphs 3-119 and 3-120 below.

1) A separate set of suggested special provisions that may be used for each type of waiver is included.

2) Paragraphs 3-118 through 3-120 also outline the requirements necessary to establish and use either an aerobatic practice area or an aerobatic contest box.

3) Waivers are issued for specific activities in these two airspace areas.

a) An aerobatic practice area is established for the purpose of practicing aerobatic skills.

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b) The aerobatic contest box is established for the sole purpose of conducting competitive aerobatic demonstrations in accordance with the rules, procedures, and practices of the International Aerobatic Club.

4) The user of an aerobatic practice area or an aerobatic contest box is not required to hold an FAA Form 8710-7, Statement of Acrobatic Competency.

5) Each activity requires a waiver with attendant special provisions appropriate to the site and the activity.

B. Procedures. Subparagraphs 3-119A and 3-120B contain specific procedures for the processing and issuance of waivers for aerobatic practice areas and contest boxes.

C. Regulatory Authority. The regulatory authority for the issuance of waivers of Title 14 of the Code of Federal Regulations (14 CFR) part 91 for aerobatic practice areas and aerobatic contest boxes is based on the authority vested in the Department of Transportation (DOT) by Title 49 of the United States Code (49 U.S.C.). The regulations contained in part 91 are actually the responsibility of AT control (ATC). However, certain portions of these regulations have been delegated to the Flight Standards Service for oversight and enforcement in accordance with FAA Order JO 7210.3, Facility Operation and Administration, Part 6, Chapter 18, Paragraph 18-1-3. Even though the mandate to designate and supervise operations within waivered airspace is within Flight Standards purview, all airspace waivers are fully coordinated with AT to ensure safety of flight in the National Airspace System (NAS) and may be issued up to, but may not exceed, 24 calendar-months. Requests for waivers and authorizations are processed by the appropriate local Flight Standards District Office (FSDO). The final approval of the waiver or authorization is the responsibility of the FSDO manager who has jurisdiction over the geographic area in which the terms of the waiver or authorization are to be exercised.

D. Application. Applications for a Certificate of Waiver are processed, approved, and issued by the FSDO. FAA Form 7711-2 (see Figure 3-19) is used by applicants to apply for a waiver for aerobatic contest boxes or for aerobatic practice areas.

1) Aerobatic Contest Box. When applying for an aerobatic contest box:

a) The applicant will use FAA Form 7711-2.

b) The application form should be submitted 60 days or more prior to the contest to allow for sufficient processing time.

c) The FSDO will process the application for a contest within 30 days of receipt.

d) Because thorough planning has a direct bearing on the success and safety of an aerobatic practice area or contest box the applicant should be encouraged to develop an effective plan that covers all facets of the coordination and use of the practice area or contest box. The inspector should assist the waiver applicant by discussing the following:

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- Proper site selection (controlled and uncontrolled airports, or other sites suitable for aerobatics),
- The size, scope, and. location of the contest,
- The category of competitors,
- A plan for spectator control (if appropriate), and
- The preparation of Notices to Airmen (NOTAM).

2) Aerobatic Practice Area. There are short term and long term practice areas.

a) Short term aerobatic practice areas:

- Use FAA Form 7711-2 to apply,
- Are associated with an aviation event or aerobatic contest,
- Are less than 10 days in duration, and
- Do not require environmental considerations.

b) Long term aerobatic practice areas:

- Are from 10 days to no more than 24 calendar-months in duration,
- Require an Environmental Assessment (EA) in accordance with FAA Order 1050.1E,
- May use FAA Form 7711-2 to apply, however, to expedite the processing time, should use the Environmental Information Document (EID) (found at: http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs800/programs/media/aerobatic_environmental.doc) in lieu of FAA Form 7711-2, and
- Inspectors will review and follow the processing instructions listed in the EID found on the Web site listed above.

3) Review of FAA Form 7711-2 or EID. Upon receipt, FAA Form 7711-2 or EID should be reviewed for discrepancies. If discrepancies exist, a meeting with the applicant may be helpful in resolving them. The information submitted by the applicant on the FAA Form 7711-2 or EID must not be altered by the issuing office.

NOTE: The National Environmental Policy Act of 1969 (NEPA) requires all federal agencies to assess the potential environmental impacts of proposed federal actions. In order to meet these requirements, the FAA conducts a NEPA review of proposed aerobatic practice areas where required by FAA's environmental compliance document FAA Order 1050.1E.

NOTE: Although not required, applicants may receive assistance with the application documentation for an aerobatic practice area by contacting the International Aerobatic Club (IAC), a division of the Experimental Aircraft Association (EAA). The FAA does not require any applicant to be a member of EAA or IAC but does recognize their expertise in this area.

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E. Approval. Waivers are processed and issued by the FSDO on FAA Form 7711-1 (See Figure 3-20).

1) The waivers are approved upon satisfactory review of the application for an aerobatic contest box or short term aerobatic box. A long term aerobatic box approval will require an EA with a finding of no significant impact by the Regional Environmental Specialist in accordance with the instructions found in the EID.

2) Waivers are signed by the FSDO manager or a delegated representative (e.g., "acting manager") to indicate the approval of the application.

3-119 AEROBATIC PRACTICE AREAS. Pilots who wish to practice aerobatic maneuvers that do not meet the requirements of § 91.303 must obtain a waiver from the appropriate part(s) of § 91.303 in a designated area referred to as an aerobatic practice area. These areas are not to be considered event or competition sites. The aviation community uses these practice areas to establish and maintain proficiency as well as to enhance competitive skills in aerobatic maneuvers. Aerobatic practice areas are established by the waiver applicant in conjunction with the local FSDO and may have dimensions of several miles in various directions or be as small as a contest box. Inspectors should be receptive to establishing these areas, consistent with safety regulations and in compliance with current guidance found in FAA Order 8900.1 and associated publications. It is imperative that the safety of all nonparticipating aircraft be considered when issuing a Certificate of Waiver for an aerobatic practice area.

A. Waivers. When a waiver is issued for an aerobatic practice area, it generally includes provisions for:

1) Aerobatic flight below 1,500 feet above ground level (AGL).

2) Other portions of § 91.303 which may be waived if the proposed operation involves a Federal airway or Class B, C, D, or E airspace designated for an airport.

3) Applicants for aerobatic practice areas located directly over or in the immediate vicinity of an airport, although not required, should coordinate the planned activity with airport management. This is in keeping with a "good neighbor" policy and provides a means for addressing potential aviation safety concerns. The issuing FSDO will review, verify, and evaluate any potential safety concerns and modify the special provisions attached to the Certificate of Waiver accordingly to address these concerns.

4) Applying the NEPA process, per the guidance in this chapter and AFS-800 environmental information Web site (http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afs/afs800/programs/media/aerobatic_environmental.doc). This is to ensure that all required environmental impacts are considered when deciding where a proposed aerobatic practice area should be located. The waiver applicant should consider coordinating with the landowners and residents where aerobatic flight is planned to be conducted.

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5) Waivers requested for areas which are designated as environmentally sensitive, as defined in Advisory Circular (AC) 91-36, Visual Flight Rules (VFR) Flight Near Noise-Sensitive Areas (current edition), must be coordinated with the appropriate federal and/or state agency.

B. Definitions.

1) Aerobatic Flight. The provisions of § 91.303 constitute the definition of aerobatic flight.

2) Aviation Event. Aviation events include air shows, closed-course air races, certain parachute demonstration jumps, fly-ins, balloon meets, and competitions that are conducted before an invited assembly of persons. Aerobatic competitions are not considered to be aviation events since the public is not invited (See FAA Order 8900.1, Volume 3, Chapter 6, Section 1, Issue a Certificate of Waiver or Authorization for an Aviation Event).

3) Inspector-in-Charge (IIC). The aviation safety inspector (ASI) (Operations) who is assigned the responsibility of issuing the waiver and conducting ongoing surveillance of the aerobatic practice area.

4) Responsible Person. The person named in Block 2 on the FAA Form 7711-2 or Section 1 of the EID and noted in the "Issued To" Block of FAA Form 7711-1 or EID.

C. Scope of Waivers. Waivers of part 91 and the attendant special provisions to those waivers may vary in scope, depending on the regulations that an applicant requests to be waived.

1) Some aerobatic maneuvers may require only a waiver of § 91.303(e) to permit aerobatic flight at less than 1,500 feet AGL. Others may require the waiver of speed limitations, minimum safe altitudes, operations in controlled airspace, or specific prohibitions while operating in the vicinity of an airport.

2) The following approved sections of the part 91 that are commonly waived for aerobatic contests and/or aerobatic practice areas: §§ 91.117, 91.119, 91.127, 91.129, 91.130, 91.131, and 91.303, depending on the location, congestion, and complexity of the area in which aerobatics will take place. For a complete list see § 91.905.

3) Waivers of the basic VFR weather minimums specified in § 91.155 may be considered only in areas where the entire aerobatic maneuvering area is totally within Class B, C and D airspace or a temporary flight restriction.

D. Regulations That May Not Be Waived.

1) Section 91.119(a) and (b) may not be waived at any time for an aerobatic practice area.

2) Section 91.151 may not be waived for any operations conducted in an aerobatic practice area. However, the IAC holds an exemption for fuel required during flight in VFR conditions. This exemption applies only during the conduct of officially sanctioned aerobatic contests and associated practices.

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E. Air Traffic (AT) Coordination. Aerobatic practice areas may be located at controlled or uncontrolled airports or in sparsely populated areas far removed from any persons and/or congested areas. The location of these practice areas is determined through proper coordination with the waiver applicant and appropriate ATC and FSDO personnel. Use of the area may be for a short duration, once each year for annual qualification, or for all hours of the day and/or evening. Inspectors should coordinate with the ATC facility having primary airspace jurisdiction over the proposed practice area. Where an ATC hub facility exists, one call can be made to the airspace and procedures specialist to facilitate expeditious coordination. In other areas, inspectors may need to contact the air route traffic control center (ARTCC) exercises control over the affected airspace. In all cases, the waiver shall not be signed unless the working file contains documentation of ATC coordination.

F. Night Operations. Aerobatic performers who conduct night aviation event operations should practice their routines in realistic conditions before the actual flight at an aviation event. Numerous air show performers of both powered and unpowered aircraft need to practice their routines in areas that offer no obstructions and little or no distractions during the hours of darkness.

1) In order to facilitate practice sessions, inspectors should determine if aerobatic practice areas previously approved for daylight operations only are also acceptable for night operations.

2) Many performers of night aerobatic maneuvers use some type of flares or pyrotechnic devices to highlight their maneuvers. Other performers use only lights and strobes. In either case, it will be necessary to coordinate and approve all facets of the waiver and any special provisions to ensure safety is not compromised if the operation is conducted at night.

G. Temporary Aerobatic Practice Areas. During the aviation event and aerobatic contest season, the FSDO may be called upon to issue a waiver for establishing a temporary aerobatic practice area. These waivers may be offered to the responsible person of a proposed aviation event or contest at the same time the application for the associated event or contest waiver is submitted. This additional waiver may be prepared for the specific purpose of providing a temporary area in which only aviation event performers or contestants may practice their routines before and during the event or contest. In addition, it will provide a safe and approved area for those performers or contestants who may be from other states or countries and who need to adapt to the weather and altitude conditions intrinsic to the local area. Even though this will be a separate waiver, which becomes effective before the event or contest, it must be prepared so as to terminate on the same date and time as the associated waiver.

1) As mentioned in 3-118 D, environmental issues are not considered for temporary aerobatic practice areas of ten consecutive days or fewer in duration associated with an aviation event or contest.

2) Some of the parameters to consider in establishing this temporary practice area are:

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a) The actual event or contest site may be suitable as a temporary practice area if it is a controlled environment and there will be no conflict with other nonparticipating aircraft. Effective times must be thoroughly coordinated with the pertinent AT facilities before approval and issuance of the waiver.

b) The temporary practice area should be established no more than 30 miles from the actual contest or event site.

c) All coordination required for establishing a (regular) aerobatic practice area should also be accomplished for preparation of a temporary aerobatic practice area.

d) The responsible person must control access to the temporary aerobatic practice area, and only those persons performing in the contest or event should be permitted to use the area.

e) The physical parameters of the temporary practice area should be large enough to encompass all of the maneuvers that will be performed in the actual contest or event.

f) The responsibility for site selection, coordination, approvals, application, and oversight of the temporary aerobatic practice area rests solely with the event or contest responsible person.

3) It is the responsibility of the event or contest responsible person to coordinate the use of these established practice areas. If practice time is not available at the event or contest site, it is incumbent upon the event or contest responsible person to request a temporary aerobatic practice area. The inspector preparing the waiver may suggest that one be established. This would be more common for events than contests.

H. Special Provisions. The following are samples of common special provisions that may be used when issuing a Certificate of Waiver for an aerobatic practice area. Special provisions contained in other chapters are usually inappropriate for aerobatic practice areas. If additional special provisions are to be added, the concurrence of the regional or national air show coordinator is required. Material in brackets [ ] indicate where the FSDO must insert information specific to the waiver being sought.

1) Aerobatic flight shall be confined to the area designated on the pictorial chart (satellite photographs may be substituted for topographic charts and are available on Web sites, e.g., Google Earth, maps.google.com, Map Quest, etc.) attached to the Certificate of Waiver and defined in special provision 2. A definitive pictorial chart or photograph of the underlying area should be attached to the application and the approved waiver.

2) The aerobatic practice area is further defined as follows: (This item should contain a literal description of the entire practice area, including all delineating boundaries and the altitudes for each specific section of the practice area.)

3) No aerobatic maneuvers may be performed over or within 500 feet laterally from any open air assembly of persons or congested area of any city, town, or settlement.

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4) No person may operate an aircraft in aerobatic flight when the visibility is less than (number) miles or a ceiling less than [number] feet.

5) Before commencing aerobatic flight operations, the person(s) authorized to activate and deactivate the aerobatic practice area shall be responsible for advising the [name of flight service station (FSS) and telephone number] of the activity and requesting that a NOTAM that includes the following information be issued:

a) The location, dates, and times the aerobatic activity will be in effect.

b) If appropriate, the runway(s) that will be closed during the aerobatic activities.

6) All certificates of waiver granting relief from appropriate sections of part 91 must also contain guidance stipulating that the person(s) responsible for activation of the aerobatic practice area provide the controlling FSS with a copy of the Certificate of Waiver at least 48 hours before activation of the NOTAM. For certificates of waiver that are issued on a long-term basis, additional wording should be included advising the holder to ensure that the FSS keeps the waiver on file for future NOTAM activation.

7) Notification shall be made to the [name of AT facility or FSS and telephone number] at least 30 minutes before the beginning of aerobatic activity in the practice area, or, if a letter of agreement exists, notification shall be made as specified in that document. The [name of facility] shall also be notified at the termination of aerobatic activities.

8) The person(s) authorized to activate and deactivate the aerobatic practice area described in special provision 2 is [name of the person(s) to whom the waiver is issued or the person(s) delegated by the waiver holder].

9) The person named in special provision 8 shall also be responsible for the following:

- Ensuring that all pilots and aircraft operating within the confines of the waivered aerobatic practice area are properly certificated;
- Briefing each pilot to ensure that all users of the practice area comply with the limitations imposed by the Certificate of Waiver and its attendant special provisions; and
- Maintaining a log containing the pilot's name, airman certificate number, aircraft registration number, date, and time the aerobatic practice was in use and providing this information to the FAA upon request.

10) When required by ATC, all pilots must monitor [name of ATC facility and frequency assigned] on a continuous basis while operating within the aerobatic practice area.

11) All pilots operating within the waivered aerobatic practice area shall maintain VFR at all times and shall be responsible for seeing and avoiding all conflicting traffic.

12) Aerobatic flight shall be conducted only between the hours of [specific times of use].

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13) The holder of this Certificate of Waiver or delegated representative is responsible for halting or canceling activity in the aerobatic practice area if, at any time, the safety of persons or property on the ground or in the air is in jeopardy, or if there is a failure to comply with the terms or conditions of this waiver.

14) The FAA has the authority to cancel the Certificate of Waiver or delay any activities if the safety of persons or property on the ground or in the air is in jeopardy, or if there is a violation of the terms of the waiver or authorization.

3-120 AEROBATIC CONTEST BOXES. A general overview of the aerobatic contest box is contained in Figure 3-21 and depicts the dimensions of the area for powered and unpowered aircraft engaged in competitive aerobatics.

A. Definitions.

1) Aerobatic Contest Box. A block of airspace 3,300 feet long, 3,300 feet wide and having an upper limit of 3,500 feet AGL (4,000 feet for gliders). The lower limit of the box is 1,500 feet for Primary and Sportsman Categories, 1,200 feet for Intermediate, 800 feet for Advanced and 328 feet for the Unlimited Category. For Gliders, the lower limit of the box is 1,500 feet AGL for Sportsman Category, 1,200 feet for the Intermediate Category, and 600 feet for the Unlimited Category. The IIC should consider the waivered air space requirement for a contest normally to be a 1 statute mile (sm) box (1 sm x 1 sm x 1 sm) starting at the surface or may be depicted as a radius around a point 1. This allows for all categories and provides a buffer zone around the competition box.

2) Chief Judge. At an aerobatic contest, the person assigned as the primary judge of one or more categories of competition. The chief judge does not actually judge the competitors, but helps to ensure the safety of competitors within the contest box. The chief judge is assisted by numerous other persons located on the ground and/or in the immediate vicinity of the contest box.

3) Chief Technical Monitor. Person assigned duties by the contest director to perform a technical inspection of each competing aircraft and its equipment. The chief technical monitor should hold an airframe and power plant certificate; however, this position may be filled by the contest director with the “best qualified” person available.

4) Competition Categories. There are different competition categories for powered aircraft and gliders. These categories are defined by IAC official contest rules.

5) Contest Director. At an aerobatic contest, the person who acts as the general manager of the overall event and is responsible for all safety related issues. The contest director may delegate specific duties, functions, and authority but must retain complete accountability for the safety of the event. The contest director may also be the person who is designated by the FAA to monitor the event. The contest director ensures that all participants comply with all rules set forth in the IAC rules book as well as the provisions of the Certificate of Waiver.

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6) Inspector-in-Charge (IIC). The ASI (Operations) who is assigned the responsibility of issuing the waiver and monitoring the aerobatic contest box, as deemed necessary by the FSDO manager, to determine compliance with the applicable 14 CFR sections.

7) Participant. Any individual and/or pilot specifically involved with, or participating in, the waivered aerobatic activities.

8) Safety Director. The person who reports directly to the contest director and is responsible for flight and ground safety.

B. Scope of Waivers. The following regulations *may not* be waived:

1) Section 91.119(a) and (b) may not be waived at any time for an aerobatic contest box.

2) Section 91.151 may not be waived. However, the IAC holds an exemption for minimum fuel required during flight in VFR conditions. This exemption applies only during the conduct of an officially sanctioned aerobatic contest and associated practices.

C. AT Coordination. An aerobatic contest box may be located at a controlled or uncontrolled airport. The location is determined and approved through proper coordination with the waiver applicant, airport management, FSDO inspectors, and appropriate ATC personnel. Inspectors should coordinate the ATC facility having primary airspace jurisdiction over the proposed aerobatic contest box. Where a hub facility exists, one call can be made to the airspace and procedures specialist to facilitate expeditious coordination action. In other areas, inspectors will need to contact the ARTCC which exercises control over the affected airspace. In all cases, the waiver will not be signed unless the working file contains documentation of ATC coordination.

D. Special Provisions. The following special provisions are listed below to provide a sample of common special provisions that should be used (only those that are appropriate) when issuing a waiver for an aerobatic contest box. Special provisions not appearing in this section should not be used without the concurrence of the regional or national air show coordinator. Material in brackets [ ] indicate where the FSDO, with the help of the contest director or representative, must insert information specific to the waiver being sought.

1) The aerobatic competition area that these special provisions pertain to is depicted and described on attachment [attachment number] to this Certificate of Waiver.

2) This waiver is not valid if the in-flight visibility is less than 3 sm or the ceiling, if a ceiling exists, is less than 3,000 feet AGL. Flight operations shall be conducted in accordance with § 91.155.

3) The contest director is responsible for ensuring that [ATC facility] is notified by telephone [ATC primary telephone number] or [ATC backup telephone number] at least 30 minutes before operations begin and again when the flight activity has been terminated.

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4) Before commencing aerobatic flight operations, the contest director is responsible for advising the [name of FSS and telephone number] of the activity and for requesting that a NOTAM that will ensure wide dissemination and include the following information, appropriate to the operation, be issued:

a) The location, dates, and times the aerobatic activity will be in effect.

b) When appropriate, runway(s) that will be closed during the aerobatic activities. (This information must also be included in the traffic advisory to non-participating aircraft.)

c) Allowing touch-and-go landings during the times the NOTAM is in effect must be coordinated and agreed upon by the waiver holder and the airport manager. (This information must also be included in the traffic advisory to non-participating aircraft.)

d) All traffic at [name of airport] will use [specific traffic pattern information] when landing on or taking off from [list runway(s)] while the NOTAM is in effect. (This information must also be included in the traffic advisory.)

5) All certificates of waiver granting relief from appropriate sections of part 91 must also contain guidance stipulating that the person(s) responsible for activation of the aerobatic contest box provides the controlling FSS with a copy of the Certificate of Waiver at least 48 hours before activation of the NOTAM.

6) Aerobatics shall only be conducted between the hours of official sunrise and sunset.

7) Each aircraft operating within the aerobatic contest box must be appropriately equipped to maintain continuous radio reception with the chief judge.

8) The holder of the waiver should obtain the permission of the [name of airport] manager to conduct aerobatic activities and, in addition, ensure that the airport management fully understands and will abide by the terms and conditions of the Certificate of Waiver. However, permission of the airport management is not required for the waiver.

9) Aerobatics are limited to those aircraft and pilots who are approved by the holder of the Certificate of Waiver or a designated representative. The contest director is responsible for ensuring that:

a) Each aircraft competing in the aerobatic competition has the appropriate documents necessary to show current registration and airworthiness;

b) Each pilot participating in the aerobatic competition is properly certificated and possesses the currency and/or endorsements appropriate to the flight operation being conducted; and

c) Before any waivered aerobatic operation, each pilot participating in the aerobatic competition receives a briefing from the waiver holder or designated representative.

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This briefing must include the terms of the waiver, the confines of waivered airspace, and any special limitations or procedural considerations contained therein.

NOTE: See subparagraph 3-120A, 5) above regarding delegation of authority by the contest director.

10) A crowd line consisting of a physical barrier and/or adequate policing shall be established at least 500 feet from the aerobatic box to confine all spectators within a designated area.

11) When operating within waivered airspace, § 91.119(c) is waived only if unoccupied structures are involved or to allow participating waivered aircraft to operate closer than 500 feet to essential personnel, vehicles, or vessels on the ground. All participating aircraft must maintain at least 500 feet from non-essential personnel.

12) Before performing any aerobatic sequence, the area must be scanned thoroughly by both the competitor and the chief judge. The competitor must not enter and/or initiate any aerobatic maneuvers unless the chief judge has ensured that the area is free of any conflicting traffic and has advised the pilot that the aerobatic contest box is clear.

13) The FAA has the authority to cancel the Certificate of Waiver or delay any events if the safety of persons or property on the ground or in the air is in jeopardy, or if there is a violation of the terms of the waiver or authorization.

E. Additional Special Provisions. The following special provisions are issued to a waiver holder for an aerobatic contest box established at an uncontrolled airport where a runway remains open during competition. These provisions should be copied with as little editing as possible to fit a unique or individual need. The provisions should be used as appropriate to the type of scenario encountered. Any additions or significant changes must have the concurrence of the regional or national air show coordinator.

1) [Name of airport] will be closed to all traffic when the competitive activity of Advanced and Unlimited Category pilots may create a conflict with continuing non-participant flight operations. (Also include this information in the NOTAM and traffic advisory, as required.)

2) No touch-and-go landings are permitted while the aerobatic box is in use if the participant in the aerobatic box poses a hazard to touch and go traffic. (Also include this information in the NOTAM and traffic advisory.)

3) Aerobatic operations must not be conducted at altitudes lower than 1,200 feet AGL when the aerobatic contest box is located over a runway that is *open* and that activity may create a conflict with continuing non-participant flight operations.

4) The contest director, or a person specifically designated by the contest director, will continuously monitor the Unicom frequency while the aerobatic box is active. That person will advise any aircraft operating at or near [name of airport] of potential traffic conflicts that may occur while operating in close proximity to the aerobatics box. The person assigned to

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monitor the Unicom frequency will have direct access to the chief judge by radio, telephone, or direct contact. Should there be an actual or potential conflict, the chief judge has the final authority to call for a cessation of aerobatics.

5) The Unicom shall be manned by a person who has been briefed on the aerobatics activity, special pattern rules, and restrictions. If needed, a scripted version of the advisory will be furnished by the waiver holder in order to provide a standardized advisory to all pilots.

F. Aerobatic Competition Not Sanctioned by the IAC. The following special provision will be issued to a waiver holder conducting an aerobatic competition that is not sanctioned by the IAC, excluding competitive flying displays at aviation events conducted in accordance with a Certificate of Waiver issued under the provisions of Volume 3, Chapter 6, Section 1.

1) Participants will have in their possession a valid IAC computer-generated score sheet or other document acceptable to the FAA from an aerobatic competition sanctioned by the IAC and completed within the last 24 calendar-months indicating that he/she has successfully competed in the specific competition category he/she intends to compete at this event.

2) Except for take-off and landing, all participants will fly no lower than the minimum altitude prescribed for this specific competition category as stated in the IAC official contest rules.

NOTE: The minimum altitudes for each competition category are also defined in subparagraph 3-120 A.1).

3-121 PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. This task requires knowledge of the regulatory requirements of parts 1, 61, 91, and FAA orders and policies. In addition, the person preparing and coordinating the waiver must be qualified as an ASI (Operations).

B. Coordination. This task may require coordination with an ATC facility, a local, state or Federal government agency, and the affected property owners with property underlying or adjacent to the practice area or aerobatic contest box, as appropriate.

3-122 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- Title 14 CFR parts 1, 61, and 91.
- FAA Order JO 7210.3, Facility Operation and Administration, Part 6, Chapter 18, Paragraph 18-1-3.
- FAA Order 1050.1, Policies and Procedures for Considering Environmental Impacts.
- AC 91-36, Visual Flight Rules (VFR) Flight Near Noise-Sensitive Areas.
- PTRS Procedures Manual (PPM).

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B. Forms:

- FAA Form 7711-1, Certificate of Waiver or Authorization (Figure 3-20).
- FAA Form 7711-2, Certificate of Waiver or Authorization Application (Figure 3-19).
- FAA Form 8000-36, PTRS Data Sheet.

C. Job Aids. Sample figures.

3-123 PROCEDURES.

A. Aerobatic Practice Area.

1) Brief the applicant on the prerequisites of site selection and any coordination that may be appropriate to the area.

2) Provide FAA Form 7711-2 or EID to the applicant.

3) Brief the applicant on the procedures for preparing and submitting the FAA Form 7711-2 or EID.

4) Open a PTRS file.

5) Upon receipt of a completed application, visit the proposed site, if required, to obtain first-hand knowledge of the operational parameters of the airspace to be used and the underlying terrain. In addition, determine the environmental impact the proposed aerobatic activity might create and coordinate with the regional Flight Standards division, as appropriate.

6) Before issuing the waiver, ensure that all proposals are coordinated with AT and any other entity directly affected by the establishment of the aerobatic practice area.

7) If the application is approved, prepare FAA Form 7711-1 and the attendant special provisions.

8) Submit FAA Form 7711-1 to the FSDO manager for signature.

9) Prepare a file for the applicant that includes, but is not limited to, a copy of the following:

- FAA Form 7711-1 and attendant special provisions;
- FAA Form 7711-2 or EID;
- Results of Environmental Review by Regional Specialist;
- Letter of disapproval of the application, if applicable; and
- Documentation of ATC coordination.

10) Send the applicant the originals of FAA Forms 7711-1 and 7711-2 or EID and the attendant special provisions.

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11) Send a copy of both forms with all attachments to the Regional Office.

12) Make appropriate PTRS entries to include the entry in the "National Use" box.

13) Prepare an office file with copies of all forms.

B. Aerobatic Contest Box.

1) Brief the applicant on the prerequisites of site selection and any coordination that may be appropriate to the area.

2) Provide FAA Form 7711-2 to the applicant.

3) Brief the applicant on the procedures for preparing and submitting the FAA Form 7711-2.

4) Open a PTRS file.

5) Visit the proposed site, if required, to obtain first hand knowledge of the operational parameters of the airspace to be used and the underlying terrain. In addition, determine the environmental impact the proposed aerobatic activity might create and coordinate with the regional Flight Standards division, as appropriate.

6) Before issuing the waiver, ensure that all proposals are coordinated with AT and any other entity directly affected by the establishment of the aerobatic contest box.

7) If the application is approved, prepare FAA Form 7711-1 and the attendant special provisions.

8) Submit FAA Form 7711-1 to the FSDO manager for signature.

9) Prepare a file for the applicant that includes, but is not limited to, a copy of the following:

- FAA Form 7711-1 and attendant special provisions;
- FAA Form 7711-2;
- Letter of disapproval of the application, if applicable; and
- Documentation of ATC coordination.

10) Send the applicant the originals of FAA Forms 7711-1 and 7711-2 and the special provisions.

11) Send a copy of both forms with all attachments to the Regional Office.

12) Make appropriate PTRS entries.

13) Prepare an office file with copies of all forms.

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14) For aerobatic contest boxes, send a copy of both forms with all attachments to Airspace and Rules Division, ATA-400 at FAA Headquarters (HQ) in Washington, DC.

3-124 TASK OUTCOMES. Completion of this task results in one of the following:

- Issuance of a Certificate of Waiver or Authorization with attached special provisions;
- Disapproval of an application for a Certificate of Waiver with the reasons for the disapproval noted on the reverse side of the form in the "Remarks" block; and
- The FSDO will process applications for aerobatic contests within 30 days of receipt.

3-125 FUTURE ACTIVITIES.

A. Surveillance. Surveillance of activities/events conducted in the aerobatic practice area or aerobatic contest box, especially events not sanctioned by IAC.

B. Cancellation. Possible cancellation of the Certificate of Waiver due to noncompliance with the terms and conditions of the waiver and/or action necessary to ensure future compliance.

C. Application. Consideration of a future application for waiver of regulations pertaining to aerobatic maneuvers conducted in an aerobatic practice area and/or aerobatic contest box.

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Figure 3-19. FAA Form 7711-2, Application for a Certificate of Waiver or Authorization

No certificate may be issued unless a completed application form has been received (14 C.F.R. 91. 101. and 105).

US Department of Transportation
Federal Aviation Administration

APPLICATION FOR CERTIFICATE OF WAIVER OR AUTHORIZATION

From Approved: O.M.B. No.2120-0027 08/31/2008

APPLICANTS - DO NOT USE THESE SPACES

Region	Date

Action
☐ Approved ☐ Disapproved – *"Explain under "Remarks"*

Signature of authorized FAA representative

INSTRUCTIONS

Submit this application in triplicate (3) to any FAA Flight Standards district office.

Applicants requesting a Certificate of Waiver or Authorization for an aviation event must complete all the applicable items on this form and attach a properly marked 7.5 series Topographic Quadrangle Map(s), published by the U.S. Geological Survey (scale 1:24,000), of the proposed operating area. The map(s) must include scale depictions of the flightlines, showlines, race courses, and the location of the air event control point, Police dispatch, ambulance, and fire fighting equipment. The applicant may also wish to submit photographs and scale diagrams as supplemental material to assist in the FAA's evaluation of a particular site. Application for a Certificate of Waiver or Authorization must be submitted 45 days prior to the requested date of the event.

Applicants requesting a Certificate of Waiver or Authorization for activities other than an aviation event will complete items 1 through 10 only and the certification, item 17, on the reverse.

1. Name of organization	2. Name of responsible person

3. Permanent mailing address	House number and street or route number	City	State and ZIP code	Telephone No.

4. State whether the applicant or any of its principal officers/owners has an application for waiver pending at any other office of the FAA.
(N/A except for Banner Towing)

5. State whether the applicant or any of its principal officers owners has ever had its application for waiver denied, or whether the FAA has ever withdrawn a waiver from the applicant or any of its principal officers/owners.
(N/A except for Banner Towing)

6. FAR section and number to be waived

7. Detailed description of proposed operation *(Attach supplement if needed)*

8. Area of operation *(Location, altitudes, etc.)*

9a. Beginning *(Date and hour)*	b. Ending *(Date and hour)*

10. Aircraft make and model (a)	Pilot's Name (b)	Certificate number and rating (c)	Home address (Street, City, State) (d)

FAA Form 7711 -2 (8-08) Supersedes Previous Edition

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Figure 3-19. FAA Form 7711-2, Application for a Certificate of Waiver or Authorization (continued)

▶ *ITEMS 11 THROUGH 16 TO BE FILLED OUT FOR AIR SHOW/AIR RACE WAIVER REQUESTS ONLY.*

11. The air event will be sponsored by:

12. Permanent mailing address	House number and street or route number	City	State and ZIP code	Telephone No.

13. Policing *(Describe provisions to be made for policing the event.)*

14. Emergency facilities *(Mark all that will be available at time and place of air event.)*

☐ Physician ☐ Fire truck ☐ Other - Specify _____

☐ Ambulance ☐ Crash wagon _____

15. Air Traffic control *(Describe method of controlling traffic, including provision for arrival and departure of scheduled aircraft.)*

16. Schedule of Events *(include arrival and departure of scheduled aircraft and other periods the airport maybe open.)*

Hour (a)	Date (b)	Event (c)

If sufficient space is not available, the entire schedule of events may be submitted on separate sheets, in the order and manner indicated above.

Please Read > The undersigned applicant accepts full responsibility for the strict observance of the terms of the Certificate of Waiver or Authorization, and understands that the authorization contained in such certificate will be strictly limited to the above described operation.

17. Certification - I CERTIFY that the foregoing statements are true.

Date	Signature of Applicant

Remarks

FAA Form 7711-2 (8-08) Supersedes Previous Edition

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Figure 3-20. FAA Form 7711-1, Certificate of Waiver or Authorization

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

CERTIFICATE OF WAIVER OR AUTHORIZATION

ISSUED TO

ADDRESS

This certificate is issued for the operations specifically described hereinafter. No person shall conduct any operation pursuant to the authority of this certificate except in accordance with the standard and special provisions contained in this certificate, and such other requirements of the Federal Aviation Regulations not specifically waived by this certificate.

OPERATIONS AUTHORIZED

LIST OF WAIVED REGULATIONS BY SECTION AND TITLE

STANDARD PROVISIONS

1. A copy of the application made for this certificate shall be attached to and become a part hereof.
2. This certificate shall be presented for inspection upon the request of any authorized representative of the Administrator of the Federal Aviation Administration, or of any State or municipal official charged with the duty of enforcing local laws or regulations.
3. The holder of this certificate shall be responsible for the strict observance of the terms and provisions contained herein.
4. This certificate is nontransferable.

NOTE.—This certificate constitutes a waiver of those Federal rules or regulations specifically referred to above. It does not constitute a waiver of any State law or local ordinance

SPECIAL PROVISIONS

Special Provisions Nos. _____ to _____, inclusive, are set forth on the reverse side hereof.

This certificate is effective from _____ to _____, inclusive, and is subject to cancellation at any time upon notice by the Administrator or his authorized representative.

BY DIRECTION OF THE ADMINISTRATOR

_____ (Region)

_____ (Signature)

_____ (Date)

_____ (Title)

FAA Form 7711-1 (7-74)

U. S. GPO: 1984 — 570-191/10199

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Figure 3-21. Aerobatic Contest Box for Airplanes

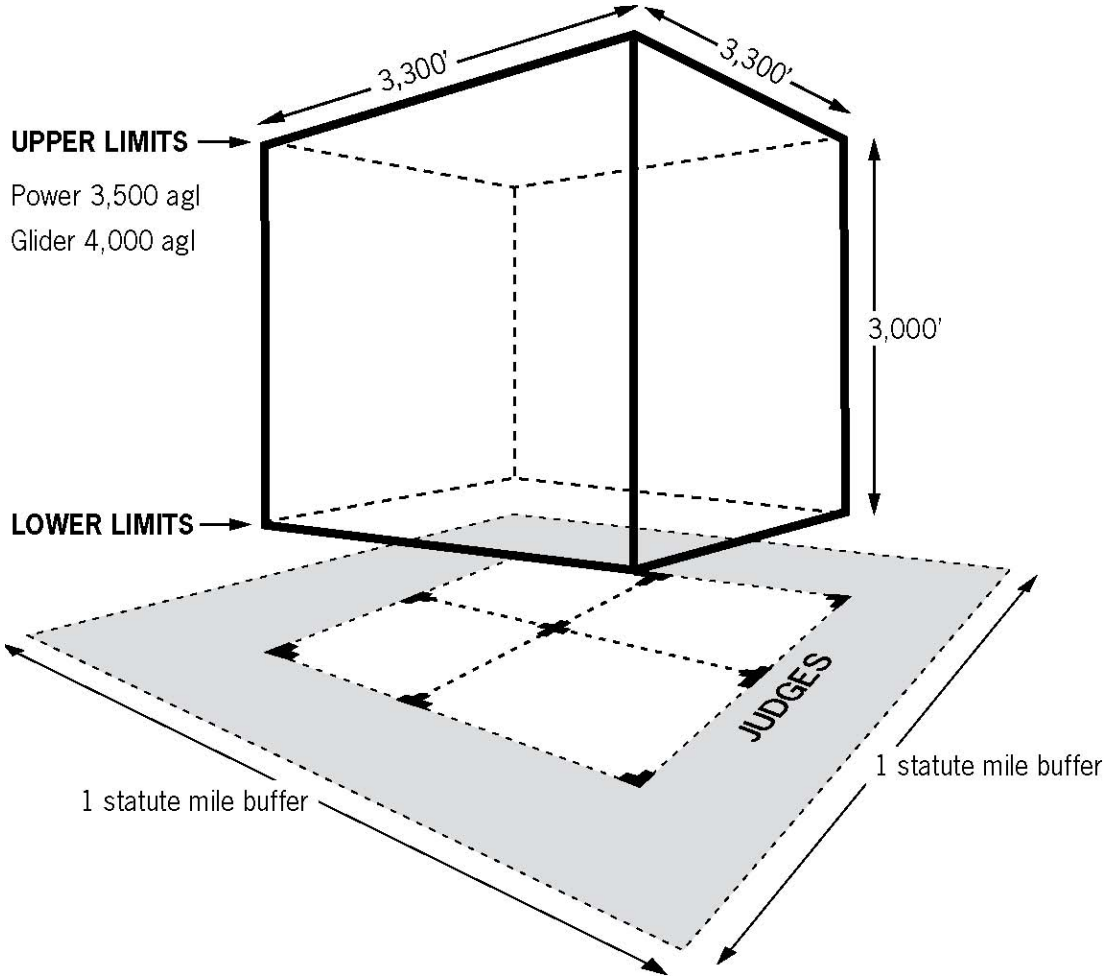

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Figure 3-22. Sample Briefing Signature Page

I have read and/or been briefed on this document and fully understand the procedures, requirements, and limitations of the waiver and all of its special provisions.

1. CONTEST DIRECTOR:
_____

2. CHIEF JUDGE: _____

3. SAFETY DIRECTOR:
_____

4. UNICOM MONITOR:
_____

PARTICIPANTS:

FULL NAME (PRINTED)	SIGNATURE	AIRCRAFT REGISTRATION

RESERVED. Paragraphs 3-126 through 3-140.

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VOLUME 3 GENERAL TECHNICAL ADMINISTRATION

CHAPTER 6 ISSUE A CERTIFICATE OF WAIVER OR AUTHORIZATION FOR AN AVIATION EVENT

Section 1 Issue a Certificate of Waiver or Authorization for an Aviation Event

3-141 PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

A. Issue Certificate of Authorization (COA). Enter "1220" in the "Activity Code" box of the PTRS transmittal form and enter "PA" in the "National Use" box if the COA was issued for parachuting.

B. Issue Certificate of Waiver. Enter "1230" in the "Activity Code" box and in the "National Use" box enter "AS" for an airshow, "AR" for an airplane air race, and "BE" for any type of balloon event.

C. Complete DD Form 2535, Request for Military Aerial Support. Enter "1231" in the "Activity Code" box and enter "WI" in the "National Use" box if a waiver will be issued and "NW" if no waiver will be issued for the operation requested.

3-142 OBJECTIVE. This section's task is to determine whether to issue a Federal Aviation Administration (FAA) Form 7711-1, Certificate of Waiver or Authorization, to an applicant for an aviation event. Completion of this task results in the issuance of a certificate of waiver or authorization or the disapproval of FAA Form 7711-2, Application for Certificate of Waiver or Authorization.

NOTE: Appropriate paragraphs in the automated Operations Safety System (OPSS) or Web-based automated Operations Safety System (WebOPSS) may be used in lieu of FAA Form 7711-1, Certificate of Waiver or Authorization.

3-143 GENERAL.

A. Definitions. Many terms used in this chapter are unique to aviation events; therefore, the following definitions should enhance the understanding of their application:

1) Aerobatic Box. The airspace at an airshow where participating aircraft are authorized to perform aerobatic maneuvers appropriate to their Category (CAT). This box begins at the appropriate CAT I/II/III show line (Figure 3-24).

2) Aerobatic Flight. Aerobatic flight is where the pitch attitude exceeds 60 degrees above or below the horizon and/or the angle of bank exceeds 75 degrees in reference to the horizon for all aircraft when conducting the event in accordance with a certificate of waiver or authorization. The definition in Title 14 of the Code of Federal Regulations (14 CFR) part 91, § 91.303 does not apply. Therefore, always waive the portion of § 91.303 that defines aerobatic flight.

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3) Air Boss. The individual who has the primary responsibility for airshow operations on the active taxiways, runways, and the surrounding airshow demonstration area.

4) Airshow. An aviation event defined as an aerial demonstration by one or more aircraft before an invited assembly of persons.

5) Airworthiness Certificate. For the purpose of this chapter, the terms "airworthy" or "Airworthiness Certificate" refer to more than just the United States (U.S.) and International Civil Aviation Organization (ICAO) countries' standard airworthy aircraft. For a U.S.-registered experimental aircraft this would be a special flight permit, which must be accompanied by operating limitations. Foreign registered experimental aircraft must have the special flight permit with operating limitations and a special flight authorization allowing airshow operations in U.S. airspace.

6) Airshow Demonstration Area. The total airspace (lateral and vertical limits) identified by the FAA waiver, temporary flight restriction (TFR), or the Notice to Airmen (NOTAM) issued for an airshow (sometimes referred to as the waivered airspace).

7) Altimeter Setting. Many performers and jump aircraft may wish to set their altimeters to zero while on the ground to measure height above ground during their performance. This may require a waiver of § 91.121. The inspector-in-charge (IIC) should waive § 91.121 for any event where aircraft involved in that event are departing from a runway at that location. This does not require the affected aircraft to set their altimeter(s) to zero but gives the pilot the option to do so.

8) Approved Maneuver. An AFS-800 approved maneuver or a series of maneuvers. These may include flight over the designated spectator area(s) below 1,000 feet above ground level (AGL), higher speeds for military airplanes, or a maneuver that may involve energy directed at the spectator area that meets safety criteria.

9) Aviation Event. Aviation events include airshows, closed course air races, parachute demonstration jumps, balloon meets, and fly-ins conducted before an invited assembly of persons, for which the FAA issues a Certificate of Waiver or Authorization.

NOTE: This chapter does not address or include aerobatic competitions (see Volume 3, Chapter 5, Issue a Certificate of Waiver or Authorization for an Aerobatic Practice Area or an Aerobatic Contest Box).

10) Aircraft Show Line Categories. Show line categories, speeds, and distances are shown in Table 3-1 below. These speeds are only for determining assignment to a show line, not maximum performing speeds. The following criteria are the basis for the minimum distances in the table below:

a) For reciprocating engine powered airplanes knots indicated airspeed (KIAS) in straight and level flight at 75 percent power at standard temperature and pressure (15°C/sea level) and maximum certified gross weight.

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b) For turbine engine powered airplanes (does not include the BD-5J Microjet) 85 percent of the maximum continuous powered straight and level flight KIAS at standard temperature, pressure (15°C/sea level), and maximum certified gross weight.

c) Minimum show line distances are measured from the crowd line to the center of the aircraft closest to any spectator area for Show Line CAT II and III aircraft and to the center airplane for CAT I airplanes.

Table 3-1. Example of Airplane Show Line Category

Airplane Show Line Category	**Aircraft Characteristics***	**Standard Show Line Distance From The Spectator Area**
I	More than 245 knots (282 miles per hour (mph))	1,500 feet
II	More than 156 knots but 245 knots or less (181-282 mph)	1,000 feet
III (Single reciprocating engine and BD-5J)	156 knots or less (180 mph) or no more than 2,250 pounds gross takeoff weight (GTOW)	500 feet
	* These are not operating limitations	

NOTE: See Table 3-1A for all aircraft categories.

11) COA. An official document issued by the FAA to permit certain activities that require FAA approval but that does not waive any regulations, for example, parachuting/sky diving demonstrations. (See Figure 3-33 and 3-33A.)

12) Certificate of Waiver. An official document issued by the FAA that authorizes certain operations of aircraft to deviate from a regulation but under conditions that ensure an equivalent level of safety. Section 91.905 lists the sections of part 91 that can be waived. (See Figure 3-32 and 3-32A.)

13) Civil Twilight. Civil twilight in the evening is the time between sunset and when the center of the sun is less than 6 degrees below the horizon. (See subparagraph 3-147N for restrictions.)

14) Control Point. A specified location where the event organizer, a designated representative, or an air boss manages the aviation event. The control point must have a communication system with the capability necessary to control the aviation event.

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15) Corner Markers. An easily identifiable marker or landmark from the air, 500 feet or more right and left of primary spectator area along the crowd line from the primary spectator area to provide flybys and performers a 500-foot reference for proper separation from spectators (see Figure 3-24, Figures 3-26 through 27C and Figure 3-29).

NOTE: Markers that may be hazardous to aircraft operations should not be placed on runways, taxiways, or any other operational area. This includes the X on the end of runways to denote runway closure. Place them in a safe area adjacent to the designated spot.

16) Critical Aircraft. That aircraft closest to the primary spectator area in a formation flight.

17) Crowd Line. A physical barrier or a line marked on the ground that serves as a restraining line for designated spectator areas and provides the appropriate safety distances from the aerobatic box and/or show line.

18) Essential Personnel. Individuals authorized to access the flying display area during an aerobatic performance. (See subparagraph 3-145C.)

19) Event Organizer. The person or agency responsible for the organization and conduct of the aviation event.

20) Flyby. A non-aerobatic pass or a series of non-aerobatic passes, performed by one or more aircraft, before an invited assembly of persons at an aviation event while a waiver is in effect. (See paragraph 3-147J.)

21) Flying Display Area. The airspace at an airshow where participating aircraft have authorization to perform. This area includes all the aerobatic boxes and show line but does not include ingress/egress routes.

22) Formation Flying. When an aircraft is flown solely with reference to another aircraft and within 500 feet of the referenced aircraft. Air racing and simulated dogfighting are not considered formation flying.

23) Heritage Flight Program. The U.S. Air Force (USAF)-approved military and civilian pilots flying formations consisting of USAF, former USAF, and U.S. Army Air Corps aircraft to demonstrate the history of USAF aircraft.

24) Ingress/Egress Routes. Those routes used by airshow performers to enter and exit the flying display area.

25) IIC. The FAA aviation safety inspector (ASI) who has primary FAA responsibility for the aviation event. (See subparagraph 3-143D.)

26) Military Jet Demonstration Teams. The sanctioned North American Military jet demonstration teams are the USAF Thunderbirds, the U.S. Navy (USN) Blue Angels, and the Canadian Forces Snowbirds.

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27) Military Single-Ship Demonstration Teams. A U.S. Department of Defense (DOD) or Canadian Department of National Defense (DND)-sanctioned demonstration team that consists of single aircraft conducting flybys or aerobatic demonstrations of current military fighter aircraft.

28) Night. Night means the time between the end of evening civil twilight and the beginning of morning civil twilight, as published in the American Air Almanac, converted to local time.

29) Official Photographers. Photographers designated by the responsible person as essential personnel to be in designated areas of the aerobatic box during performances (see subparagraph 3-145C).

30) Participant. Any individual specifically involved with, or directly participating in, the waivered aviation event.

31) Primary Spectator Area. The main area designated by the event organizer for spectator use. The crowd line creates its boundary and has well defined lateral limits (ends). This is the area from which the public is directed to view the event. There may be more than one primary spectator area.

32) Responsible Person. A person designated by the event organizer to be responsible for all aspects and special provisions of the waiver/authorization. This person must be acceptable to the waiver/authorization-issuing Flight Standards District Office (FSDO) as being knowledgeable concerning the terms and provisions of the certificate of waiver/authorization for this aviation event. The responsible person will be responsible to the FAA for the safe conduct of the event.

33) Secondary Spectator Area(s). Any area, not designated as a primary spectator area, where people have a natural tendency to gather to observe the event. This includes, but is not limited to, private property or property not under control of the event organizer, public roads, and private access roads.

34) Show Center. A visible reference point that denotes the center of the flying display area.

35) Show Line. A line on the surface of the ground or water, marked to be clearly visible to pilots from the air, intended to enhance pilot orientation during the performance. The show line provides the performer with a clear visual reference to the minimum safety distance applicable to the CAT of the maneuvering aircraft being flown (See subparagraphs 3-147A, C through F.)

36) Tailhook Legacy Flyover Program. The USN-approved military and civilian pilots flying formations consisting of sanctioned USN and former USN aircraft to demonstrate the history of U.S. naval aviation.

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37) Web Sites. The public Internet airshow site is available at http://www.faa.gov/about/initiatives/airshow. The FAA employee airshow site is available at http://intranet.faa.gov/FAAEmployees/org/linebusiness/avs/offices/afs/programs/airshows.

B. Regulatory Authority. Flight Standards Service (AFS) has the authority to grant or deny waivers of the regulations listed in § 91.905 for aviation events. The FSDO that has responsibility for aviation events conducted at the proposed site processes requests for waivers or authorizations.

1) Scope of Waivers.

a) Waivers of 14 CFR sections and the attendant special provisions may vary in scope depending on the regulations that an applicant requests to be waived and will vary depending upon the type of aviation event and the location. Some events require nothing more than waiving § 91.303(e) to permit aerobatic flight at less than 1,500 feet above the surface. Other events that consist of flybys and static displays may only require waiving sections of part 91 for aircraft speed limitations, minimum safe altitudes, or limitations while operating in the vicinity of airports or within Class B, C, D, or E airspace.

b) Waivers of the basic visual flight rules (VFR) weather minimums specified in § 91.155 may be considered in areas where the entire event can be conducted with air traffic control (ATC) providing separation between participating aircraft and nonparticipating aircraft. This will mean that the entire airshow display area for the affected aircraft must be within a TFR, Class C, or Class D airspace.

NOTE: Class B airspace is normally "Clear of Clouds" for VFR operations.

2) Section 91.905 establishes a list of rules subject to waivers. Some of the subsections of the mentioned sections may or may not need to be waived. For example, see the Note below on § 91.119. There should be a corresponding special provision that gives the conditions that must be followed for each section and/or subsection to be waived to maintain an equivalent level of safety. Another example would be § 91.117. Aircraft speed may be waived but that waiver of airspeed would have a limitation on maximum airspeed, and the limitations on where that waiver is valid would be in the special provisions attached to the waiver.

NOTE: Section 91.119(a) will not be waived for airshow demonstration purposes. Section 91.119(b) and (c) may be waived only when the conditions stated herein are met.

C. Program Coordinators. A national airshow coordinator is designated in FAA headquarters by AFS-800. The regional Flight Standards Division manager designates regional airshow coordinators. The national coordinator is responsible for overall program monitoring and coordination of all information and communications between DOD, FAA regions, and the public. The regional coordinators are responsible for monitoring the same programs in that region and for coordinating policy and information between FSDOs and the national coordinator. The national and regional airshow coordinators function in an advisory capacity. IICs making onsite evaluations are responsible for technical determinations as to the issuance or denial of a request for waiver.

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1) The IIC will elevate any issues requiring clarification or that may be of regional or national interest, such as military demonstration team participation, to the regional airshow coordinator. The regional coordinator will determine the level of regional participation. A list of regional coordinators is available on the public access site at http://www.faa.gov/about/initiatives/airshow/. FAA IIC and other FAA employees may use the following site: https://intranet.faa.gov/FAAEmployees/org/linebusiness/avs/offices/afs/programs/airshows/. The regional coordinator assists in resolving issues and coordinates with the national coordinator as necessary.

2) The national coordinator makes recommendations regarding policy changes. When policy change is not required, provide clarification back to the regional coordinator.

a) Regional supplements to aviation event policy are not permitted (see Volume 1, Chapter 1, Section 1, subparagraph 1-3C).

b) The regional coordinator will receive reports of initiation of any enforcement investigations, and he/she will coordinate the necessary response with the national coordinator as early as possible in the investigation.

c) All accidents or incidents occurring at an aviation event will be reported immediately to the regional coordinator, who will coordinate with the national coordinator.

D. IIC. To enable the FAA to most effectively manage the aviation event program, FSDO managers will assign an IIC to process an application for a waiver or authorization for an aviation event. The IIC oversees or personally conducts the following activities:

- Site feasibility study.
- Participation in the preseason evaluation meeting.
- Evaluation of the application for waiver or authorization.
- Recommendation for issuance or denial.
- Prepares a list of special provisions appropriate for the event in compliance with current guidance in this order.
- Surveillance of the aviation event.

E. IIC Qualifications. The IIC assigned this task and the subsequent surveillance must have completed the applicable on-the-job training (OJT), and must have participated in the issuance of at least three certificates of waiver and surveillance of at least three aviation events as a trainee with a qualified IIC. For events in which a military aerobatic demonstration team performs, the IIC must have satisfactorily completed OJT for a military aviation event, including participation in a site feasibility determination required by DOD, a preseason evaluation meeting, and a waiver preparation for a military demonstration team.

F. Qualified Inspector Not Available. If the FSDO does not have an inspector who meets the above qualifications, the FSDO manager will contact the regional airshow coordinator to request an inspector who is qualified to perform the tasks of an IIC. After the regional coordinator identifies an available IIC, FSDO managers should work out the arrangements necessary to accomplish the task and provide OJT if an ASI is available. A PTRS record must be made documenting the need for outside resources.

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G. Surveillance of an Aviation Event. Surveillance of an aviation event is the responsibility of the FSDO manager. Preferably, the IIC who processed the application for a waiver or authorization should monitor the event. Consider additional resources for high profile events or large aviation events. Any event not monitored by an IIC must be coordinated with the regional airshow coordinator well in advance, and the outcome documented in PTRS. (See Volume 6, Chapter 11, Section 10, Surveillance of an Aviation Event, paragraph 6-2371.)

H. Surveillance of an Aviation Event—Inspector Resources Not Available. It is always preferred to have a monitor at each event, although in rare circumstances it may not be possible. The FSDO manager, along with the regional airshow coordinator, should consider the following as part of the decision making process and assessing the risk:

- Size of the event (length, number of airshow acts and static display, number of spectators)?
- Has there been a history of problems with the management of the event?
- Is it a military airshow?
- What is the previous safety history of this event?
- Is the event well planned and are experienced personnel in key positions (e.g., event organizer/responsible person, air boss, performers, Crash, Fire and Rescue personnel, etc.)?
- What is the experience level of the responsible person/event organizer and air boss?
- Is the emergency plan well designed and adequately staffed for this event?
- Is the plan to manage spectators and sterile areas well designed and adequately staffed for this event?
- Is a TFR issued for the event?
- Is ATC managing the movement of aircraft? Are they onsite?
- How many FAA monitors would this show normally require?
- Will you send an Airworthiness inspector to inspect aircraft prior to event?
- Will you send an ASI (Operations) to check the performers' credentials prior to event?
- Is it possible to attend first day to ensure compliance with waiver and special provisions?

3-144 APPLICATION FOR A CERTIFICATE OF WAIVER OR AUTHORIZATION.

A. FAA Form 7711-2, Certificate of Waiver or Authorization Application. An inspector who reviews relevant information about the proposed operation and site suitability processes applications for aviation events should use FAA Form 7711-2 (Figures 3-32 through 3-33A). Not all blocks on the form may apply to each event. In other cases, additional information may be required. The FSDO manager has the authority to sign a waiver or authorization when the application is approved.

1) Submit applications for airshows or air races at least 90 days before the date of the event. Only after the event organizer has met all requirements, approval or denial of the application will be completed within 30 days of receipt by the FSDO.

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2) Present applications for parachute jumps made over or into a congested area or open-air assembly of people at least 10 working days before an event. Completion of an application's approval or denial must be done within 5 working days of receipt by the FSDO.

3) TFRs are requested in accordance with § 91.145. TFRs should be requested about the same time the application for waiver is made and will be processed in accordance with the procedures established in subparagraph 3-144E, 4).

4) The completion and submission of FAA Form 7711-2 and all supporting documents are solely the applicant's responsibility.

5) Upon approval, FAA Form 7711-2 and its attachments become a part of FAA Form 7711-1 (Figure 3-34).

6) The applicant must attach current maps, charts, diagrams, or other data appropriate to the activities and locations to FAA Form 7711-2 upon application for a certificate of waiver or authorization.

7) For most events, the supporting data must address the following major areas:

a) Diagrams and descriptions of spectator areas which restrict the public from:

- The flight areas;
- The active runways;
- The taxi and run-up areas; and
- Other active areas, such as emergency or police helipads, parachute landing areas, pyrotechnic areas, etc.

b) Supporting documents should describe the methods that will be used to ensure security of areas outside of the designated spectator area, especially the area under the aerobatic maneuvering area.

8) Except for official military pilots, each pilot flying a civil aircraft must have the proper certification and rating for the aircraft to be flown. In addition, each civilian pilot who performs aerobatics must possess a Statement of Aerobatic Competency (SAC) (see subparagraph 3-145A) including foreign civil airmen (Figures 3-35 and 3-36).

a) Non-airmen participants, such as parachutists, can be accepted on the basis of a license issued by the U.S. Parachute Association (USPA), similar organizations or equivalent qualifications acceptable to the FAA. The FAA does not require certification of operators of ultralight vehicles, wing walkers or trapeze occupants, ribbon-cut personnel, drivers of ground vehicles for a car-to-plane transfer, and other non-airmen participants. For unmanned air vehicle operations, contact the regional coordinator for support.

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b) Except for official military aircraft, each aircraft flown in an aerial demonstration must be properly certificated and have documentation in accordance with the procedures established in subparagraph 3-145F indicating current inspections, Airworthiness Directives (AD) and time limitations are appropriate for the aircraft to be in an airworthy condition.

B. Assisting the Event Organizer with Form 7711-2. The current edition of FAA Advisory Circular (AC) 91-45, Waivers: Aviation Events, or AC 105-2, Sport Parachuting, as appropriate, provides most information necessary to plan and conduct a safe event. You may obtain these documents and other pertinent information from the FAA at http://www.faa.gov/about/initiatives/airshow. FAA inspectors can obtain additional information at https://intranet.faa.gov/FAAEmployees/org/linebusiness/avs/offices/afs/programs/airshows.

1) Thorough planning has a direct bearing on the success and safety of any event. In larger events, the event organizer should be encouraged to appoint a responsible person (see subparagraph 3-143A32), to develop a detailed plan for all facets of the event regarding the FAA waiver or authorization. The event organizer and/or responsible person must understand that a waiver is only issued after the determination that a proposed event can be conducted safely and in the best interest of public safety. The inspector should direct the event organizer or responsible person to the detailed guidance in this chapter and ensure that the following subjects have been addressed:

- Type of event,
- Each act's support and airspace requirements and eligibility of participants and aircraft (military/civil),
- Military aircraft performances,
- Parachute demonstrations,
- Site selection (airports, fairgrounds, other sites),
- Airspace considerations and issuance of a TFR,
- Minimum safety distances and altitudes, and
- Event management.

2) The experienced event organizer is generally well acquainted with the requirements and procedures for obtaining the waiver or authorization and will usually appoint a responsible person to attend to areas regarding the waiver or authorization. Ask first time event organizers to review and have a good understanding of the current edition of AC 91-45 or AC 105-2, which contain important information for planning and conducting safe aviation events, because they may not be aware that a waiver or authorization is required. These ACs also provide information on how to request FAA Form 7711-1. First time event organizers are strongly encouraged to contact industry organizations (e.g., the International Council of Air Shows (ICAS)) for airshow support and/or training.

C. Completion of Form 7711-2. (See Figures 3-32 and 3-32A.) Upon receipt, review the application for obvious discrepancies. If discrepancies exist, arrange a meeting with the applicant to resolve the issues to mutual satisfaction. The applicant must revise the information he/she submitted on FAA Form 7711-2; the FSDO will not alter it.

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1) Blocks 1 and 2. An organization does not sponsor every airshow. An individual may sponsor an event. If the applicant represents an organization, the organization's name should appear in Block 1. The name of the individual and his/her position or authority to represent the organization (i.e., the responsible person) should appear in Block 2. If the applicant is not representing an organization, "N/A" should be entered in Block 1 and the applicant's name entered in Block 2. A responsible person is one who has demonstrated to the FAA knowledge concerning the terms and provisions of the certificate of waiver/authorization for this aviation event. The responsible person will be responsible to the FAA for the safe conduct of the event.

2) Block 3. Permanent Mailing Address. The applicant should indicate the permanent mailing address of the organization named in Block 1 or the individual named in Block 2.

3) Block 4. Pertains to Banner Towers only. Aviation events should enter "N/A."

4) Block 5. Pertains to Banner Towers only. Aviation events should enter "N/A."

5) Block 6. Reference § 91.905 for a list of rules subject to waivers. Ensure that the applicable rules to be waived have been requested. An application for a parachuting operation should state that authorization is requested in accordance with § 105.21 and 105.25.

6) Block 7. It may be sufficient for the applicant to use the terms airshow, parachute demonstration jump, or air race to describe the events. However, it would be helpful for the applicant to fill in as detailed a description as possible if the event is an airshow or air race; for example, enter the CAT of aircraft to be flown, in addition to make and model, if known. (See Figure 3-32, block 5.)

7) Block 8. The applicant should describe the airshow demonstration area as a rectangular, cubic, or cylindrical cell of airspace; and the aerobatic box as a cube or rectangle bounded by a runway or other definable geographical reference, a lateral point, and up to a particular altitude AGL. This can be over land or water.

a) For off-airport sites, the boundaries should be described using rivers, highways, railroads, or other easily identifiable landmarks or markers.

b) For an airshow, the applicant should attach current, properly marked maps, drawings, or photographs of the planned area of operation (satellite photographs may be substituted for topographic charts (from http://maps.google.com, http://www.mapquest.com, etc.)). The applicant will include as much of the following data as known at the time of application. The IIC will review the documentation for acceptance. Any depiction submitted must include indications of the following:

- The location and marking of the show lines.
- The location of the boundaries of the airshow demonstration area.
- The location of the boundaries of the flying display area and/or aerobatic box.
- The location and type of corner markers if flybys are anticipated.

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- The location of the primary spectator area and the types of barriers used, including gates.
- The location of the emergency vehicles and medical facilities.
- The location of the emergency access surface routes to and from the event site.
- The location of the aircraft movement areas.
- The location of the parachuting landing area.
- The location of the static display aircraft parking areas.
- The location of the airshow aircraft parking areas.
- The location of the fly-in aircraft parking areas.
- The location of the refueling areas.
- The location of the helipads.
- The location of the airshow control point.
- The location of the pyrotechnic areas.

c) Applicants should note in Block 7 if supplemental information is attached.

d) The site layout must depict that the airshow demonstrations or airshow acts can be accomplished at that site. If an airshow demonstration or act cannot fit within FAA distance criteria, or if congestion or new development around the proposed site impedes those criteria, the site is not appropriate for that demonstration or act.

8) Block 9. Inspectors can eliminate the need for the applicant to resubmit applications for an additional authorization by advising applicants to list alternative dates on the initial application. This avoids confusion and reduces the number of applications that must be submitted by the event organizer.

9) Block 10. The initial application does not need to list specific performers/aircraft. The application may be accepted with a notation in Block 8 that a list will be provided at a later, specified date and time. The list should eventually include all performers and aircraft (civilian and military) and parachute teams (civilian and military). A notation stating the show line CAT must be annotated with each make and model aircraft. Once the list has been supplied, may be amended by the responsible person and resubmitted to the IIC for approval. Performers added on the day of the event must show proof of appropriate qualifications that the aircraft is airworthy, and a determination must be made that the performance can be conducted at that show site.

10) Block 11 and 12. This section requires the name and address of the event organizer. The event organizer of an airshow may be an individual, a group of individuals, or an organization. The event organizer of an airshow may appoint a responsible person that has the overall responsibility for the conduct of the airshow in a safe manner and in accordance with the conditions contained in the certificate of waiver or authorization issued for the airshow. The event organizer may delegate to other persons the authority to organize and control particular aspects of the event. At a small event, one person may be able to coordinate more than one activity, while at a large event, a committee of persons delegated by the appropriate authority may control an activity.

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11) Block 13. There is no specific requirement for the use of uniformed police or security guards. The need for policing depends upon several factors that must be discussed with the IIC to ensure adequate crowd control. However, it is highly recommended that uniform clothing be worn (high visibility T-shirts, hats, etc.) by individuals performing crowd control or other official duties.

a) The event organizer must ensure that the airshow demonstrations are conducted safely and without creating a hazard to any non-participants or spectators. It is imperative that all areas adjacent to the airshow site containing homes, factories, major highways, traveled thoroughfares, or any occupied vessel, vehicle, or structure be carefully evaluated before making a final decision for site selection, and that these areas can remain sterile if their location is under the aerobatic box.

b) With respect to crowd control, it is the event organizer's responsibility to ensure that all reasonable efforts are made to confine spectators to the spectator areas, ensure that sterile areas are evacuated and remain sterile, and to present a plan to the IIC in sufficient detail that specifies how this will be accomplished and who is responsible to police the aviation event. The application may be accepted with a notation in Block 13 that a written plan will be provided at a later date, specified date and time.

12) Block 14. Emergency facilities have caused problems for event organizers. As previously noted, the application serves as an all-purpose form and contains blocks that may or may not be appropriate to emergency facilities. Some applications have been erroneously denied because the boxes for physician, ambulance, and fire truck were blank. Encourage every airshow event organizer to provide emergency medical service even though this service may not be utilized. Many event organizers prefer to have the local fire department's emergency rescue squad, paramedics, or emergency medical technicians at their show rather than a physician.

NOTE: For balloon events, consult the guidelines for emergency procedures listed in paragraph 3-153 when considering which boxes to check in Block 14.

13) Block 15. In this block enter a description of method for controlling air traffic (AT) and potential alternative communication methods. For example:

a) Although every aircraft in the event may be equipped with a two-way radio, a visual ground-to-air emergency signal must be provided and described in the application.

b) If a scheduled air carrier serves an airport that is the site of an aviation event, arrangements must be made for the arrival and departure of such aircraft. It is usually adequate to schedule a break in the activities to allow for scheduled arrivals and departures. The event organizer should complete prior coordination with the air carrier and ATC.

c) Request for TFRs, as authorized under § 91.145, if applicable. Add notation in Block 15 if request initiated.

d) List ATC facilities, frequencies, and contacts.

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14) Block 16. The FAA must see a proposed schedule of events to evaluate the application. It should contain at least a general description of the types of events and their approximate sequence in the show. The application may be accepted with a notation in Block 16 that a final schedule of events will be provided at a later, specified date and time.

a) The schedule should identify the aircraft and expected performers in the approximate sequence of appearance as best as possible at the time. During the event, the scheduled order of appearance may change because of weather, mechanical problems, or other factors at the discretion of the air boss.

b) Any demonstration or act added to the airshow schedule requires notification to FAA and should be submitted at the earliest opportunity (see subparagraph 3-144C6, Block 8). Cancellation of an airshow demonstration or act does not require advance notice, unless it has a significant impact on the event (e.g., cancellation of a military demonstration team would require notification, as would the cancellation of the entire event).

D. Temporary Practice Areas. During the airshow season, the FSDO may be called upon to issue a waiver for the establishment of a temporary aerobatic practice area.

1) Inspectors should encourage event organizers to apply for a temporary practice area for an associated airshow as part of that airshow waiver request, if one is desired. This will provide participating performers with a convenient and safe area in which to practice their aerobatic performances.

2) Although this will be a separate waiver, which becomes effective as much as 7 days immediately before the event, it should terminate on or before the same date and time as the event waiver.

3) The actual airshow site may be suitable as a temporary practice area if it is a controlled environment and there will be no conflict with other nonparticipating aircraft. The effective times must be thoroughly coordinated with the pertinent AT facilities before approval and issuance of the waiver.

4) The temporary practice area should be established no more than 20 or 30 miles from the actual airshow site.

5) The responsibility for site selection, coordination, approvals, application, and oversight of the temporary aerobatic practice area rests solely with the airshow event organizer.

NOTE: Temporary aerobatic practice areas are excluded from Order 1050.1, Environmental Impacts: Policies and Procedures, due to their temporary nature.

E. Coordination Requirements.

1) AT Coordination. Any request for a waiver or authorization for an aviation event or flyover not as part of an aviation event requires coordination with the appropriate ATC facility. Any special conditions considered necessary by the Air Traffic Service (ATS) Area will be made a part of the certificate of waiver or authorization in the special provisions.

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2) Special Ultrahigh Frequency (UHF)/Very High Frequency (VHF) Frequency Requests. Requests for special UHF/VHF frequencies for airshow usage should be made by the sponsor or responsible person to the AT facility having jurisdiction over the airspace where the airshow will take place.

3) FAA Airports (ARP). Any event organizer who requests a waiver for a public aviation event on an airport certificated in accordance with 14 CFR part 139 must coordinate with the appropriate FAA Airport District Office (ADO) and receive approval for the event ground operations plan before issuance of FAA Form 7711-1.

a) Encouraging event organizers to include airport management in the coordination will greatly facilitate the process. These steps will facilitate the resolution of any conflicts with ARP (Associate Administrator for Airports) policy/regulatory requirements relative to part 139. The ground operations plan includes the necessary changes that must be addressed for security. ARP is responsible for ensuring any necessary changes to the security plan are coordinated with FAA security before approval. ARP-1's approval of the ground operations plan is generally separate and distinct from the review and approval of the overall airshow layout (primary spectator area, show line(s), takeoff/landing runway, etc.) that is the responsibility of the waiver-issuing FSDO.

b) Any limitations or special provisions considered necessary by the ADO will be made a part of the certificate of waiver. As part of their normal program responsibilities, FAA ADO inspectors may from time to time request information concerning aviation event activities at airports other than those certificated in accordance with part 139.

c) ARP has designated lead airport inspectors in each ARP regional office as the approval authority for this approval. Affected airshow sponsors should call the appropriate regional office for coordination. If unable to reach that office, call the national ARP point of contact. The list of regional offices is found on the Internet at http://www.faa.gov/airports/news_information/contact_info/regional.

4) TFR. A TFR is an area designated to enhance the protection of persons and property on the surface or in the air, to maintain air safety and efficiency, or to prevent the unsafe congestion of aircraft in the vicinity of an aviation event. The responsible person or air boss must request a TFR not FSDO personnel. The procedures for requesting a TFR are found on the following Web site: http://www.faa.gov/about/initiatives/airshow.

a) Aerial demonstrations contained entirely within a Class B, C, or D airspace area should not request the issuance of a TFR under § 91.145.

b) Requirements for issuance of a TFR NOTAM in accordance with § 91.145:

- Any segment of the requested airspace for the aerial demonstration for aircraft exceeding 200 KIAS is outside of Class B, C or D airspace;
- Military aircraft are conducting aerobatic demonstrations;
- Civilian aircraft that operate in excess of 200 knots are conducting aerobatic demonstrations; or

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- Sanctioned military parachute demonstration teams are performing.

c) TFR issued will reflect the dates, times, and lateral and vertical limits of the airshow display area for the aerial demonstration for which a certificate of waiver or authorization (FAA Form 7711-1) has been issued.

1. VFR and instrument flight rules (IFR) AT (not specified on the waiver) may be authorized to operate within the designated airspace area published in the TFR NOTAM, when the following conditions are met:

- The controlling ATC facility or air boss (if authorized by ATC) grants authorization,
- The air boss has coordinated the procedure with the IIC, and
- The TFR NOTAM specifies the frequency to contact ATC for an authorization.

2. Cancellation of a waiver and TFR NOTAM must be coordinated. The Responsible person or air boss must coordinate cancellation with the controlling ATC facility and the IIC. The procedures can be either pre-coordinated or established at the time of cancellation.

5) Class D NOTAM. Issue a Class D NOTAM for any aerial demonstration that does not require a TFR. A Class D NOTAM does not prohibit transient aircraft from entering the airspace. It is only a notice for non-participating aircraft that the airport is closed and the purpose of that closure.

6) Waiver of § 91.155 Requirements for VFR.

a) Section 91.155 authorizing operations "clear of clouds" is waived under the following circumstances:

1. Aerial demonstrations are conducted entirely within Class C or D airspace where ATC communication is maintained (Class B is normally clear of clouds); or

2. Aerial demonstrations that are conducted within the boundaries of a TFR issued for that event and ATC communication is maintained.

b) Aerial demonstrations conducted at night must comply with all of § 91.155.

3-145 PARTICIPANT AND AIRCRAFT ELIGIBILITY.

A. Aerobatic Competency Documentation.

1) All civil pilots who perform aerobatic maneuvers in any aircraft where the pitch angle or bank angle exceeds 90 degrees must possess a valid FAA Form 8710-7, Statement of Acrobatic Competency, or Transport Canada Form 26-0307, Statement of Aerobatic Competency (Figures 3-35 and 3-36).

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2) All civil pilots who perform maneuvers in excess of 60 degrees but not more than 90 degrees of pitch, and/or more than 75 degrees but not more than 90 degrees of bank that do not meet the requirements in subparagraph A1) must have a logbook endorsement or a competency letter issued within the past 24 calendar-months after complying with the following:

a) Have successfully completed a flight and ground review by a DPE (Designated Pilot Examiner), FAA Operations Inspector, ICAS or Experimental Aircraft Association (EAA) aerobatic competency examiner possessing authorization to administer this test in that particular airplane or helicopter.

b) The endorsement or letter states that the pilot may fly maneuvers up to 90 degrees of pitch and/or 90 degrees of bank in reference to the horizon (see Figure 3-37). The endorsement is limited to the altitude demonstrated but not less than 200 feet AGL. The testing standards for this endorsement are as follows:

1. For 90 degrees of bank endorsement the applicant must demonstrate a roll to 90 degrees from the horizon and return to level without loss of altitude and within 10 degrees of the predetermined roll out heading.

2. For 90 degrees of pitch up, the applicant must demonstrate a pitch up to 90 degrees from the horizon starting at the lowest altitude authorized but never less than 200 feet AGL. This pitch up will terminate at a predetermined airspeed or altitude as determined by the examiner.

3. For a 90 degrees of pitch down, the applicant must demonstrate a pitch down to 90 degrees and recover at a predetermined altitude but never lower than 200 feet.

4. The applicant must demonstrate knowledge of show line orientation and proper distance's from spectator areas.

a. Demonstrate ability required to reposition the aircraft from a maneuvering pass;

b. Realign 180 degrees for the next pass; and

c. Align the flight path so as not to direct energy toward the primary spectator area.

5. For any demonstrations, at no time may the outcome of the maneuver be in doubt.

6. The applicant may only be endorsed for the altitude demonstrated but not less than 200 feet

3) All limitations on the document listed in subparagraphs 3-145A1) or 2) above must be followed. Aerobatic maneuvers and sequences/performances that contain aerobatic maneuvers must be initiated and completed at or above the altitude listed in the limitations on the SAC. Non-aerobatic fly-bys may be performed below the altitude limitation listed on the SAC

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only before or after the sequence/performance is completed. The performer may not interrupt an aerobatic sequence/performance to perform a non-aerobatic fly-by below the altitude restriction.

4) Upon request of the FAA, civil aircraft pilots must show evidence of performing or practicing their performance(s) within the previous 15 days.

B. Required Crewmembers. With the exception of stunt persons, the special provisions of an airshow waiver provide that only required crewmembers by aircraft type design be carried on any civil aircraft engaged in an aerial demonstration. For additional persons necessary for safety to be on board a performing civil aircraft, the situation must meet the following conditions and be approved by the IIC:

1) Each crewmember must be on board to fulfill a definite safety function, such as, but not limited to:

a) A one-time show site checkout for a qualified pilot who is unfamiliar with the site;

b) A qualified pilot flying cover for closed course air racing;

c) A qualified person who is required to operate aircraft systems during normal or emergency conditions in flight; or

d) A qualified pilot obtaining experience before inclusion as a non-aerobatic aerial demonstration team member.

2) Each pilot must be current and have the proper qualifications for the specific make and model of a civil aircraft.

3) Each pilot must hold a SAC or aerobatic endorsement when occupying a seat of an aircraft with functional dual controls for all three axes and aerobatic flight is conducted.

4) Each pilot in command (PIC) must hold a non-aerobatic formation credential when occupying a seat of an aircraft that has functional dual controls for all three axes when in a formation flight and aerobatic flight is not conducted.

C. Essential Personnel Requirements. Examples of essential personnel as determined by the IIC would include, but are not limited to: Crash, Fire and Rescue personnel, FAA personnel, pole holders, pyrotechnicians, essential support crew, other performers, official photographers or taxiing aircraft associated with the event. Essential personnel must meet the following conditions:

1) Have a safety briefing including ingress and egress from the aerobatic box;

2) Wear high visibility clothing that will easily identify them as essential personnel when in the box; and

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3) Official photographers may not exceed the number agreed upon by the responsible person and the IIC to be in the specified areas at one time.

NOTE: Essential personnel do not include news media or photographers (other than official photographers) for the event.

D. Aerobatic Formation Flight. Perform formation aerobatics where the angle of bank exceeds 60 degrees and/or the angle of pitch excess 45 degrees only if the following conditions are met:

1) The members of the aerobatic team must have performed together in 10 aerobatic performances over the preceding 12 months; or

2) When the team members have flown less than 10 aerobatic performances in the past 12 months, the team must be able to document 30 aerobatic practice sessions or combination of 30 practice sessions and airshow performances as a team over the preceding 12 months in the performing aircraft type; and

3) All persons conducting formation aerobatics must have demonstrated or substantiated their skills and have the formation aerobatics notation placed on their SAC.

E. Non-Aerobatic Formation Flight. Each civil PIC who wishes to conduct non-aerobatic formation flybys where the angle of bank does not exceed 60 degrees or 45 degrees of pitch in the airshow display area must meet the following:

1) Be in possession of an FAA recognized current and valid industry formation flying card.

2) Attend a briefing given by the flight leader of the proposed flight;

3) The briefing in subparagraph E2) above must meet the requirements of the industry formation group that issued the formation flying card of the formation flight leader;

4) The responsible person must provide the IIC a list of the pilots flying in the formation.

NOTE: Formation training will not be conducted during the airshow.

F. Aircraft Eligibility. To be eligible to participate in an aviation event, an aircraft must be in an airworthy condition. The waiver or authorization's named responsible person is responsible for ensuring that the participating aircraft have the required documentation to show the aircraft is in airworthy condition.

1) To ensure that the aircraft participating in an aviation event are airworthy, an IIC or his or her representative should examine the general condition of the aircraft and required aircraft documents, and determine if the aircraft has met the specified inspections.

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2) The ASI should use one of the following methods to determine compliance with required inspections:

a) Review of the aircraft's maintenance records (logbooks); or

b) Review of a current and valid form supplied by the owner/operator.

1. The completed form must be similar to the sample FAA Aircraft Inspection and Status Form (Figure 3-38).

2. An appropriately qualified airman who holds a mechanic or repairman certificate or an Inspection Authorization (IA) must sign the form.

3. The ASI who inspected the aircraft and determined it was airworthy may sign the form.

4. If an ASI has previously signed off on this form, an aircraft inspection is not required.

3-146 AIRSHOW AIRSPACE REQUIREMENTS. Issue FAA Form 7711-1 to an event organizer. It specifies a geographic area, both lateral and vertical, where airshow demonstrations are authorized. This area could be quite large (e.g., 10 nautical mile (NM) radius of an airport from the surface up to 18,000 feet mean sea level (MSL) or rather small (e.g., 2 NM radius up to 3,000 feet MSL), depending on the type of airshow demonstration planned. In determining where aerobatics will be performed within the geographic area specified on FAA Form 7711-2, the event organizer selects a site that will accommodate all the specific types of airshow demonstrations without detracting from safety or creating a hazard to any non-participants or spectators. It is imperative that all areas adjacent to the airshow site containing homes, factories, major highways, traveled thoroughfares, or any occupied vessel, vehicle, or structure be carefully evaluated before making a final decision for site selection. An environmental review in accordance with the current edition of FAA Order 1050.1 is not required due to the temporary nature of a waiver for an aviation event. You must identify the following applicable blocks for an airshow:

- Airshow demonstration area,
- Show lines,
- Flying Display Area,
- 500 feet corner markers,
- Restrictions to ingress/egress routes (noise sensitive areas, obstructions, etc.), and
- Designated spectator areas.

3-147 MINIMUM SAFETY DISTANCES AND ALTITUDES. This paragraph provides the minimum safety distances, both horizontal and vertical, which must be maintained between aircraft in flight and the primary spectator area, secondary spectator area and occupied buildings during an airshow.

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A. Show Lines. For aerobatic and other flight demonstrations, an aerobatic box and show lines must be established at prescribed minimum distances from the designated spectator areas. The appropriate performers must be able to easily identify these lines.

Table 3-1A. Minimum Show Line Distance From Spectator Areas, Congested Areas and Occupied Buildings by Aircraft Category

Minimum Show Line Distance from Spectator Areas, Congested Areas and Occupied Buildings	Aircraft Category or Aircraft Type	Demonstration Maneuvers Authorized
1,500 feet	Category I Aircraft	Aerobatic maneuvers
1,000 feet	Category II Aircraft	Aerobatic maneuvers
1,000 feet	Helicopters	Aerobatic maneuvers
500 feet	Category III Aircraft	Aerobatic maneuvers and Flybys
500 feet	Gliders, Hang Gliders, powered paragliders	Aerobatic maneuvers and Flybys
500 feet	Ultralight airplanes and Weight-shift control aircraft	Aerobatic maneuvers and Flybys
500 feet	Helicopters	Non-aerobatic maneuvers
500 feet	Category I Aircraft	Flybys
500 feet	Category II Aircraft	Flybys
500 feet	BD-5J Microjet	Aerobatic maneuvers
100 feet	Powered Parachute Aircraft, Ultralights (paragliders and powered paragliders)	Non-aerobatic maneuvers

The minimum distances in this table are based upon the following criteria:

a) For reciprocating engine powered airplanes–true airspeed in straight and level flight at 75 percent power at standard temperature and pressure (15°C/sea level) and maximum certified gross weight.

b) For turbine engine powered airplanes (does not include the BD-5J Micro jet),—85 percent of the maximum continuous powered straight and level flight true airspeed at standard temperature, pressure (15°C/sea level), and maximum certified gross weight.

NOTE: The speeds in paragraphs (a) and (b) above are used for determining assignment to a show line, not the maximum performing speed of the aircraft. See subparagraph 3-143A10) for Category.

B. Formation Flight Demonstrations. For formation flight demonstrations, the formation leader must adjust his or her ground track so that the critical aircraft remains the appropriate distance from the designated spectator areas.

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C. Guidelines for Establishing Show Lines and/or Aerobatic Boxes.

1) Establish show lines prior to establishing the spectator area. If possible, the distance from a crowd line to the closest shoulder of an active runway should be at least 500 feet. This will allow demonstration teams to make formation takeoffs, performers to use the entire runway for ribbon cuts, etc. It is permissible to use a crowd line that is 500 feet from the centerline of the runway in use but requires CAT I airplanes to make single ship centerline takeoffs and CAT III airplane aerobatics to remain beyond the centerline, not allowing them to use the centerline for alignment during their performances.

2) Use prominent features such as runway shoulders or centerlines, tree lines, parked vehicles, boats for events over water or other geographical features to establish the show lines.

3) Prescribed minimums may not be altered to accommodate obstacles that are hazards to performers (antennas, windsocks, tall trees, hangars, etc.).

4) All show lines must be clearly discernable, to ensure that pilots have adequate visual references throughout their performance.

5) Show lines for events held at night must be lighted in a manner that ensures the lines are clearly visible and identifiable by the participating pilots.

6) For military demonstration teams, both the CAT I and CAT III show lines must be discernible at least 2 miles from show center at an altitude of 200 feet; the CAT I show line should be clearly visible from the highest altitude required by the applicable team.

7) Any turbine engine powered airplane for which bona fide performance data acceptable to the FAA is not available will be required to perform on the CAT I show line.

D. CAT I Show Lines. The minimum distance from the spectator area to the show line for CAT I aircraft is 1,500 feet or greater (Figure 3-26 and Figure 3-26A).

1) Aerobatic maneuvers for CAT I airplanes remain centered on the CAT I show line and parallel to the crowd line while in the flying display area. This includes single or multiple airplane maneuvers (Figure 3-26B).

2) If the only well defined show line is closer than 1,500 feet to a spectator area, and if it is not possible to move the spectator area, the distance between the CAT I show line and the primary spectator area may be reduced from 1,500 feet to a minimum of 1,200 feet. This reduction is authorized solely in the interest of flight safety because a well-defined show line is essential for pilot orientation. Place all artificial show lines at 1,500 feet.

3) When there is a reduction in the distance from the show line to the primary spectator area, a similar reduction shall not be permitted for the secondary spectator area side of the show.

4) In no case shall there be less than 2,700 feet between the primary and the secondary spectator areas.

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5) The reduction should be determined by first considering the secondary spectator area side of the show line.

E. Category II Show Lines. The minimum distance from the spectator area to the show line for CAT II aircraft is 1,000 feet or greater. (Figure 3-26C)

1) Aerobatic maneuvers for CAT II airplanes remain no closer than the CAT II show line and parallel to the crowd line while in the flying display area unless the aerobatic box is large enough to contain any aerobatic maneuver. This includes single or multiple airplane maneuvers (Figure 3-26D).

2) If the only well-defined show line is closer than 1,000 feet to a spectator area, and if it is not possible to move the spectator area, the distance between the CAT II show line and the primary spectator area may be reduced from 1,000 feet to a minimum of 800 feet. This reduction is authorized solely in the interest of flight safety because a well-defined show line is essential for pilot orientation.

3) When there is a reduction in the distance from the show line to the primary spectator area, a similar reduction shall not be permitted for the secondary spectator area side of the show line.

4) In no case will there be less than 1,800 feet between the primary and the secondary spectator areas.

5) Determine the reduction by first considering the secondary spectator area side of the show line.

F. CAT III Show Lines.

1) The CAT III show line will not be closer than 500 feet from the primary or secondary spectator areas.

a) If there is less than 1,000 feet between the primary and any secondary spectator areas, the site cannot be considered for an airshow waiver.

b) The width of the flying display area:

1. If there are less than 1,000 feet between the primary and any secondary spectator areas, the site cannot be considered for an airshow waiver. The width of the aerobatic box must be large enough to contain the aircraft maneuvers and still ensure the safety distances for the spectators. When the flying display is only 1,000 feet between the spectator areas, a single aircraft must fly centered on the 500 feet show line when in the display area. No lateral or turning maneuvers are performed in that area and the aircraft must fly past the spectator areas and make a non-aerobatic turn to re-enter the aerobatic display area (Figure 3-27).

2. For multi-aircraft demonstrations the flying display area must be wide enough to contain all maneuvers and/or all aircraft where no aircraft or maneuver is closer than 500 feet from a spectator area (Figure 3-27B and Figure 3-27C).

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3. For single aircraft performing lateral and/or turning maneuvers the flying display area must be wide enough to contain all maneuvers where the aircraft or maneuver is closer than 500 feet from a spectator area (Figure 3-27A).

2) The 500-foot show line may also be used for flybys. In this case, clearly delineate the CAT III show line for high performance aircraft.

3) For flybys and ingress/egress routes place corner markers on the ground to clearly identify the 500-foot lateral separation from the primary spectator area and that marker must be visible from 500 feet AGL at 200 knots (Figure 3-29).

G. Takeoff and Landing Distances from Spectators.

1) As listed in Table 3-2, an aircraft's performance characteristics will determine the minimum distance required between the spectator area and the takeoff/landing surface. The guidance pertaining to aircraft operations applies to all aircraft operating at an aviation event while the waiver is in effect. These same safety distances are recommended to be applied starting when spectators are allowed into the show site until all spectators have left the show site.

Table 3-2. Minimum Distance between Spectator Areas, Built-up Areas or Occupied Buildings and Take-off/landing Surface

Minimum Distance between Spectator Areas, Built-up areas or Occupied Buildings and Takeoff/Landing Surface	Aircraft Performance Characteristics
100 feet	Powered Parachute Aircraft
200 feet	(1) Airplanes, gyroplanes, and weight-shift control aircraft with reference speed for final approach (V_{ref}) of 60 kts or less and a certificated gross weight of 2500 lbs or less, including ultralights (airplanes, gyroplanes, and weight-shift control) (See Figure 3-25)
200 feet	(2) Gliders, powered and unpowered paragliders, and hang gliders (See Figure 3-25)
200 feet	(3) Helicopters—engine start and shutdown and hover taxi in ground effect (See Figure 3-30)
300 feet	Airplanes and gyroplanes with V_{ref} of more than 60 kts but less than 100 kts and certificated gross weight of 50,000 lbs or less (See Figure 3-25A)
500 feet	(1) Airplanes and gyroplanes with V_{ref} in excess of 100 kts (See Figure 3-25B)
500 feet	(2) Airplanes and gyroplanes with a certificated gross weight in excess of 50,000 lbs (See Figure 3-25B)
500 feet	(3) Airplanes and helicopter conducting excessive, non-aerobatic maneuvers on takeoff or landing (comedy

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	acts) (See Figure 3-25B)
500 feet	(4) Helicopter—takeoff and landing (See Figure 3-30)
The minimum distances in this table for: a) Formation takeoff/landing operations, will be measured to the closest runway edge, and b) Single aircraft operations conducted on the centerline may be measured to the runway centerline.	

2) Takeoffs and Landings—Aerobatic Maneuvers Conducted. When the takeoff runway is separated from the primary or secondary spectator areas by less than 500 feet for CAT III, 1,000 feet for CAT II, and 1,500 feet for CAT I aircraft:

a) Aerobatics are not permitted over spectator areas or congested areas; or

b) An aerobatic maneuver may be performed after takeoff when the aircraft has turned away from the spectator area and crossed the appropriate show line. (See Figure 3-28 and Figure 3-28A for CAT III aircraft example.)

3) Helicopter Operations. As listed in Table 3-2, all helicopters must take off and land at a minimum distance of 500 feet from the spectator area during an aviation event and helicopters will not pass over spectator areas at any time, except as provided in subparagraphs 3-147H and I below, during the departure and arrival. Helicopters must start up and shut down at a minimum distance of 200 feet from the crowd and hover taxi in ground effect or ground taxi at a maximum ground speed of 20 knots ground speed between the takeoff/landing areas and the startup/shutdown area.

4) Aircraft Towing. Conduct glider, hang glider, and paraglider towing (airplane/automobile) at a minimum distance of 200 feet from the crowd.

H. Flight over Primary Spectator Area.

1) Civilian and Military Aircraft. Flight over the primary spectator area is permitted when at or above 1,000 feet above the spectators.

2) Military Jet Demonstration Teams. When authorized by AFS-800, military demonstration teams are permitted to fly at a minimum altitude of 500 feet over the primary spectator area if:

a) Flight is non-maneuvering and straight and level or wings level in a normal climb; and

b) The direction of flight is in one direction only—back to front or front to back.

I. Flight Over Secondary Spectator Areas. The responsible person will make every effort to discourage secondary spectator areas. Secondary spectator areas cannot be under the aerobatic maneuver area. Flight over the secondary spectator area is permitted by all civilian and military airshow performers when the following conditions are met:

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1) Minimum altitude must be no lower than 500 feet above the spectators; and,

2) Until the aircraft reaches an altitude of 500 feet, flight will be non-maneuvering and wings level in a normal climb.

J. Flyby. A flyby can be performed by a single aircraft, by aircraft in formation, or by aircraft in trail.

1) No abrupt maneuvers between the corner markers may be performed along the 500 feet show line by CAT I or II airplanes,

2) Conduct a flyby along show lines at a minimum horizontal distance of not less than 500 feet from primary spectator areas, secondary spectator areas, congested areas, or occupied buildings; and in accordance with the following conditions:

a) By CAT I or II airplanes—no lower than 100 feet AGL when less than 1,000 feet from a designated spectator area, unless the pilot possesses a current surface level SAC card for the make and model of airplane being flown;

b) By all airplanes—using a bank angle of no more than 75 degrees, a pitch angle of no more than 60 degrees, and a maximum indicated airspeed of no more than 300 knots, regardless of the show line CAT;

c) By formation flights, no lower than 200 feet AGL, using a bank angle of no more than 60 degrees, a pitch angle of no more than 45 degrees and a maximum indicated airspeed of no more than 250 knots, regardless of the show line CAT.

3) Corner markers must be highly visible landmarks or contrasting markers easily visible from 200 feet AGL at 200 KIAS that identify the crowd line 500-foot lateral separation (corner) points left and right of the primary spectator area (see Figure 3-29).

NOTE: Per § 91.117(d), if the minimum safe airspeed for any particular operation is greater than the maximum speed required by § 91.117(a through c), the aircraft may be operated at that speed.

K. Airshow Maneuvers Toward Primary Spectator Area. The categories for airshow maneuvers towards the primary spectator area are as follows:

- Unacceptable level of risk—prohibited.
- Acceptable level of risk—no approval required.
- Acceptable level of risk—approval required.

1) Prohibited Maneuvers. Aerobatic maneuvers conducted inside the aerobatic box that in the event of a catastrophic failure a part of the aircraft would contact the surface at or inside the primary spectator area between the corner markers are prohibited.

2) Permitted Maneuvers—No Approval Required. The following maneuvers are permitted without any additional approval:

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a) Aerobatic maneuvers in which the aircraft, but not the actual energy vector, is momentarily pointed towards the primary spectator area (e.g., hammerhead turns, spins, tail slides, torque rolls, and lomcevaks).

b) High energy maneuvers such as minimum radius turns (maximum of 90 degrees of bank) by single aircraft on the appropriate show line for the aircraft CAT in accordance with the following (see Figure 3-30A):

1. CAT III aircraft—maximum altitude of 250 feet,

2. CAT II aircraft—maximum altitude of 300 feet, and

3. CAT I aircraft—maximum altitude of 500 feet.

c) Non-aerobatic maneuvers by a single aircraft with an energy vector directed towards the primary spectator area provided the aircraft remains beyond the appropriate reference line for their show line CAT (i.e., 500 feet for CAT III; 1,000 feet for CAT II, 1,500 for CAT I) (see Figure 3-28B).

d) Flight over the spectator areas in accordance with subparagraphs 3-147H and 3-147I.

e) Repositioning turns in accordance with subparagraph 3-147L.

3) Permitted Maneuver—Approval Required. The following maneuvers are prohibited unless approved in accordance with paragraph 3-149, FAA AFS-800 Maneuver Packages Approval Process:

a) Aerobatic maneuvers which direct an energy vector toward the primary spectator at any point, other than those described in subparagraph 3-147L1), which are prohibited; and

b) Non-aerobatic maneuvers by multiple aircraft or aircraft in formation with an energy vector directed towards the primary spectator area.

c) Aerobatic 360 degree turns with an energy vector directed towards the primary spectator area:

1. For single aircraft that exceed the requirements of paragraph 2)b) above; or

2. For multiple aircraft.

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L. Repositioning Turns.

1) Return to the Flying Display Area/Aerobatic Box. Conduct repositioning turns that may have an energy vector directed towards the primary spectator area made for the purposes of returning to the flying display area or aerobatic box to realign with the appropriate CAT aircraft show line as follows:

a) Civilian performers.

1. Holders of a SAC card and flying CAT III or CAT I and CAT II ex-military fighters are permitted to perform repositioning turns using a maximum of 120 degrees of bank and 90 degrees of pitch when above 500 feet AGL and not over designated spectator areas or congested areas.

2. Holders of an endorsement for pitch and bank angles up to 90 degrees are permitted to perform repositioning turns to those limits above 500 feet AGL when not over designated spectator areas or congested areas.

b) Military jet demonstration teams and single ship demonstration teams.

1. Military demonstration teams with accepted maneuvers packages are permitted to exceed a maximum of 120 degrees of bank and 90 degrees of pitch; and

2. Pitch and bank angles must not exceed standard operating procedures prescribed for the specific aircraft; and

3. Inverted flight is not authorized below 1,500 feet AGL and not over congested areas or spectator areas.

2) Inside the Flying Display Area/Aerobatic Box. When it is not practical to leave the flying display area or aerobatic box in between segments of a flight demonstration, repositioning turns that have an energy vector directed towards the primary spectator area and are made for the sole purpose of remaining in the flying display area and realigning with the appropriate CAT show line are permitted in accordance with the following:

a) Holders of a SAC card or an endorsement for pitch and bank angles up to 90 degrees are permitted to perform repositioning turns and/ or clearing turns to a maximum 90 degree bank;

b) The turns are carried out without abrupt control inputs during the portion of the turn when the aircraft is directing energy at the crowd; and

c) The turns are conducted in a manner to ensure the aircraft remains beyond the appropriate distance for their show line CAT (i.e., 500 feet for CAT III; 1,000 feet for CAT II, 1,500 feet for CAT I).

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M. Night, Civil Twilight, and Airborne Pyrotechnic Demonstrations Authorization. Aerobatic performers may request authorization to conduct aerial demonstrations at night (after civil twilight). The demonstrations are typically conducted with pyrotechnic devices attached to the wings. Other demonstrations use numerous landings lights, strobe lights, or smoke. Conduct these demonstrations no lower than 500 feet and no higher than 5,000 feet AGL. Jet aircraft performers may request a higher ceiling requirement. Inspectors can accommodate such requests by ensuring that the following have been accomplished:

- The pyrotechnic or light installations are appropriately documented in the aircraft's maintenance records.
- The requirements in subparagraph 3-147N below are met.

N. Night and Twilight Event Special Provisions. As appropriate, include the applicable special provisions in addition to the special provisions in paragraph 3-155 of this section for events conducted after local sunset.

1) Confine aerobatic demonstrations at night to 1 NM on either side of the show center along a well-defined, lighted show line.

2) Confine aerobatic demonstrations to altitudes above 500 feet AGL and below 5,000 feet AGL after official sunset.

3) The minimum weather conditions at night require a cloud base no lower than 2,500 feet and 3 statute miles visibility. Section 91.155 will not be waived for any flight conducted between sunset and sunrise.

4) Aircraft position lights must be operating from sunset to sunrise except while pyrotechnics on the aircraft are illuminated unless § 91.209 is waived. Waive § 91.209 only if the flight is conducted totally within Class B, C, D or TFR airspace.

5) When pyrotechnics are illuminated, operations over persons are prohibited at any altitude.

O. Passenger and Emergency Helicopter Operations. During some aviation events, helicopters take passengers for rides or serve as emergency vehicles. The responsible person, in conjunction with the helicopter operator, will establish a comprehensive operation plan, to include egress and ingress routes that do not overfly spectator areas at low altitudes and will not interfere with performers or other operations conducted during the event. This plan will be briefed at the performers' briefing. The following guidelines will be adhered to:

1) Startup and shutdown areas for helicopters will be:

a) Located at a minimum distance of 200 feet from the crowd or passenger waiting areas.

b) Protected by appropriate barriers and/or crowd control to prevent unauthorized persons from entering these areas.

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c) Located to prevent the helicopter from passing over spectators during takeoff or landing.

2) Pilots must receive the performer's briefings by the same briefer unless relief is granted by the IIC for a different briefer to give the briefing due to remoteness of helicopter operations in reference to the event (attendance at the performer's briefing is highly recommended).

3) Refueling procedures for operations conducted during the event hours must be approved by the IIC.

NOTE: Helicopter operations will not be permitted during military demonstration team performances, or parachuting operations. The IIC may permit helicopter operations during parachuting operations if the operations are distant enough from the parachuting landing area to not be a safety hazard (e.g., Air Venture at Oshkosh, where the helicopter operations are at a separate location from the main airfield).

P. Helicopter Demonstrations.

1) Helicopter Acts Involving External-Load Operations. Airshow acts that are considered Class B, C, or D external-load operations, will not be conducted over persons on the surface unless those persons are part of the act and must be conducted in accordance with 14 CFR part 133 and the provisions of the waiver. Military helicopters need not comply with part 133 but must comply with the provisions of the waiver.

2) Helicopters may perform aerobatic maneuvers no closer than 1,000 feet horizontally from designated spectator areas.

3) Helicopters performing aerobatic maneuvers must have a valid and current special airworthiness or experimental certificate issued in the Experimental CAT for the purpose of exhibition. Nothing contained in these special provisions of the waiver should be contrary to any operating or special limitation issued as a part of that special airworthiness or experimental certificate.

4) Helicopters may not perform non-aerobatic abrupt maneuvers closer than 500 feet horizontally from a spectator area.

5) Helicopter performers are limited to the aerobatic maneuvers as listed on their SAC card.

Q. Air Carrier Aircraft Demonstrations. Flight demonstrations may be conducted at an airshow under the provisions of a waiver by any certificated air carrier with a large (more than 12,500 lb (GTOW aircraft)) listed on that certificate. When an air carrier operating this large aircraft requests authorization to conduct a flight demonstration at an airshow, the IIC will require the following:

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1) The air carrier will develop a performance package that describes in detail the entire flight profile. The performance package will specifically address the make and model of the aircraft and take into consideration any specific flight safety conditions of that aircraft.

2) A waiver provision should be developed with the following limitations:

- Minimum altitude—200 feet AGL,
- Maximum bank—30 degrees,
- Maximum speed—300 knots, and
- Minimum speed—V_{ref} for the configuration and weight of the aircraft, or as required for the go-around sequence on touch-and-go landings should be permitted only when the carrier has addressed the crew procedures, the runway requirements, and the abort procedure in sufficient detail.

3) Coordination with the air carrier's principal operations inspector (POI) is necessary before approval by the IIC.

4) Any maneuvers not in the air carrier's training program must be practiced before the demonstration. This practice may be in an approved simulator that represents the make and model of the demonstrated aircraft.

R. Ultralight Vehicle Demonstrations. An ultralight vehicle is only a single place vehicle and must meet the applicability of 14 CFR part 103, § 103.1 and operate as an ultralight vehicle under part 103. The FAA does not require certification of ultralight vehicle operators meeting the provisions of § 103.1.

1) Aerobatic flight demonstrations by ultralight vehicles should be included on a certificate of waiver or authorization, with appropriate special provisions. The applicant must provide the issuing office with a statement of determination that the vehicle meets the requirements of § 103.1 or authorized under an exemption to part 103, and the operator is able to conduct the proposed demonstration without creating a hazard to persons and property on the surface. The statement should contain a summary of how the determination was made. The IIC determines if the statement is suitable. The IIC may require a demonstration prior to making a determination. For additional support, contact AFS-800.

2) Ultralight vehicles must meet the same separation standards as conventional aircraft with a level flight cruise speed of less than 156 knots using 75 percent power (CAT III), with the exception of powered parachutes.

3) Wing walking acts using ultralight vehicles are not authorized for operation as an ultralight vehicle operated in accordance with part 103. Only certificated aircraft may be used for this type operation.

4) Pilots may not receive compensation for participation at aviation events because ultralight vehicles may not be operated for compensation or hire.

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S. Experimental Amateur-built and Exhibition Aircraft. The aircraft can be flown acrobatically if it is airworthy and not prohibited from aerobatic flight. The performer must provide to the IIC documentation of the aerobatic maneuvers authorized in accordance with the aircraft operating limitations. The IIC should consult with the airworthiness inspector regarding suitability.

T. Wing Walking and Specialty/Trapeze Acts. Wing walking acts may be approved when the performers have safely demonstrated the act in an aerobatic competency evaluation. Section 91.107(a)(2) and (3) may need to be waived for stunt persons only. All helicopter trapeze acts must comply with the applicable requirements of part 133 concerning helicopter external load combination Class B or D operations. Avoid overflight of the designated spectator areas for these acts.

U. Ground-based Pyrotechnics. As appropriate, in addition to the applicable airshow special provisions listed on the FAA Internet site at http://www.faa.gov/about/initiatives/airshow/waiver/ and on the FAA employee's Intranet site at https://intranet.faa.gov/faaemployees/org/linebusiness/avs/offices/afs/programs/airshows/tora/index.cfm, include the pyrotechnics special provisions and checklist (see Figure 3-39) for events that will use ground-based pyrotechnics, if the ground-based pyrotechnics will be installed and/or detonated anywhere on the airport surface.

V. Glider Operations. The following criteria apply only to glider operations.

1) Motorized and non-motorized gliders fall into the CAT III aircraft group. CAT III aerobatic box and performance distances apply.

2) Unless obstructions are present that would make a taxiway takeoff unsafe, it should be permitted with a minimum distance of 200 feet from the primary spectator area (see Figure 3-25). This distance may be reduced to 150 feet if the takeoff path is at an angle of at least 10 degrees away from the spectators.

3) Landings may be approved on the taxiway used for the takeoff as long as there are no obstructions or adverse wind conditions that would create a hazard to the spectators. If the landing approach requires a low altitude turn over the spectators, landing on a taxiway is not permitted. After landing, the aircraft must come to a full stop at least 50 feet from spectators.

W. Agricultural Aircraft Demonstration. In addition to the applicable airshow special provisions listed on the above mentioned Web sites, include the appropriate agricultural aircraft special provisions for events that have agricultural aircraft aerobatic demonstrations.

X. Ingress and Egress Routes Into and Out of the Flying Display Area.

1) All Civil and Military Aircraft. For flight over congested (built-up) areas adjacent to flying display areas:

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a) Section 91.119(a) will not be waived for aerial demonstration purposes. Section 91.119(a) requires that all pilots must always operate an aircraft at an altitude allowing, if a power unit fails, an emergency landing without undue hazard to persons or property on the surface, except when necessary for takeoff or landing; and

b) Aerobatic maneuvers are prohibited.

2) All Civil and Military Aircraft (Except for Sanctioned Military Demonstration Teams). For flight over congested (built-up) areas adjacent to the flying display area:

a) Minimum Altitude. At least 1,000 feet above the highest obstacle within a radius of 500 feet from the aircraft;

b) Ingress from Adjacent Congested Areas (Built-up Areas) to Flying Display Area. Aircraft entering a flying display area from over a congested (built-up) area are permitted to leave the minimum altitude specified above in subparagraph 3-147X2)a) to complete a smooth transition to the performance altitude on the flight line; however, the angle of descent should not be lower than a normal approach for that aircraft type (i.e., steeper than normal approaches are permitted).

c) Egress from Flying Display Areas to Adjacent Congested (Built-up) Areas. Aircraft exiting a flying display area to a congested (built-up) area should climb at a rate consistent with the safe operation or best pitch attitude for that aircraft type. If extended flight over the built-up area is expected, compliance with the minimum altitude specified above in subparagraph 3-147X2)a) is required (see Figure 3-31).

Y. Compensation at Airshows.

1) To receive any type of compensation (fuel, oil, lodging, rental cars, etc.), for flight activities at an airshow, an airman must have a commercial pilot certificate and second-class medical certificate. The aircraft must be certificated for operations that allow compensation or hire. Additionally, if passengers or property are carried for compensation or hire, the aircraft must be certificated to allow for those types of operations.

2) In accordance with part 91, § 91.319, all experimental aircraft are prohibited from conducting operations for compensation or hire while carrying passengers and/or property operations. Experimental aircraft may be authorized to be operated for compensation or hire without any passengers or property on board.

3) IICs should conduct an investigation when they become aware of any performers who may only hold a private pilot certificate and appear to be receiving compensation while performing or giving rides.

4) Additionally, all FAA inspectors conducting surveillance should be vigilant in monitoring activities that involve passenger rides at an aviation event. They should conduct an investigation when they become aware of operations conducted in an aircraft or by a pilot who may be operating contrary to regulations.

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3-148 MILITARY PERFORMANCES.

A. General. The guidelines in this paragraph apply to military aircraft, military pilots, and parachute teams specifically designated to perform missions for the U.S. DOD and the Canadian DND.

1) Only the Aviation Liaison Officer in the Office of the Assistant Secretary of Defense for Public Affairs can sanction a U.S. DOD team

2) Canadian DND Sanctioned Military Teams. The Canadian DND-sanctioned military teams are the Canadian Forces Snowbirds, the Canadian Forces CF-18 Demo Special Events, and Sky Hawks. Their contact information is listed on http://www.faa.gov/about/initiatives/airshow/military.

3) The DOD-sanctioned single ship military demonstration teams are not exempt from any regulation or policy that is used in issuing a waiver unless specifically stated in their FAA-accepted command guidance. Fly these aircraft in accordance with these guidance documents (see paragraph 3-148C below).

4) FAA headquarters does not issue any blanket special approvals, authorizations, waivers, or blanket exemptions that would pertain to all military airshow performances. The sanctioned North American Jet Demonstration teams have maneuver packages that are approved each year and pertain only to the team for whom it was approved.

5) Forward any outside complaints received by the FAA as a result of the aerial demonstration to the designated military representative for disposition. Direct any questions by FAA representatives involving a military team to the appropriate team.

6) Enforcement action against any military team or performer will be conducted according to current FAA policy (see the current edition of FAA Order 2150.3, Compliance and Enforcement Program). When enforcement action is initiated, the IIC must notify the national airshow coordinator through the regional airshow coordinator.

7) All accidents and incidents must be reported to the national airshow coordinator by the IIC through the regional airshow coordinator.

B. Sanctioned Military Jet Demonstration Teams. This title pertains only to The Blue Angels, The Thunderbirds and the Snowbirds. A list containing their contact information is available at http://www.faa.gov/about/initiatives/airshow/military.

1) The sanctioned military jet demonstration teams provide AFS-800 with command-approved maneuvers packages for approval. See paragraph 3-149 for the approval/acceptance process.

2) These teams normally will conduct preseason meetings with the airshow event organizer and jurisdictional FAA offices. These meetings will usually occur in the winter months before the start of the airshow season. Participation in these meetings is mandatory for the jurisdictional FSDO. It is incumbent upon the event organizer to notify the appropriate FSDO in

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ample time to send a representative to the meeting. The FSDO will notify the regional airshow coordinator of the meeting. It is imperative to review site suitability in detail with the event organizer and military jet demonstration team representative at this meeting. This will include, but is not limited to, the placement of the aerobatic box and impact on the nonparticipating public on the surface under this box, review of proposed ingress/egress routes that will require FAA approval and any impact on scheduled air carrier operations.

3) Coordinate any change to an FAA maneuvers package or the addition or removal of a pilot authorized to fly under the prescribed maneuvers package with the national airshow coordinator as soon as possible. These changes are not authorized until accepted or approved by AFS-800 and the national airshow coordinator.

4) Military jet demonstration teams and military Single ship Demonstration teams may conduct an arrival demonstration. This normally consists of several passes for visual familiarity with existing landmarks and maneuvers practice using these landmarks. Coordinate details of the arrival demonstration in advance. For the military demonstration teams, this should be accomplished at the preseason meeting.

a) The arrival demonstration must be previously approved and meet all FAA regulations and requirements as stated in the waiver and special provisions. The main difference between the arrival demonstration and a regular demonstration is that the normal size crowd is not present, which may preclude the need for crowd control.

b) The teams often ask to have the team advance coordinator or operations officer accept the arrival demonstration briefing and relay all necessary information to the team. The IIC should allow this if the team representative is a rated aviator or a nonrated officer serving with the team. Briefings with the team representative must be completed before the team's arrival at the demonstration site. It is mandatory that the IIC or IIC's representative is present at this briefing.

5) The sanctioned military jet demonstration teams have FAA-approved maneuvers packages. The maneuvers packages describe each demonstration maneuver in detail and specify ingress/egress routes. Flight over congested (built up) areas adjacent to flying display areas (ingress and egress) must be carried out as follows:

a) They are authorized to fly nonaerobatic at 500 feet above obstacles and/or occupied buildings when within 3 NM of show center.

b) The opposing solos are permitted to descend below 500 feet AGL in the transition area over occupied buildings in a wings level shallow descent to arrive at 200 feet AGL before reaching 1 NM from show center.

c) On a case-by-case basis, where it is deemed a safe transition to the next maneuver, the IIC will grant a waiver to the sanctioned military jet demonstration teams permitting them to fly as low as 200 feet above the highest obstacle within a 500-foot horizontal radius along specified ingress/egress routes within 3 NM from show center, provided the following conditions are met:

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1. A request is sent or given to the IIC by an authorized team member for each show site.

2. The results of a completed onsite survey conducted during the current airshow season by a representative of the military demonstration team.

3. A current aerial photograph or topographical chart depicting the CAT I show line, aerobatic box required for the approved maneuvers package, and ingress/egress routes.

4. Depict ingress/egress routes on a 1:24,000 scale map (or its equivalent) indicating the minimum altitudes requested, the 500-foot lateral distance of the end of the primary spectator area, and any other secondary open-air assemblies of persons.

d) Flight is never authorized below 500 feet:

1. Over occupied buildings outside of the transition area;

2. Within 500 feet laterally of open-air assemblies of persons; and

3. Aerobatic flight is not permitted outside of the aerobatic box (except as authorized as stated above).

C. Sanctioned Military Single Ship Demonstration Teams—Military Single-Ship Demonstrations. The military single ship demonstration teams are the sanctioned North American military specialized teams that demonstrate the capabilities of one particular aircraft; (e.g., the USAF A-10, F-15, F-16, and F-22 single ship demonstration teams); the USN F-18 single ship demonstration teams; and Canada's DND single ship demonstration teams. The applicable branch of the military must develop guidance and/or maneuver packages, which define the aerobatic routine to be performed at aviation events (see paragraph 3-149).

D. Other U.S. Military Demonstration Teams. Other U.S. military demonstration teams include the USAF Heritage Flights and the USN Tailhook Legacy Flights. These flights may include a victory roll at the end of their performance and is the only aerobatic maneuver authorized but is not authorized over spectator areas or occupied buildings and must conform to military guidance or meet civilian requirements as appropriate. Various other military aircraft may be authorized for flybys, simulated in-flight refueling demonstration, simulated assault or rescue operation or other non-aerobatic operations or static displays.

E. Other Foreign Military Demonstration Teams. Other foreign military flight demonstration teams single and multi-aircraft, must submit a maneuvers package to AFS-800 to ensure compliance with FAA guidance. See paragraph 3-149 for the approval process.

F. Military Parachuting Demonstration Teams.

1) Sanctioned Military Parachuting Teams. The sanctioned military demonstration teams are the U.S. Army Golden Knights, USN Leap Frogs and the Canadian DND Skyhawks. The sanctioned military parachute teams are considered to have met the highest

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level of parachuting certification. The team members need not be listed on an application for a FAA Parachuting Authorization application, FAA Form 7711-2. The sponsor or responsible person may make the application for a sanctioned team.

2) Non-sanctioned Military Parachuting Teams. Non-sanctioned military teams are not performing any demonstrations for the DOD or DND, therefore must meet all the same requirements as any civilian team.

G. DD Form 2535 (military participation). The DOD requires the event organizer, or a designated representative, to complete DD Form 2535 when requesting a U.S. military aerial demonstration team on or off a military installation. The event organizer or representative must forward the form to the appropriate FSDO. The event organizer must allow for a 30-day review period. The FSDO completes Section IV, FAA Coordination (Airspace Coordination). Classify the proposed site requiring a waiver as satisfactory, conditional-satisfactory, or unsatisfactory during an FAA inspector conducted site feasibility study. The USAF is using an automated DD Form 2535 and the applicant can only obtain it by accessing their Web site: http://www.acc.af.mil/aerialevents.

- A satisfactory classification indicates that a waiver is not required or can be issued following compliance with other stated requirements.
- A conditional-satisfactory classification will include specific conditions that need to be met, such as closing roads, evacuating buildings, etc., and special consideration for the military demonstration teams' ingress and egress routes.
- An unsatisfactory classification indicates that the requested activity cannot be performed safely at the proposed site, and a waiver will not be issued.

1) Generally, the standard aerobatic box for the Blue Angels and Thunderbirds is 12,000 feet by 3,000 feet. The Snowbirds usually request 8,000 feet by 3,000 feet. For a single ship demonstration team, the standard aerobatic box is 6,000 feet by 3,000 feet. The support manuals and some maneuvers packages will indicate the size of the required airspace.

2) Military Flybys (Other than an Aviation Event). DD Form 2535 for a flyover or flyby at civic events, funerals, etc., are submitted to the local FSDO for FAA coordination. Other than the three sanctioned North American Jet Demonstration teams, the flybys should be accomplished at 1,000 feet above the highest obstacle within 2,000 feet horizontal from the flight path.

a) If no regulations are being waived:

1. No site evaluation is necessary.

2. Contact the AT facility with jurisdiction for the air space being used for coordination and enter the AT contact information in block 18 of Section IV.

3. Check the appropriate boxes (a through g) in block 16.

4. Check the appropriate box in block 17. If other that satisfactory, enter the conditions for "Conditionally Satisfactory" or reason(s) for "Unsatisfactory" in block 18.

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b) If a waiver of one or both of the following regulations is require:

1. If the speed requested is above those authorized in § 91.117

2. If one of the sanctioned military jet demonstration teams is requesting a flyover below 1,000 feet above the highest obstacle 2,000 feet either side of their flight path as required in § 91.119.

3. If a waiver of § 91.119 is issued to one of the sanctioned military jet teams, the follow conditions must be met:

a. A site suitability must be conducted including ingress and egress routes,

b. Flight below 500 feet above the highest obstacle 1,000 feet either side of the intended flight path is not authorized, and

c. Only shallow turns, climbs and descents are authorized below 1,000 feet AGL.

4. In addition the following coordination requirements must be met:

a. Conduct a briefing between the PIC and ASI before the flyby.

b. Compliance with all other rules of part 91 is required.

3-149 FAA AFS-800 Maneuvers Packages Approval Process.

A. North American and Foreign Military Flight Demonstration Teams. North American and Foreign Military flight demonstration teams, single-ship demonstration teams, and mixed military and civilian formation demonstrations who conduct public performances in the United States. require FAA acceptance of their command-approved maneuvers package or accepted aerial demonstration guidance by AFS-800. Some of the maneuvers described in these packages may not conform to all guidance requirements in Volume 3, Chapter 6 (e.g., airspeed, altitude over primary spectator area, etc.) and therefore require FAA acceptance of their maneuvers package (see paragraph 3-148 above).

B. Civilian Performers. Civilian performers requesting approval for one or more maneuvers described in subparagraph 3-147K) or relief from one or more requirements listed in this chapter require FAA acceptance and must make an application as follows:

1) The applicant must fill out an applicant to include (applicants that are applying for relief from a requirement and not an approval of a maneuver need only comply with a) and b) below and send request to address listed in subparagraph 3) below):

a) A copy of the performer's SAC (FAA Form 8710-7 or Transport Canada Form 26-0307);

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b) A detailed description of the maneuver(s) requiring approval or relief;

c) A pictorial display (e.g., ribbon drawing) of the maneuver(s) including the sequence in which the maneuver(s) will be flown;

d) The entry and exit airspeed and altitude for the requested maneuver;

e) The airspace required to complete the maneuver(s) requiring approval to include lateral, horizontal and vertical distances;

f) A computation of turn radius, scatter radius and safety radius from the closest points to the primary spectator area of the maneuver(s) needing approval using the formulas listed in subparagraph 3-151 noting the airspeed, altitude and G forces used in the computations; and

g) An evaluation from an ICAS or EAA aerobatic competency evaluator verifying the following.

1. The maneuver has been demonstrated,

2. It can be performed competently with regularity,

3. It has been demonstrated by the applicant to be within the airspace described in 4 above, and

4. It does not meet the definition of a Prohibited Maneuver as described in subparagraph 3-147K1).

2) Upon completion, the aerobatic competency examiner will forward the application and evaluation results to: ICAS Safety Committee Chairman, 750 Miller Drive, S.E., Suite F-4 F-3, Leesburg, Virginia 20175.

3) Upon receipt, the Safety Committee will review the application and documentation. Within 15 working days of receipt, the Safety Committee Chairman will forward the application package with comments to: FAA Headquarters, AFS-800, 800 Independence Avenue, SW, Washington, D.C. 20591.

4) AFS-800 will notify the applicant of the results within 30 days of receiving the application package from the ICAS Safety Committee Chairman.

C. Evaluation Process. An evaluation is required to assure an equivalent level of safety for spectators in case of an incident involving the aircraft. AFS-800 and the National Air Show Coordinator will decide what the appropriate evaluation requires. This will depend on the requested maneuver(s) and completeness of the application. The review may include but not limited to a safety committee of subject matter experts as determined by AFS-800.

1) The following criteria will be used to evaluate maneuvers for compliance:

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a) Aerobatic maneuvers which direct an energy vector toward the primary spectator at any point, other than those described in subparagraph 3-147K1), which are prohibited.

b) Non-aerobatic maneuvers by multiple aircraft or aircraft in formation with an energy vector directed towards the primary spectator area.

c) 360 degree turns with an energy vector directed towards the primary spectator area:

1. For single aircraft that exceed the requirements of subparagraph 3-147K2)(b) above; or

2. For multiple aircraft.

2) Below is an outline of the FAA acceptance process:

a) Military Flight Demonstration Individual Pilots or Teams planning to perform an aerobatic demonstration in the United States must submit an application package that contains the following requirements:

1. A complete copy of their maneuvers package must be furnished to AFS-800, National Air Show Coordinator, and;

2. The maneuvers package (electronic format is required) will consist of profiles that must contain the following:

- A ribbon pictorial (or equivalent) of all maneuvers in the performance,
- Minimum and maximum operating altitudes,
- Distances from the designated spectator area, and
- Relationship of the aircraft to the show line.

3. Minimum weather requirements for the performance and profiles for a high and low show if that option is available.

4. The size and dimensions of the following airspace required to conduct the performance: flying display area, aerobatic box, and ingress/egress routes.

5. A proposed date for a private demonstration/review by the National Air Show Coordinator.

b) Military teams must also submit a letter from the commanding officer authorizing this military team. The letter must include:

- A team roster, including the address and telephone number of the commanding officer of the military organization;
- The military orders describing the requirements for training and the conduct of the operation; and

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- A list of the aircraft used in the demonstration and a description on how to conduct flight demonstrations in the United States.

c) For all civilian teams or individuals requesting a maneuvers package approval for relief from one or more requirements in this guidance will submit a letter of request. The letter must include:

- A team roster, including the address, telephone number, fax number and e-mail address of the point of contact (POC).
- If foreign, a list of the aircraft used in the demonstration and a description of how they intend to conduct flight demonstrations in the United States.
- If requesting an approval for a maneuver not meeting the description in subparagraph 3-147K2) (acceptable maneuvers) then submit an application in accordance with subparagraph 3-149B above.

d) Final acceptance of approved maneuvers. The national airshow coordinator will coordinate any necessary changes with the applicant. Changes may also be coordinated with an appropriate committee selected by AFS-800.

3-150 PARACHUTE DEMONSTRATIONS. Although many airshow activities may require waivers, parachuting or skydiving demonstration jumps do not. As provided in part 105, some of these jumps require a COA. FAA Form 7711-2 is the application for authorizations parachute jumps.

A. Parachutists Not Associated with the USPA. Parachutists who are not members of the USPA and who wish to participate in a demonstration or exhibition jump over or into a congested area, must present satisfactory evidence of the experience, knowledge, and skill equivalent to that required by the USPA. Although the majority of contacts with the parachutists are made by operations inspectors, questions concerning parachute riggers, airworthiness, or engineering should be referred to the Aircraft Maintenance Division (AFS-300) and/or the Aircraft Certification Service (AIR), Rotorcraft Directorate's Special Certification Office (ASW-190) for resolution. In some cases, the local USPA area safety and training advisor may be able to answer safety questions regarding the jump and landing area. Contact the USPA for assistance in locating a USPA area safety and training advisor in your area.

1) If the applicant is unable to provide adequate information about the event or jumper's qualifications, inspectors may require a demonstration jump (not over a congested area) before approving an authorization.

2) The FAA authorized the USPA to adopt its own safety rules and licensing standards for parachutists, instructors, and jumpmasters. Additionally, the USPA has pledged to implement a policy of self-policing so that conflicts with other airspace users are avoided and a high level of safety is maintained. Toward this goal of assisting the FAA, the USPA has supplied every FSDO with a brochure of its rules and safety programs and has offered assistance any time the FAA has encountered problems with a particular club or has questions regarding parachuting.

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3) Airborne demonstrations, other than those performed by the DOD, must have an approval letter from AFS-800 containing the conditions for these demonstrations if the equipment, opening altitude and jump experience does not meet the requirements found in this paragraph.

B. Safety. Title 14 CFR part 105 states rules designed to protect the general public and other users of the national airspace from sport parachuting activities.

1) When a parachute jump is conducted over or into a congested area, a COA is required.

2) An open-air assembly of persons usually occupies a relatively small area. Therefore, it should not be a problem to avoid these areas during an exit. The primary purpose of an exit limitation over an open-air assembly is to provide a higher level of safety under the remote possibility that a jumper would be unable to deploy one of two parachutes.

C. COA (FAA Form 7711-1). Section 105.21 includes rules applicable to jumps over or into congested areas or open-air assemblies of persons. Any jump over or into a congested area requires FAA Form 7711-1. Section 105.15(a) (1 through 7) lists the information required when applying for a COA.

1) The drift-over provision of § 105.21 permits a jumper to exit an aircraft over areas other than a congested area and, with a fully deployed parachute, drift over a congested area or open-air assembly of persons, and then land in an open area. Under these circumstances a COA is not required. However, the drift-over provision does not permit any jump that results in a landing into a congested area or open-air assembly of persons unless the parachutists have obtained a COA.

2) Operations inspectors reviewing applications for authorizations to jump into congested areas or controlled airspace should look for any indication that these jumps involve special stunts or more participants than the aircraft type certificate allows. When in doubt, coordinate with the FSDO airworthiness unit. Further information about congested areas can be found in Volume 3, Chapter 51, Section 6, Evaluate a Part 133 Congested Area Plan, paragraph 3-4203; and Volume 3, Chapter 52, Section 2, Evaluate a Part 137 Congested Area Operations Plan, paragraph 3-4258.

D. Parachutist's License and Recent Experience. The competence of parachutists is extremely important when evaluating the suitability of a landing site.

1) Open field and Level I landing areas require a current USPA class C or D license (or equivalent), a minimum of 200 jumps, of which 50 jumps were within the last 12 months to include 5 jumps within the previous 60 days on the same make and model canopy to be used for the demonstration.

2) Level II and stadium landing areas require a class D license with a pro rating (or equivalent), and 50 jumps within the last 12 months to include 5 jumps in the previous 60 days on the same make and model canopy.

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3) USPA issues the PRO rating with an expiration date that coincides with the expiration date of the holder's USPA membership. USPA members are renewed on the basis of continued demonstration of the original certification requirements. USPA original certification requirements are memberships in USPA, a USPA class D license, and the accomplishment of 10 successive jumps into a 10-meter (33 feet) diameter target area in accordance with the following:

- Accomplish all required jumps with a stand-up landing;
- The size of the canopy used during the PRO rating qualification determines the smallest canopy allowed in demonstration jumps; and
- Either a safety and training advisor or an instructor/examiner and at least two other spectators witnesses qualification jumps.

E. Landing Areas. All FAA-authorized demonstration jumps are classified as open field, Level I, Level II, or stadium.

1) Open Field.

a) A minimum-sized area that will accommodate a landing area no less than 500,000 square feet (e.g., approximately 750 by 750 feet, or an area with the sum total that equals or exceeds 500,000 square feet);

b) Allows a jumper to drift over the spectators with sufficient altitude (250 feet) so as to not create a hazard to persons or property on the ground; and

c) Will accommodate landing no closer than 100 feet from spectators.

2) Level I Landing Area.

a) An open area that will accommodate a landing area no smaller than 250,000 square feet (e.g., approximately 500 by 500 feet); and

b) Permits jumpers to land no closer than 50 feet from the spectators and to pass over the spectators no lower than 250 feet, including the canopy and all external paraphernalia.

c) Many open field athletic areas and airport operational areas constitute Level I landing areas.

3) Level II Landing Area.

a) An open area that will accommodate a rectangular, square, oval or round shaped landing area of approximately 5,000 square feet for no more than four jumpers, with at least 50 feet in width. An additional 800 square feet minimum for each additional jumper over four for any jumper landing within 30 seconds of the last of any four jumpers; and

b) Permits jumpers to land no closer than 15 feet from the spectators and to pass over the spectators no lower than 50 feet including the canopy and all external paraphernalia.

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c) Athletic fields 150 yards in length by 80 yards in width, or smaller with bleachers, walls, or buildings in excess of 50 feet in height on two or more sides above the landing surface, are defined as stadiums and constitute Level II landing areas.

4) Stadium. A Level II landing area smaller than 150 yards in length by 80 yards in width and bounded on two or more sides by bleachers, walls, or buildings in excess of 50 feet high.

5) Other Landing Area Considerations.

a) A landing area that exceeds the maximum dimensions of a Level I landing area, permits a parachutist to drift over a congested area or open air assembly with a fully deployed and properly functioning parachute (if the parachutist is at sufficient altitude to avoid creating a hazard to persons and property on the ground), and that has no other safety concerns would likely not require a COA as required by 14 CFR part 105, § 105.21 or § 105.25.

b) Any parachute jumping demonstration planned in conjunction with a public aviation event will require a COA with appropriate special provisions as required by § 105.21 and/or § 105.25 even if the landing area exceeds the maximum dimensions for a Level I area. A parachute jumping demonstration planned in conjunction with a public aviation event is one that takes place any time after the first spectator arrives for the event that day.

F. Tandem Jump Demonstrations.

1) Tandem jumps will only be authorized in open field and Level I landing areas.

2) The USPA must approve the tandem jump master in order to conduct tandem jumps.

3) The passenger (or "rider") requires no previous jump experience or license.

G. Alternate Landings Areas. Regardless of the parachutists' experience, "runoffs" or escape areas must be identified.

H. Cutaway Acts. Cutaways may not be performed if cutaway equipment will drift into the spectator area.

3-151 AIR RACES.

A. Cross-country Air Races. Cross-country air races are normally proficiency type races and do not require waivers other than for altitude and speed at checkpoints along the route. This will require some coordination with the AT facility that services that airspace. See Volume 3, Chapter 7, Issue a Certificate of Waiver or Authorization: Section 91.119(b) and/or (c) (Minimum Safe Altitudes), for assistance and guidance in issuing a waiver for § 91.119. Airspeed may be waived in accordance with this chapter similar to military flybys described in subparagraph 3-148G2.

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B. Closed-course Air Races. Due to the complexity of the two types of closed-course pylon air racing courses (e.g., Reno type and Red Bull type), all air racing courses must be submitted to AFS-800, the national airshow coordinator, for approval before a waiver can be issued by the FSDO having jurisdiction. The formulas found in subparagraphs 3-151G and H should help the applicant design the racecourse for submission.

NOTE: Both demonstration and competitive events are normally conducted over a fixed, short-distance racecourse, usually located on or adjacent to an airport. It is the sponsor's responsibility to design the course so that hazards to spectators and other persons on the surface are prevented. Only persons and vehicles authorized by the participating race organization will be permitted beyond the crowd line during racing operations.

1) Authorized persons may include press, aircraft support crews, judges, and officials at the start line.

2) Authorized persons must clear the runway and move back to at least the runway "hold short" line 1 minute before the launch for standing starts. No one will be permitted in front of the first row of aircraft after this time except the starter flag team.

3) Pylon crews, press, and vehicles, except the home pylon flag crews, will remain inside the pylon course during races in designated areas. Race timing teams are permitted in the area between the crowd line and the show line during racing.

4) Handle non-competitive demonstration races like a competitive event, including a determination of pilot competency. Choreograph demonstration races from takeoff to landing. New classes of racing aircraft must be found competent by a similar existing air racing organization.

C. Participants. A fundamental principle of closed-course air race safety, including demonstration events, is that all of the participants need to be associated with an organization dedicated to the sport. Race pilots must possess a current race pilot authorization in the class in which that pilot is racing (issued within the previous 12 months). An organization or person given issuing authority by the FAA must issue the race pilot authorization. The structure and existence of a credible air racing organization provides an internal level of safety that would not otherwise exist. It is recommended that the IIC determine the following before issuing a waiver for an event that includes closed-course air races:

1) Determine whether the air race course has AFS-800 approval.

2) Determine if the participants have the proper qualifications by holding air race pilot authorization for the class in which they are participating.

3) Obtain statements from the organization regarding the air racing currency of each airman.

4) Determine whether the organization has established safety operating rules.

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5) Inform the regional and national airshow coordinators upon receipt of an air race application.

D. Air Racing Organizations. If AFS-800 determines that an air race organization has a credible program, policies, and procedures for determining air racing pilot competence, that organization will be given authorization to issue race pilot certificates. The current contact for each air race organization can be found at http://intranet.faa.gov/FAAEmployees/org/linebusines s/avs/offices/afs/programs/airshows. The organizations are normally listed by class, such as the following:

- International Formula One,
- Unlimited Division,
- AT-6/SNJ Racing Association, Inc.,
- Formula V Air Racing Association,
- Professional Race Pilots Assn. (Biplane),
- Sport Class, and
- Jet Class.

E. Typical Racecourses. A diagram of a typical air race site is shown in Figure 3-40. A diagram of a typical unlimited racecourse is shown in Figure 3-40A. Two examples of suitable air race site diagrams are shown in Figure 3-40B. The following paragraphs discuss the method of determining the various distances used.

F. Racecourse Design. A satisfactory pylon air racecourse design involves the shape of the course and its relationship to the area around the course, especially the spectator areas. Both of these factors depend upon the maximum speed of the racing aircraft and the maximum "g" loading (acceleration forces) that the aircraft are expected to encounter when flying the racecourse in a normal manner. The maximum height at which the aircraft are expected to fly during the race is also a factor.

G. Racecourse Speeds.

1) The following are typical speeds for each racing class:

- Formula V: 160 mph,
- Sport Biplane: 210 mph,
- AT-6/SNJ: 225 mph,
- International Formula One: 250 mph,
- Sport Class: 300 mph, and

2) Unlimited and jet classes: 450 mph and higher.

3) As additional classes become active, they will be added to this list with appropriate speeds specified.

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4) The maximum "g" loading for a race aircraft flying the course in a normal manner has been set at 3.5 "g's." In actual racing, where maneuvering and turbulence is encountered, momentary "g" loadings in excess of this figure can be expected.

5) The speed and "g" loadings permit the calculation of the minimum radius turn that should be permitted in the design of the racecourse. The formula for the turn radius for a given "g" loading and speed is shown below. (Using a value of 3.5 for "g," the minimum turn radius is shown for each racing class below.)

Minimum Turn Radius Formula

$$R = \frac{V^2}{32.2 \times \sqrt{g^2 - 1}}$$

$$R = \text{Minimum turn radius (feet)}$$

$$V = \text{Aircraft speed in ft/sec} \quad \text{or}$$

$$V = \text{knots} \times 1.689$$

$$32.2 = \text{Acceleration force of gravity } (\text{ft/sec}^2)$$

$$g = \text{"g" force in turn}$$

6) The angle of a turn (the change in course required to negotiate the turn) should be planned to avoid forcing a race aircraft to make the turn too sharply. A maximum turn angle that does not exceed 65 degrees has been found to be satisfactory.

H. Racecourse Show Line. During the race, aircraft occupy a raceway around the race course. The edge of this raceway closest to the spectator area is the show line, over which no aircraft is permitted to cross while racing.

1) The raceway width may vary from 150 feet to 500 feet in the various racing classes so that the aircraft may pass one another. The critical requirement is that no racing aircraft is permitted to cross over the show line during the race.

2) The minimum turn radius, the maximum turn angle, and the raceway width define the limits of a satisfactory race course. The race course relationship to the spectator areas or other populated area must also be defined. All racing classes require a distance of 500 feet between the primary spectator area and the show line.

3) An additional safety area is required to ensure that spectators are protected in the event that debris leaves a race aircraft. Should this occur while the aircraft is in a turn, the debris will follow a path tangential to the turn from the moment it departs the aircraft.

a) The theoretical straight-line distance to a point on the ground that the debris will follow (ignoring air resistance) depends upon aircraft speed and altitude. This distance is the scatter distance. A maximum racing altitude of 250 feet is acceptable for aircraft weighing in excess of 1,000 lb (presently, the AT-6/SNJ and the Unlimited class). A maximum racing altitude of 150 feet is acceptable for aircraft weighing 1,000 lb or less (presently the International

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Formula One, Sport Biplane, and Formula V classes). The scatter distance formula for each racing class is shown below.

Scatter Distance Formula

$$S = V \times \sqrt{\frac{2 \times A}{32.2}}$$

S = Scatter distance (feet)

V = Aircraft speed in ft/sec

(V = knots $\times$ 1.689)

A = Maximum aircraft altitude (AGL) (150 or 250 feet)

32.2 = Acceleration of gravity (ft/sec^2 0

b) The theoretical location of all possible debris impact points from an aircraft in a turn is a circle whose radius is the square root of the sums of the squares of the turn radius and the scatter distance. This radius is the scatter radius.

Scatter Radius Formula

$$S = \sqrt{\left(R^2 + S^2\right)}$$

Sr = Scatter radius (feet)

R = Turn radius (feet)

S = Scatter distance (feet)

c) To provide an acceptable margin of safety, the difference between the turn radius and the scatter radius is multiplied by a safety factor of 1.5 and added to the turn radius to define the safety radius.

Safety Radius Formula

$$Sfr = R + 1.5 \times (Sr - R)$$

Sfr = Safety radius (feet)

Sr = Scatter radius (feet)

R = Turn radius (feet)

4) The critical turn with respect to the safety radius is the turn that enters the portion of the race closest to the spectators. The safety area is constructed as follows:

a) Bisect the course change angle for the critical turn;

b) Mark off the minimum turn radius for the class of aircraft racing, as shown in Figure 3-28A, from the pylon position to a point on the angle bisector; and

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c) Draw an arc, whose radius is the safety radius, from the point described in subparagraph 3-151H3)c) above. No spectators can be within this arc (Figure 3-40).

5) In some cases, it may be expedient to design the race course around the spectator area. While spectator area-to-show line distances are unchanged, the safety zone is now outside the spectator area and is no longer a factor. Roads to this kind of a race course layout must be completely closed off to the spectator area during the race.

6) Race courses are normally flown in a counterclockwise direction (left turns). Problem sites may require flying the course in a clockwise direction (right turns). Other modifications of the race course, such as changing the angular relationship of the spectator line to move the crowd away from a turn pylon, or lengthening the race course to move the turn pylon away from the crowd, may also be necessary.

3-152 BALLOON MEETS AND COMPETITIONS.

A. Balloon Meets. Routine balloon ascensions can usually be conducted in accordance with the provisions of part 91, and no waiver is required. However, balloon competitions will likely require a certificate of waiver or authorization with appropriate special provisions to maintain the safety of the nonparticipating public.

B. Balloon Operations. Flight competitions by manned balloons often involve operations at horizontal and vertical distances less than those required by § 91.119(b) and (c). Operations at these altitudes are necessary to take advantage of varying wind conditions at different altitudes that are the balloonist's only means of directional control. These operations are acceptable when appropriate limitations are developed to ensure public safety and the safety of the participants.

C. Public Safety. Ballooning has grown significantly in recent years, and competitive tasks have been refined and standardized. The FAA's concern is that every effort is made to ensure public safety. The intent of § 91.119 should never be compromised when issuing waivers and developing special provisions.

1) Target areas must be under the control of event officials. The use of portable bull horns or public address systems provides an adequate means for crowd control, or for directing balloonists away from the target area in an emergency. Balloon landings are not normally permitted closer than 1,500 feet from the target or goal, although event officials may allow a reduction of this distance to 500 feet for safety considerations. Only balloon recovery ground support crewmembers and authorized event officials can be present at the landing site.

2) The relatively slow speed of balloons allows spectators to move from harm more easily than at an airshow where fast moving aircraft are performing. Accordingly, the designated spectator area can be minimized to a 200-foot radius away from the designated balloon goal/target. IICs should ensure that the sponsors assure spectators remain clear of the goal/target area during balloon meets or competitions.

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D. Balloon Competition Event Waivers. To be found eligible for a waiver of § 91.119(b) and (c), the applicant must prepare and maintain an organized manned balloon competition manual that has been found acceptable by the jurisdictional FSDO. The contents of the manual are the basis for issuance of the waiver. The applicant and the participants must comply with the balloon manual contents and requirements. No operations can be conducted under a waiver except while in VFR conditions during the period from sunrise to sunset, as specified in § 91.155.

1) Event organizers should be asked to submit a set of competition rules when applying for a waiver. Although this is not a regulatory requirement, it should be encouraged for the sake of conformity and safety. These competition rules should generally conform to a recognized industry standard, such as those developed by the Balloon Federation of America (BFA) for events sanctioned by the BFA Competition Division.

2) A waiver of § 91.119(b) and (c) for organized balloon competitions can be issued based on submission of an application containing the proposed operations and contents of the organized manned balloon competition manual. (See subparagraph 3-152E below.)

3) Section 91.119(b) and (c) should be waived only to the extent necessary to accommodate the event while allowing an acceptable level of safety. Evaluation of the site by the IIC determines the actual separation distances for a specific event; however, the following minimum distances and special provisions must be observed.

a) Section 91.119(b) may be waived to allow flight over a congested area at an altitude of no less than 500 feet above the highest obstacle within a 500-foot horizontal radius of the balloon. This section of the regulation may only be waived within a specified maximum distance from designated launch sites and/or target areas. This designated area will be determined by the event organizer and the FAA; this area must also be clearly delineated in the event organizer's manual before the event. (A scaled map, drawing, and/or aerial photographs should be in the event organizer's manual before the event.) The designated area should be the minimum area necessary to accommodate the event, and the area should be consistent with the event organizer's ability to control operations. A waiver of § 91.119(b) should not be issued if the target area is so small that a normal descent (200 to 300 feet per minute) cannot be made.

b) Section 91.119(b) may be waived to allow flight above, but not less than 75 feet from, any open-air assembly of persons (designated spectator area) under the direct control of the event organizer.

c) Section 91.119(c) may be waived to allow flight over open water or sparsely populated areas, no closer than 200 feet horizontally to any person, vessel, vehicle, or structure.

E. Organized Manned Balloon Competition Manual. The following is a list of the minimum required topics that must be addressed in the competition manual for a balloon event. Other information may also be included (see Figure 3-41).

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1) Responsibilities and Procedures:

- Duties of personnel,
- Registration and airworthiness determinations,
- Pilot qualifications,
- Pilot/crewmember briefing responsibilities,
- Copy of letter(s) of agreement, and
- Event flight crewmember qualifications, experience, and maximum numbers onboard each balloon for each type of event.

2) Ground Operations:

- Clear areas,
- Spectator areas (designated primary and potential secondary areas),
- Crowd control requirements, and
- Landowner relations/notification.

3) Flight operations:

- Areas of operations,
- Types of operations,
- Altitudes,
- Weather requirements,
- Communications requirements, and
- AT coordination.

4) The organized manned balloon competition manual must incorporate § 91.119(b) and (c) limitations as appropriate to the event in a form and manner acceptable to the FAA and the event organizer. The event organizer should describe in the manual as clearly as possible the manner of operations that are needed to comply with the event waiver.

5) The organized manned balloon competition manual must include a list and description of all events, tasks, and races to be included in the waiver.

F. Personnel. The organized manned balloon competition manual must contain the names of the following personnel who are responsible for the event:

- Flight director (event director),
- Person responsible for establishing and maintaining crowd control,
- Event organizer's FAA liaison, and
- Persons responsible for obtaining weather data and conducting the pre-event pilot and event flight crewmember briefings.

G. Letters of Agreement. In addition to the organized manned balloon competition manual, a letter of agreement (LOA) clearly detailing all responsibilities may provide an excellent means of control. In the manual, the event organizer outlines the responsibilities assumed, such as crowd control, notification, communication, and briefing of participating pilots

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and event flight crewmembers. ATC identifies the services they provide, such as up-to-date weather, a portable tower, or direct communication line with the tower. The FSDO identifies the necessary aircraft and airman certification qualifications and site inspection requirements through the waiver process.

H. Balloon Event Flight Crewmembers. Only pilot and event flight crewmembers, as described in the organized manned balloon competition manual, may be carried onboard any balloon operating under the waiver issued to the event organizer.

1) Event flight crewmembers will be restricted to the minimum number required for the type of event as specified in the organized manned balloon competition manual. Event flight crewmembers should be kept to a minimum for competitive events.

2) All event flight crewmembers must have received appropriate training concerning their duties relative to the event, and must attend the event pilot and flight crewmember briefing before each event. These crewmembers must sign a statement that they have been briefed and that they are designated event flight crewmembers for the purpose of the specific event for which the waiver was granted.

3) The PIC of each balloon is responsible for obtaining the signed statements on a form furnished by the event organizer. The PIC will maintain this form during the event and return it to the event organizer and make it available to the FAA upon request.

4) Balloon event flight crewmembers are differentiated from ground support launch and recovery crewmembers.

I. Maximum Wind Speed. The maximum wind speed for launch and at the target zones is mutually determined by the event organizer/flight director and the FAA. Place these limitations in the operations manual. Determine the maximum wind speed limitations after considering the local terrain conditions and the competency of the participating airmen and the limitations of the aircraft. If a balloon does not have an FAA-approved flight manual, operating limitations can be found on the Type Certificate Data Sheet (TCDS). The actual means of determining the wind speed must be mutually agreeable to the FAA and the event organizer. The IIC and/or the event organizer/flight director may wish to consider moving the designated spectator area barriers if the wind speed is excessive.

J. Types of Competitive Tasks. Competitive tasks are exercises in navigation using changes in wind direction. The winner of a task is the balloonist who can best take advantage of changes in wind direction by ascending and descending. Event organizers generally engage launch directors to control staggered launch times and ensure safety for multiple launches. The following are some typical balloon competitive tasks, based on information provided by the BFA. See Figure 3-41 for detailed descriptions of the tasks.

- Pilot declared goal,
- Judge declared goal,
- Multiple judge declared goal,
- Elbow,

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- Hare and hound,
- Convergent navigational task (CNT),
- Fly on task,
- Gordon Bennett memorial,
- Watership down, and
- Key grab.

3-153 EVENT MANAGEMENT.

A. Management Organization.

1) The event organizer of an aviation event may be an individual, a group of individuals, or an organization that will designate a responsible person to act on all matters pertaining to an FAA-issued certificate of waiver or authorization.

2) The responsible person of an aviation event has the overall responsibility for the conduct of the airshow in a safe manner and in accordance with the conditions contained in FAA Form 7711-1, issued for the airshow.

3) The IIC should work closely with the responsible person to develop normal and emergency plans, briefings, and checklists.

B. Briefing (See Figure 3-41A). The importance of the participant briefing to the safe and successful conduct of a special aviation event cannot be overemphasized. At a safety briefing review all aspects of the flying, ground, and emergency procedures of the proposed airshow. Conduct the briefing in such a way that each of the performers and airshow personnel in charge of the air, ground, and emergency operations leaves the briefing with a clear understanding of their responsibilities and procedures to be followed in normal or emergency situations that may occur during the course of the aviation event.

1) The requirements for a briefing held at an aviation event are as follows:

a) Conduct a briefing before the beginning of an aviation event on each day of the event. A night show briefing can be incorporated into this briefing if all parties are present;

b) Carry out a briefing in an area as free of noise and other distractions as possible, and you must limit attendance to flight crews, appropriate flight crew support staff, parachutists, ground performers such as pyrotechnic teams, public announcers, and other key event personnel as determined by the air boss and/or IIC;

c) Verify each participant's attendance at a briefing by roll call or otherwise, and a record retained for submission to the IIC, if requested;

d) Performers who are not briefed are not permitted to participate in the aviation event covered in the briefing;

e) For team performances, only the team leader is required; however, a delegate may represent the team leader, provided the person is a pilot member of the team;

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f) For an aircraft that is to be launched from a remote airfield, the briefing may be given to the aircraft's pilot by telephone; and

g) The briefing is conducted at a time as close to the performance time as practicable.

2) The briefing must cover the following points, at a minimum:

a) Key aviation event personnel (to include essential and event organizer personnel) are introduced and the means of communication with them is described.

b) Weather—the briefing should be given by a meteorologist if one is available, but may be given by a flight specialist or experienced pilot. The briefing need only cover aspects of the weather that are significant to the conduct of the aviation event such as the altimeter setting, cloud cover or ceiling, visibility, winds and temperature, density altitude, and other weather data forecast for the period of the event. If a low ceiling program (marginal weather) has been approved, the weather minima and a "low show" program must be briefed. If § 91.155 (cloud clearance) is waived, this must be briefed.

c) The airport airspace details, such as position, dimensions, height above MSL, the airspace in accordance with the NOTAM and/or any TFRs issued for the aviation event, local obstructions, warnings, and other pertinent information.

d) The method of coordinating AT, including type of coordination, such as positive control by ATS, advisory by Flight Service Station (FSS), or other. This aspect of the briefing must include airshow frequencies and assigned radio call signs, if necessary. The method(s) of suspending the performance or recalling a performer by both radio and visual signals must be described.

e) The aviation event site, including the position of the primary spectator areas, secondary spectator areas, show lines, show center, airshow demonstration area, hazards, direction of entry/exit lanes, holding areas, and alternate airports using aerial photographs, maps, scale diagrams, or other means of depiction.

f) The performance schedule will include a performer's on stage time and routine duration time. Additional timing information (e.g., startup, taxi, takeoff, show and landing timings) may be included at the discretion of the briefer. Participants, if required, are to note their onstage and offstage timings if required. Performers should be aware of the position of the act they follow and location for the start of their performance. During this portion of the briefing, other programmed flying events before, during, or after the airshow portion itself, such as balloons, parachutists, flybys, and similar aerial displays, must be covered.

g) Wake turbulence can be a factor at any airshow where there is a mix of participants and should be addressed in preparing the flight program and mentioned at the briefing as a precaution to participants.

h) The fire fighting and emergency services equipment available, including their location and the access routes to be kept clear, must be discussed.

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i) Pyrotechnic briefing, in accordance with subparagraph 3-147U. The pyrotechnic briefing card must be used by the shooter in command (Figure 3-39).

j) Identification and location of all participating aircraft equipped with operable ejection seats, jettisoned fuel tanks, or ballistic parachute systems.

k) Time check—to ensure all participants are using the same time for airshow coordination.

l) The flight operations director or other person responsible for flight operations ensures that each performer understands the applicable special provisions with respect to individual low-level authorizations contained in the certificate of waiver issued for the airshow.

m) Circling the jumpers—All key personnel involved with circling the jumpers must complete the briefing described in Figure 3-42.

n) Any other subjects as necessary.

NOTE: Examples of other subjects that have been included in briefings are medical factors affecting pilot performance (e.g., over-the-counter medication, pilot fatigue, heat stress), and factors affecting orientation of flight (e.g., over water or unusual terrain). It is suggested that, at the briefing on the final day of an airshow, a "Departure Briefing" be included to advise participants of ATC procedures, etc., to be followed on leaving the airshow site. Remind pilots that their departures are to be normal and that no "ad hoc" demonstrations are to take place during their departures.

3-154 WEATHER CONDITIONS.

A. Day.

1) Flight demonstrations will not be conducted unless the ceiling is at least 1,500 feet, and the visibility is at least 3 statute miles at the time of the demonstration.

2) Except for North American military performers, aerobatic maneuvers conducted by CAT III aircraft during flight demonstrations will not be conducted unless the ceiling is at least 1,500 feet, and the visibility is at least 3 statute miles at the time of the demonstration.

3) The FAA monitor may adjust the minimum ceiling and visibility requirements at his or her discretion, but no less than 1,000 feet and 3 statute miles if:

a) Except for North American military performers, aerobatic maneuvers are conducted by CAT III aircraft only within an operations area having a diameter of no more than 2 statute miles; and

b) To the surface as a result of the reduced weather conditions.

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4) Originally scheduled aerobatic maneuvers are not modified or conducted in close proximity to the surface as a result of the reduced weather conditions.

5) The FAA monitor may specify a higher ceiling minimum and a higher visibility minimum where justified by the presence of surrounding terrain or other local condition.

6) Flight demonstrations may be conducted "clear of cloud" when the requirements have been met to waive § 91.155, cloud clearance requirements.

B. Night. The minimum weather conditions at night require a cloud base no lower than 2,500 feet and 3 statute miles visibility.

C. Military. Military participants must comply with minimum weather requirements established in the command-approved maneuvers package, except when the minimum weather requirements are less restrictive than the policy established in this order.

3-155 SPECIAL PROVISIONS. Special provisions are conditions, requirements, or limitations necessary to protect nonparticipating persons, property on the surface, and other users of the national airspace system. Each certificate of waiver or authorization must include special provisions as determined by the issuing FSDO.

A. Applicability. Many safety provisions are general in nature and are applicable to most aviation events. Other provisions may apply only to certain types of events. Provisions that appear on the waiver or authorization should be restricted to protective measures, controls, or requirements that are not otherwise specified by the regulations. Regulatory requirements that are not waived should not be included as special provisions. Waiver provisions never supersede aircraft airworthiness operating limitations.

B. Ensuring Safety. The special provisions ensure that the event can be conducted without an adverse effect on safety. Every waiver/authorization must contain special provisions to ensure an equivalent level of safety with the rules that are waived for the nonparticipating public and nonparticipating AT.

C. Use of Special Provisions. Some events require extensive and highly detailed special provisions, whereas the special provisions for other events can have less detail. In addition to variation among events, local conditions may have a significant impact on the necessary special provisions.

1) Special provisions may pertain to associated protective measures and control requirements that may not be specifically covered by the regulations. In addition, it may be necessary to increase one regulatory minimum in order to authorize safe deviation from another. For example, in order to permit aerobatic flight in Class D airspace, it might be necessary to increase the minimum visibility requirement to 5 miles or some other appropriate value.

2) When applicable, IICs should insert the name of the responsible person, found in Block 2 of the application, into the text of the special provisions to indicate the holder of the certificate of waiver or authorization.

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3) Type the provisions with as little editorial change as possible onto the certificate of waiver or authorization form or on attached pages. Any special provisions add that are not listed on the airshow Web site (see subparagraph D below) must have Regional or National Air Show Coordinator approval before inclusion except for ATC instructions. Only include applicable special provisions. Numbers and language can be inserted or changed to suit each event only when necessary, appropriate, and in accordance with the guidance in this handbook. Editorial comments enclosed in square brackets, [ ], should not be included on the certificate.

D. Examples of Common Special Provisions. The list of special provisions are found on the Internet at http://www.faa.gov/about/initiatives/airshow/waiver.

3-156 PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. This task requires knowledge of regulatory requirements in part 91 and FAA policies and qualification as an ASI (Operations).

1) The inspector assigned this task is also responsible for the surveillance of the aviation event (see Volume 6, Chapter 11, Section 10, paragraph 6-2371).

2) The inspector assigned this task and the subsequent surveillance must have completed OJT and participated in issuing a certificate of waiver and the surveillance of three aviation events with an inspector qualified in this task.

3) For an aviation event at which a military demonstration team performs, the inspector must have satisfactorily completed OJT (including participation in the feasibility study, the preseason evaluation meeting, waiver preparation, and airshow surveillance) at an event that includes a military demonstration aerobatic team.

B. Coordination. This task requires prior coordination with the appropriate AT facility and the airworthiness unit.

3-157 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- 14 CFR parts 1, 61, 91, 103, 105, 133, and 139.
- AC 91-45, Waivers: Aviation Events.
- AC 103-7, The Ultralight Vehicle.
- AC 105-2, Sport Parachuting.

B. Forms:

- FAA Form 7711-1, Certificate of Waiver or Authorization (Figure 3-34).
- FAA Form 7711-2, Certificate of Waiver or Authorization Application (Figure 3-32 and 3-33).
- FAA Form 8710-7, Statement of Acrobatic Competency (Figure 3-35).
- Transport Canada Form 26-0307, Statement of Aerobatic Competency (Figure 3-36).

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C. Job Aids:

- Sample letters and figures.
- Job Task Analysis (JTA): 2.5.14, 4.7.2.

3-158 GENERAL PROCEDURES.

A. Determine if a Waiver or Authorization Is Required. If the event cannot take place in compliance with the regulations, a waiver is required.

1) If a waiver or authorization is not required, no further action is required with this task.

2) DD Form 2535, section IV, should be completed and signed if requested by an event sponsor. These forms are required for vehicle and static displays, as well as for military flight demonstrations and flybys.

NOTE: DD Form 2535 can be found by going to one of the FAA airshow sites and selecting one of the DOD teams. The team names are hyperlinked to the team Web sites from which you can view, print, or download this form. The USAF and the USMC (U.S. Marine Corps) requires the sponsor to apply on their Web site for any type of support, flying or static displays (see http://www.faa.gov/about/initiatives/airshow/).

3) If a waiver or authorization is required, brief the applicant on preparing FAA Form 7711-2.

B. PTRS. Open the PTRS File. Enter "1220" in the "Activity Code" box of the PTRS transmittal form and enter "PA" in the "National Use" box if the COA was issued for parachuting. Enter "1230" in the "Activity Code" box and enter "AS" in the "National Use" box if issued for an airshow, "AR" for an air plane air race and "BE" of any type of balloon event. Enter "1231" in the "Activity Code" box and enter "WI" in the "National Use" box if a waiver will be issued and "NW" if no waiver will be issued for the operation requested.

C. Brief Applicant.

1) Advise applicant on the procedures to prepare FAA Form 7711-2.

2) Advise the applicant on the procedures to obtain the current editions of AC 91-45, AC 103-7 (if applicable), and AC 105-2.

3) Provide applicant with FAA Form 7711-2 (Figure 3-32 through 3-33A).

3-159 ADDITIONAL PROCEDURES FOR MILITARY APPLICANTS. In addition to the procedures in paragraph 3-158 and paragraph 3-160, conduct the following procedures for military applicants.

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A. Determine if a Feasibility Study is Required. A FAA feasibility study is required when a waiver is required.

B. Conduct Feasibility Study.

1) Determine if an onsite inspection is required. An onsite inspection is required when:

a) The inspector is unfamiliar with the area of the scheduled event;

b) It has been more than 1 year since the last onsite inspection;

c) There has not been an aviation event or flyby requiring a waiver there before; and/or

d) There may be new construction or other unique environmental changes near the site.

2) If an onsite inspection is required, review the documents submitted with the request for FAA completion of DD Form 2535, section IV. The documents that must be submitted by the event organizer are:

a) Use templates of the proposed maneuvers overlay for the proposed site (the maneuvers package for the current year should be used to evaluate the site);

b) Current 7.5-minute series Topographic Quadrangle Map published by the U.S. Geological Survey (USGS) (scale 1:24,000) for the area or current aerial photographs of the required airspace for the event, as necessary, to conduct the feasibility study.

3) The inspector will determine the following for an aerial demonstration:

a) If the operating area is large enough to contain the aerobatic maneuvers;

b) Whether proposed egress and ingress routes adversely impact safety; and

c) Whether a waiver of § 91.119(b) and (c) is necessary.

4) The inspector will determine for a military flyby:

a) If the operating area is appropriate to conduct a flyby at 1,000 feet above the highest obstacle, and 2,000 feet laterally of an obstruction;

b) If it can be conducted in accordance with part 91 without a waiver.

c) Whether proposed egress and ingress routes adversely impact safety.

C. Complete Applicable Section of DD Form 2535. Fill in the appropriate FAA blocks on the form, with special emphasis on Block 17;

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1) For an aerial demonstration, select one of these three classifications:

a) Satisfactory classification. A waiver can be issued following compliance with standard requirements of this chapter.

b) Conditional-satisfactory classification (most common). The remarks section specifies specific conditions that must be met, such as closing roads, evacuating buildings, compliance with a crowd control plan, and minimum altitudes on ingress and egress routes.

c) Unsatisfactory classification. The requested activity cannot be performed safely at the proposed site, and a waiver will not be issued.

2) For a military flyby, select one of these three classifications:

a) Satisfactory. The flight can be conducted without a waiver.

b) Conditional-satisfactory classification. The remarks section specifies certain conditions that must be met and a waiver is required:

- A briefing between the PIC and ASI must be conducted before the flyby;
- Compliance with all non waived section of part 91 is required; and
- An authorization and agreement of the conditions from the commanding officer must be submitted to the ASI.

c) Unsatisfactory classification. Requested activity cannot be performed safely at the proposed site, and a waiver will not be issued.

3) The ASI must ensure the information in the remarks section of DD Form 2535 is coordinated with the commanding officer authorizing the aerial demonstration or military flyby if a waiver is required.

4) Sign the form.

5) Retain a copy of DD Form 2535 for the office file. Return the original to the show sponsor.

D. Preseason Evaluation Meeting. Attend the preseason evaluation meeting for those events at which the USAF Thunderbirds or the USN Blue Angels participate. At this meeting, the inspector should discuss the following:

- Proposed special provisions of the certificate of waiver or authorization;
- DD Form 2535;
- Onsite evaluation;
- Conditional-satisfactory requirements;
- Safety concerns unique to the site;
- Past events, if appropriate;
- Review of request for a waiver to § 91.119(b) or (c) and submitted supporting documents; and

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- Proposed egress and ingress routes and requests for flight along those routes below 500 feet AGL that will require FAA approval.

3-160 GENERAL PROCEDURES CONTINUED.

A. Evaluate FAA Form 7711-2. Using the information provided by the applicant and the background in section 1, review FAA Form 7711-2 for all pertinent information and supporting documents for the proposed aviation event. Accept strikeovers that are minor in nature and initialed by the applicant. Blocks 11 through 16 apply to airshow waiver requests only.

1) Blocks 1 and 2—Name of Organization and Responsible Person. Ensure that the applicant has indicated the name of the organization in Block 1. Annotate "N/A" in Block 1 if an individual is applying. Annotate the name of the responsible person or the individual applying in Block 2.

2) Block 3—Permanent Mailing Address. Ensure that the applicant indicates the permanent mailing address of the organization named in Block 1 or the individual named in Block 2.

3) Block 4—Enter "N/A" since this pertains to banner towing only.

4) Block 5—Enter "N/A" since this pertains to banner towing only.

5) Block 6—Section and Number To Be Waived. Ensure that the applicant has listed all sections of the regulations to be waived.

6) Block 7—Description of Proposed Operation. Determine if the applicant has correctly indicated the type of aviation event.

7) Block 8—Area of Operation. Ensure that the applicant has listed the specific locations and the lateral and vertical limits of the aerial demonstrations.

8) Block 9—Beginning Date and Hour and Ending Date and Hour. Check for a beginning date and time, and an ending date and time for the aviation event.

9) Block 10—Aircraft and Pilots. Check for aircraft make and model, pilot names, certificate numbers and ratings, and full home addresses. A notation stating the show line CAT must be annotated with each make and model of aircraft. Ensure that parachutist names, license class, and addresses are included. Block 8 may be accepted with a statement, "A list containing aircraft and pilot information (and/or parachutist information) will be furnished on [applicant enters a specific date and time]."

10) Blocks 11 and 12—Event Organizer. Ensure that the applicant has indicated the event organizer (organization or individual) of the aviation event and the event organizer's address.

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11) Block 13—Policing. Ensure that the applicant has described provisions for policing the event. Specify if a written formal plan has been provided to IIC. Block 11 may be accepted with a statement "A crowd control plan will be furnished on [applicant enters a specific date and time]" or "crowd control plan N/R" (if approved by IIC).

12) Block 14—Emergency Facilities. Ensure that the applicant marked all blocks that will be available at the time and place of the event.

13) Block 15—ATC. Ensure that the applicant has described the method of controlling AT, including the arrival and departure of aircraft, requested TFR in accordance with § 91.145, as applicable, and has coordinated with the appropriate FAA ATC. Add a notation stating if TFR requested from ATC.

14) Block 16—Schedule of Events. Ensure that the applicant has listed all events and dates and times. Block 16 may be accepted with a statement "A final schedule of event will be furnished on [applicant enters a specific date and time]."

15) Block 17—Certification. Ensure that the applicant has signed and dated the application.

B. Determine if Application Is Complete.

1) Application Incomplete or Inaccurate. If the application is incomplete or inaccurate, complete the "FAA Action" block on FAA Form 7711-2 by marking "Disapproved." Write the reason for disapproval in the "Remarks" section. Return the application to the applicant.

2) Application Complete. If all pertinent information and supporting documents have been submitted with the application and the application is complete and correct, evaluate the proposed operation.

C. Evaluate Proposed Operation. Use the application information and the items listed below to determine if the proposed operation can be accomplished without an adverse effect on safety:

1) Review, if applicable, previous certificates of waiver or authorization issued for aviation events at the same location.

2) Coordinate the use of controlled airspace with the appropriate AT facility as soon as possible. Include any limitations or special conditions considered necessary by the ATS as part of the certificate of waiver or authorization.

3) Using the list of participating aircraft, verify that the airworthiness unit completed the required documents.

4) Using the list of participating aircraft and Table 3-1A, determine the required show line distance.

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5) Accompanied by the applicant, conduct an onsite visit to sites used for the first time and to sites unfamiliar to the inspector.

a) Clarify or confirm information submitted with the application.

b) Verify the distances and the location of the show and reference lines.

6) Verify that NOTAM has been issued and is appropriate.

a) A copy of the published NOTAM should be attached to the waiver.

b) Brief the NOTAM at each pre-show briefing for all participants.

D. Review Waiver Requests for § 91.119. Determine if a waiver of § 91.119 is appropriate.

1) Waive § 91.119(b) and (c) only if the pilot will still be in compliance with § 91.119(a).

2) Waive § 91.119(b) and (c) only for non-aerobatic flight, while temporarily exiting or returning to the operating area. Use the standards discussed in section 1.

3) Waive § 91.119(c) only if unoccupied structures are involved, or to allow participating personnel, vehicles, or vessels to be positioned closer than 500 feet from the performing aircraft.

4) Waive § 91.119(b) and (c) for flight over structures, roads, vehicles, or vessels under the following conditions for the USAF Thunderbirds, USN Blue Angels, and Canadian Defense Forces Snowbirds:

a) When the show line is generally aligned with a runway at an active airport;

b) When ingress and egress transition of the operating area coincides with established approach or departure paths used for the designated runway;

c) When aerobatic flight will not be conducted over any nonparticipating persons; and

d) When non-aerobatic flight over nonparticipating persons is not closer than 500 feet but may be as low as 200 feet above unoccupied obstacles less than 500 feet laterally from ingress/egress route while flying within 3 NM from the show center.

5) Consult with the regional airshow coordinator as necessary.

E. Approve or Disapprove Waiver.

1) Waiver Disapproval. If the entire operation cannot be approved, complete the "FAA Action" block on FAA Form 7711-2 and state the reasons for disapproval in the "Remarks" section of the form. Return the application form to the applicant.

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2) Waiver Approval. If the entire operation can be approved, complete the "FAA Action" block on FAA Form 7711-2 and develop the special provisions.

F. Develop Special Provisions List. Develop the list of special provisions appropriate to the aviation event using the information submitted with the application and the suggested special provisions on the airshow internet site (http://www.faa.gov/about/initiatives/airshow).

G. Issue Certificate of Waiver or Authorization.

1) Complete FAA Form 7711-1, (Figure 3-34) as follows:

a) In the "Title" block, use "X's" to mark out the inappropriate word.

b) Enter the waiver holder's and responsible person's names and addresses as they appear in Blocks 1 and 2 on the application.

c) Include a brief summary of the aviation event in the "Operations Authorized" block. For aviation events involving aerobatic flight, clearly define the dimensions of the affected airspace. In the case of parachute demonstration jumps, use the following statement, "Parachute demonstrations are authorized in accordance with § 105.21."

d) Except for parachute demonstrations, include in the "List of Waived Regulations" and "Title" blocks each specific regulation waived by the FAA. Ensure that the listed regulations correspond to those on FAA Form 7711-2 and conform to § 91.905. When many regulations are involved, list the specific rules on a separate sheet of paper and attach it to the certificate. Use the following statement, "A list of waived regulations is attached."

e) Place the total number of special provisions in the appropriate spaces in the "Special Provisions" block.

1. Type and sequentially number the special provisions on the reverse side of FAA Form 7711-1 or on separate pages.

2. Use only the special provisions, which apply to the operations in the waiver or authorization application.

3. Group the provisions by type of event, such as airshow provisions or parachute demonstration jump provisions.

f) Attach any additional pages to the certificate of waiver or authorization.

g) When an aviation event is scheduled for multiple days, uses a separate sheet to list the dates and times the certificate is in effect, if needed. Use the following statement: "See attached page [insert appropriate page number] for dates and times."

h) Have the jurisdictional FSDO manager or their designated representative, which may be either the assistant manager or another supervisor from within that jurisdictional FSDO sign FAA Form 7711-1.

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2) Attach to FAA Form 7711-1 a copy of FAA Form 7711-2 and its supporting documents.

3) Distribute FAA Forms 7711-1 and 7711-2 as follows:

a) Place a copy of both forms in the FSDO file;

b) Send a copy of FAA Form 7711-1 to all affected AT facilities; and

c) Return the original of both forms to the applicant.

H. PTRS. Make the appropriate PTRS entry.

3-161 TASK COMPLETION. Completion of this task results in one of the following:

- Issuance of a certificate of waiver,
- Issuance of a COA, or
- Denial of an application for a certificate of waiver or authorization.

3-162 FUTURE ACTIVITIES.

- Surveillance of an aviation event.
- Possible cancellation of the waiver or authorization as a result of noncompliance with its provisions.
- Consideration of a future application for waiver or authorization from the same or other applicants.

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Figure 3-24. Example of an Airshow Layout

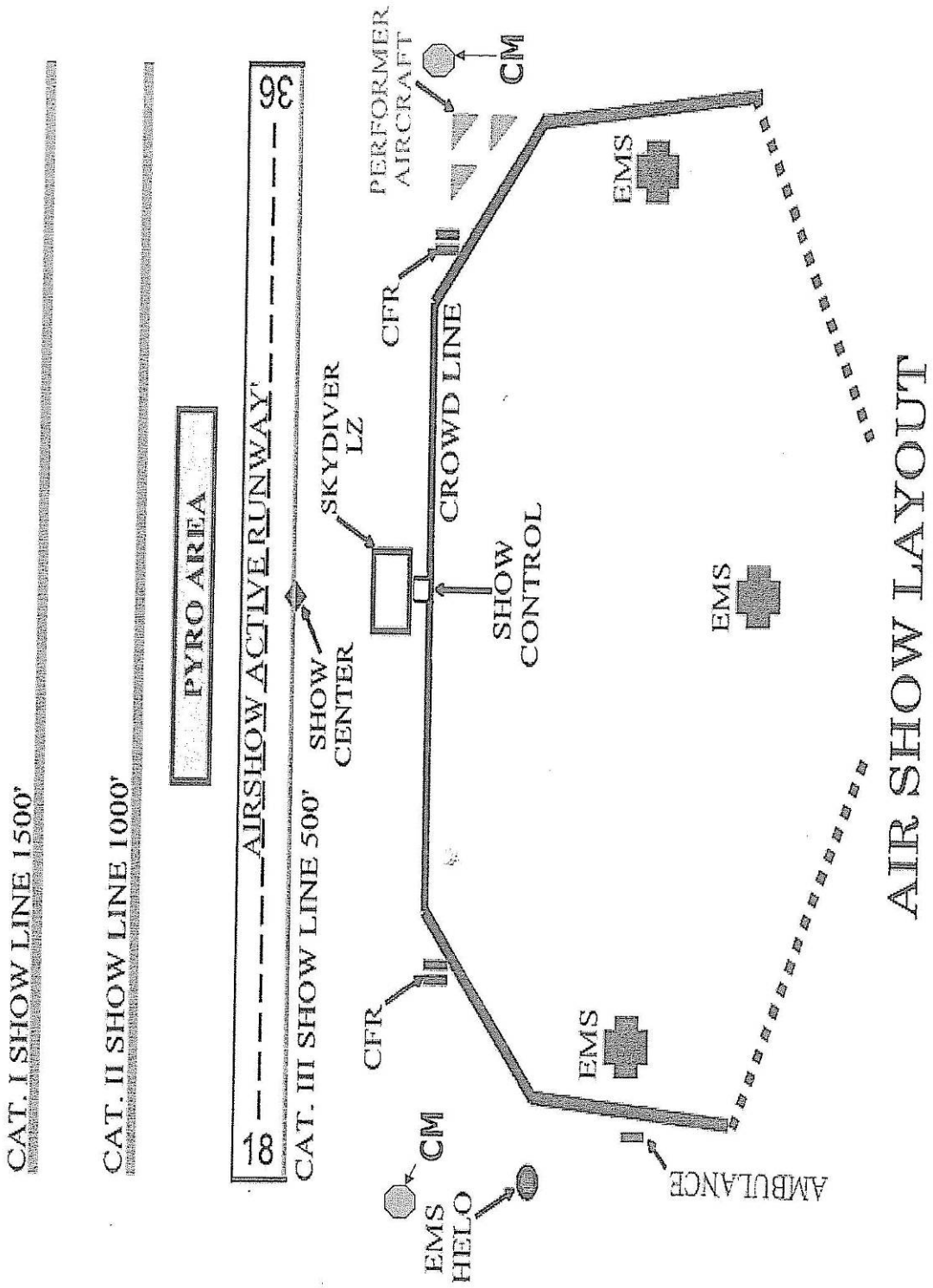

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Figure 3-25. Minimum Separation Distance (200 Feet) Between Runway or Takeoff Area and the Primary Spectator Area

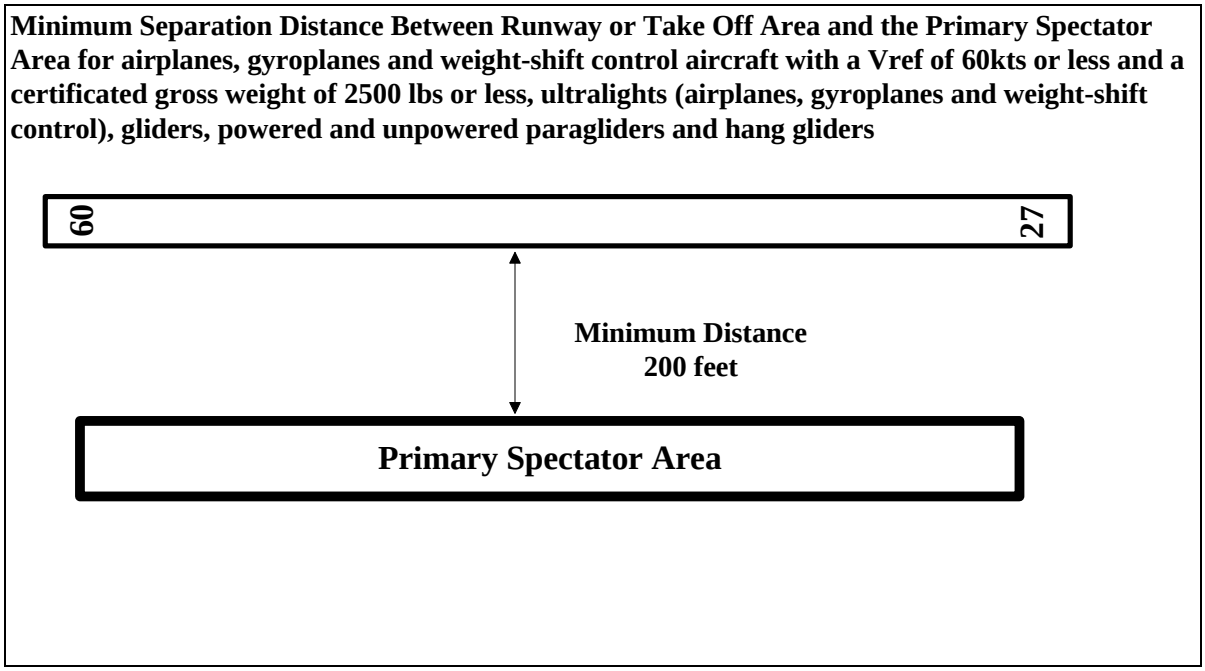

Figure 3-25A. Minimum Separation Distance (300 Feet) Between Runway or Takeoff Area and the Primary Spectator Area

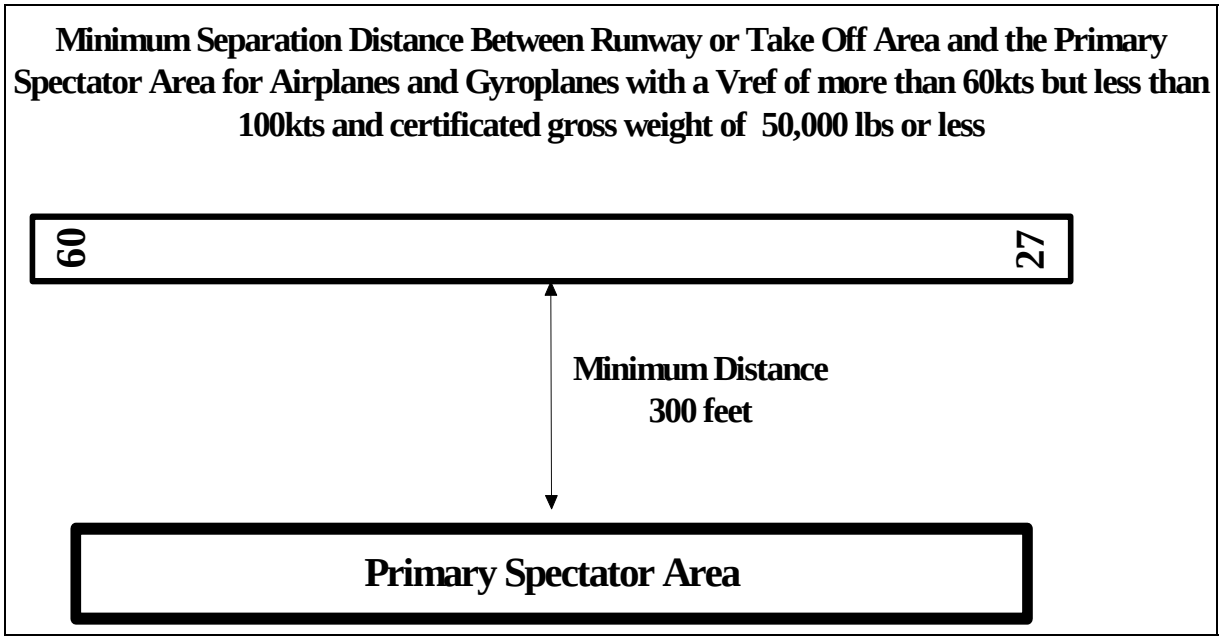

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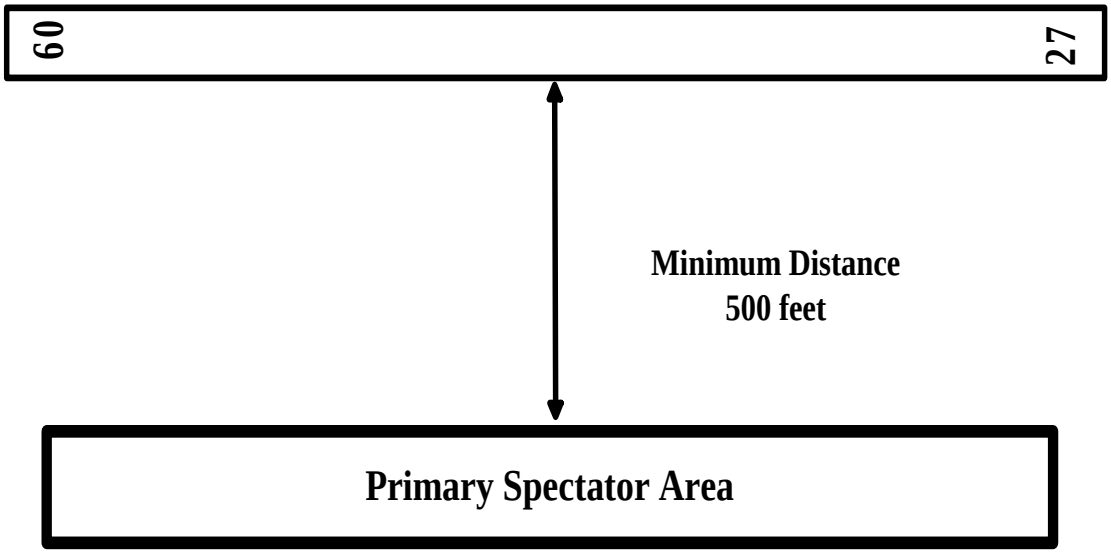
Figure 3-25B. Minimum Separation Distance (500 Feet) Between Runway or Takeoff Area and the Primary Spectator Area

Minimum Separation Distance Between Runway or Take Off Area and the Primary Spectator Area for Airplanes with Vref in excess of 100kts, Airplanes and Gyroplanes with a certificated gross weight in excess of 50,000 lbs and Airplanes and Helicopters conducting excessive, non-aerobatic maneuvering on takeoff or landing (comedy acts)



As per par. 3-147H(1), the minimum distances illustrated in this diagram for:
a) single aircraft operations conducted on the centerline are to be measured to the runway centerline; and
b) formation takeoff/landing operations, are to be measured to the runway edge.

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Figure 3-26. Minimum Distance from Spectators for Category I

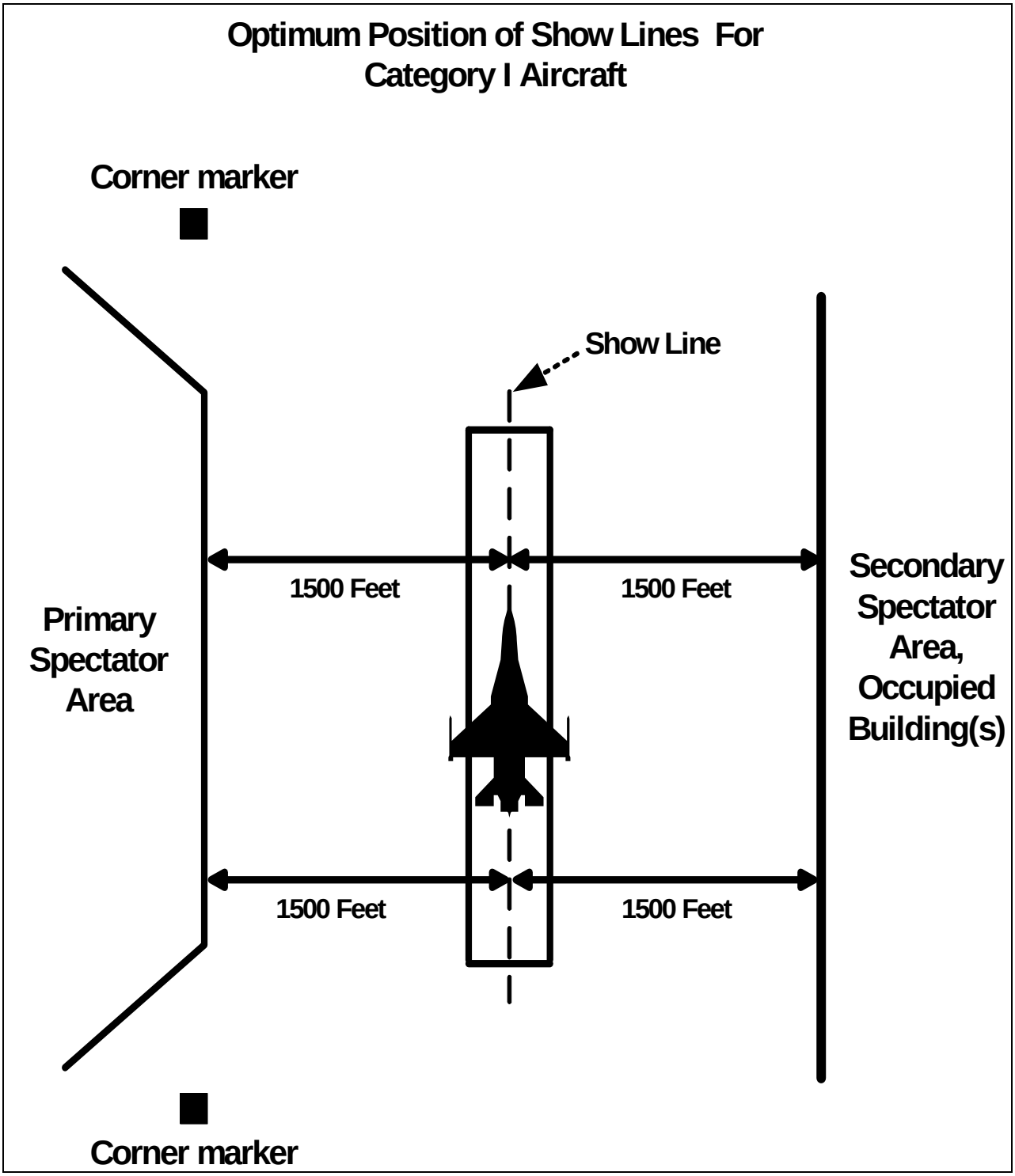

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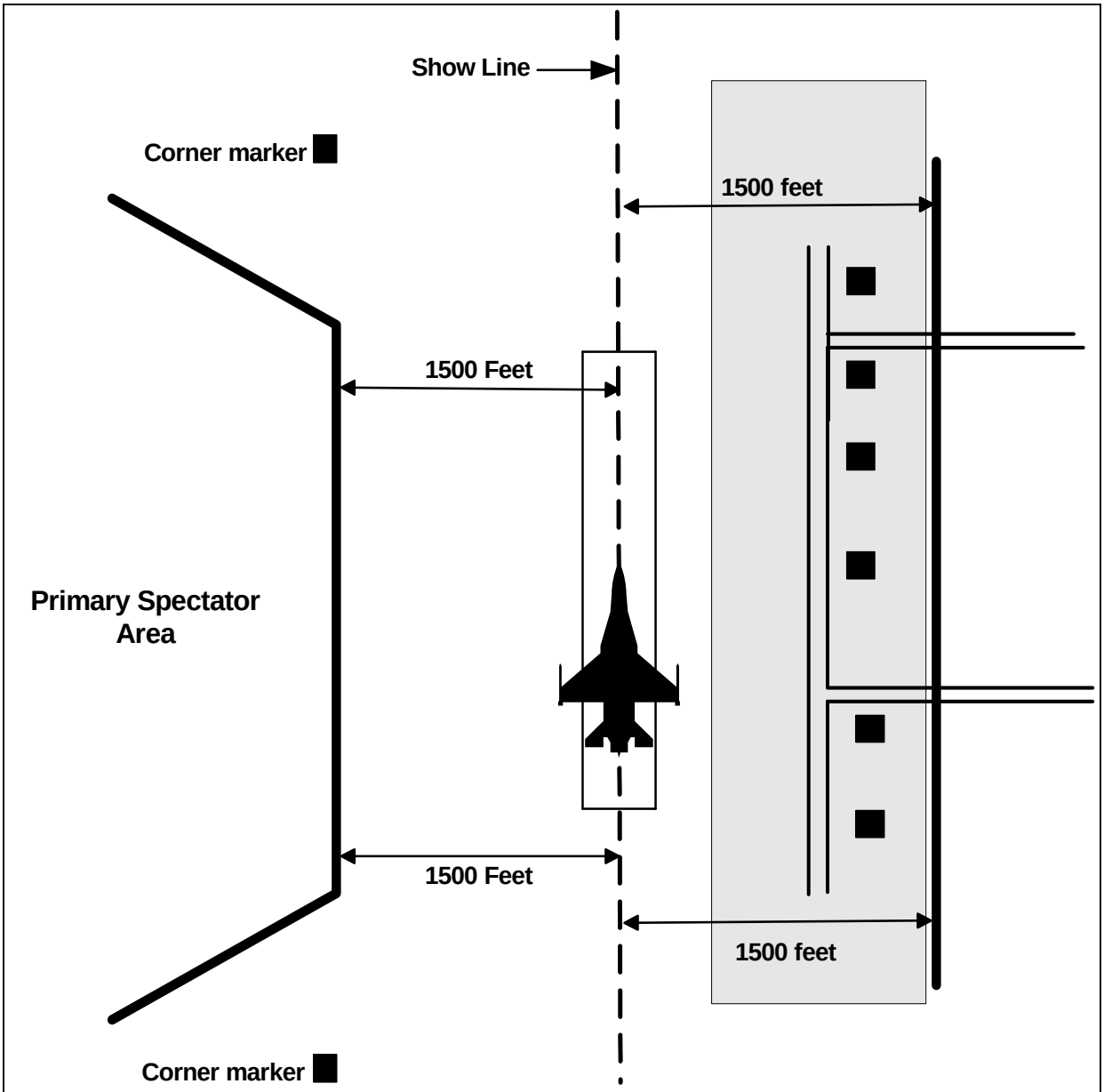
Figure 3-26A. Site Layout with Flying Display Area Less Than 1500 Feet from Show Line



Note: In the example depicted above, the buildings and the roads lie within the flying display area less than 1500 feet from the show line. For this site layout to be approved, all buildings must be vacated and road access denied to highlighted area.

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Figure 3-26B. Example of Category I Aircraft Formation on Show Line

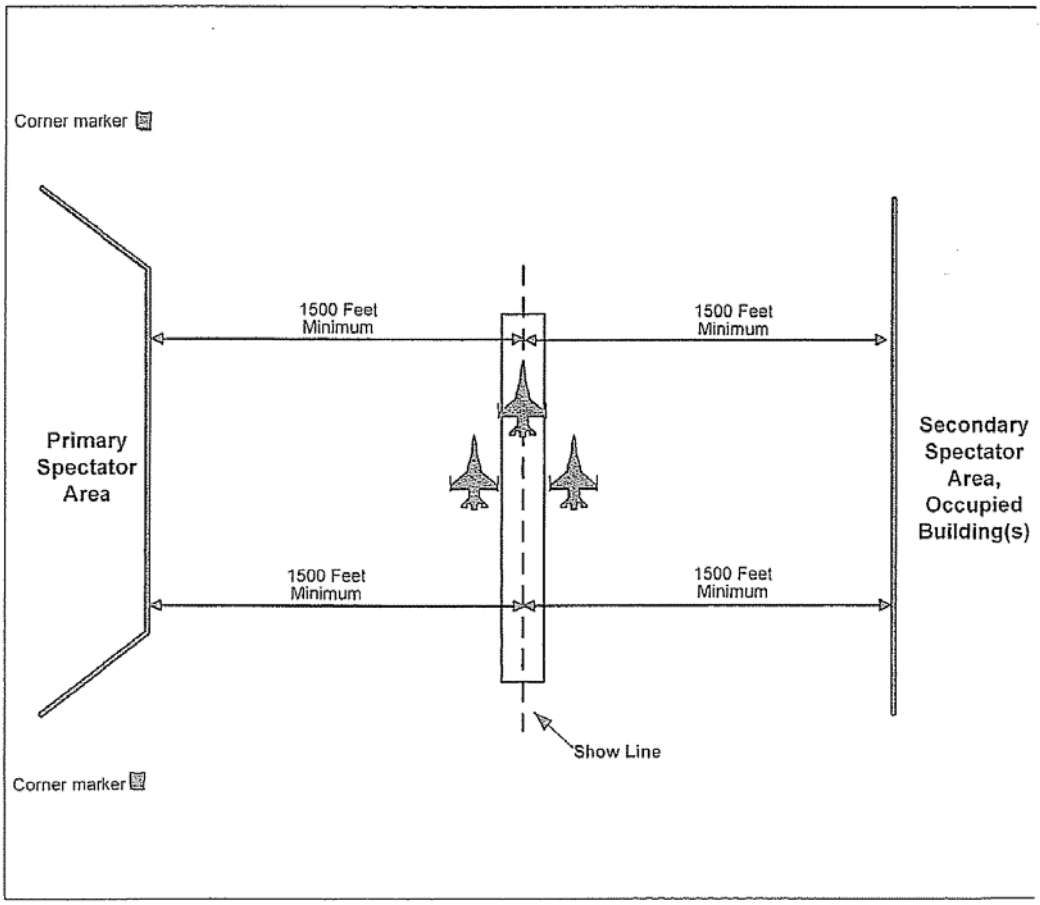

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Figure 3-26C. Minimum Distance from Spectators for Category II Aircraft

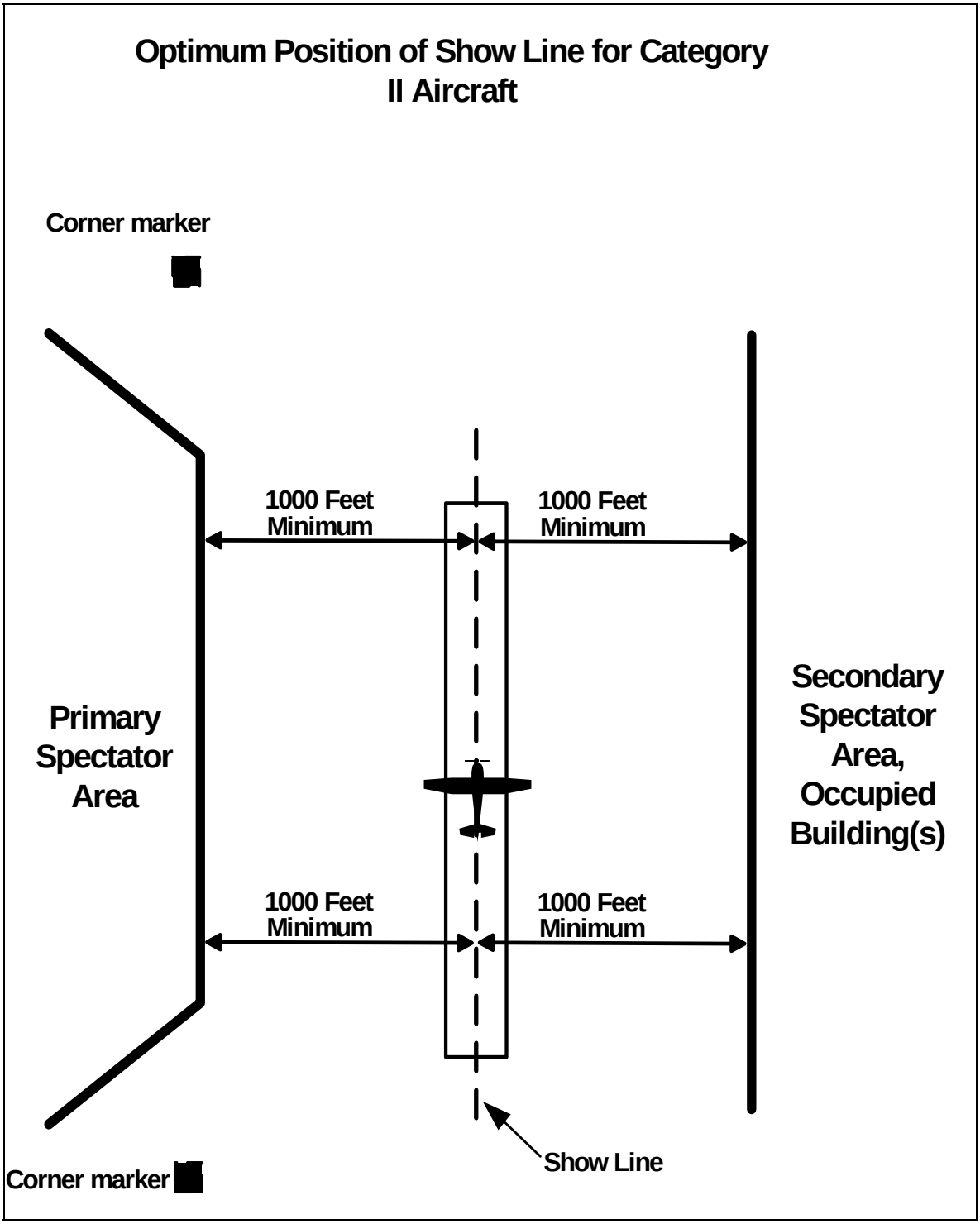

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Figure 3-26D. Example of Category II Aircraft Formation on Show Line

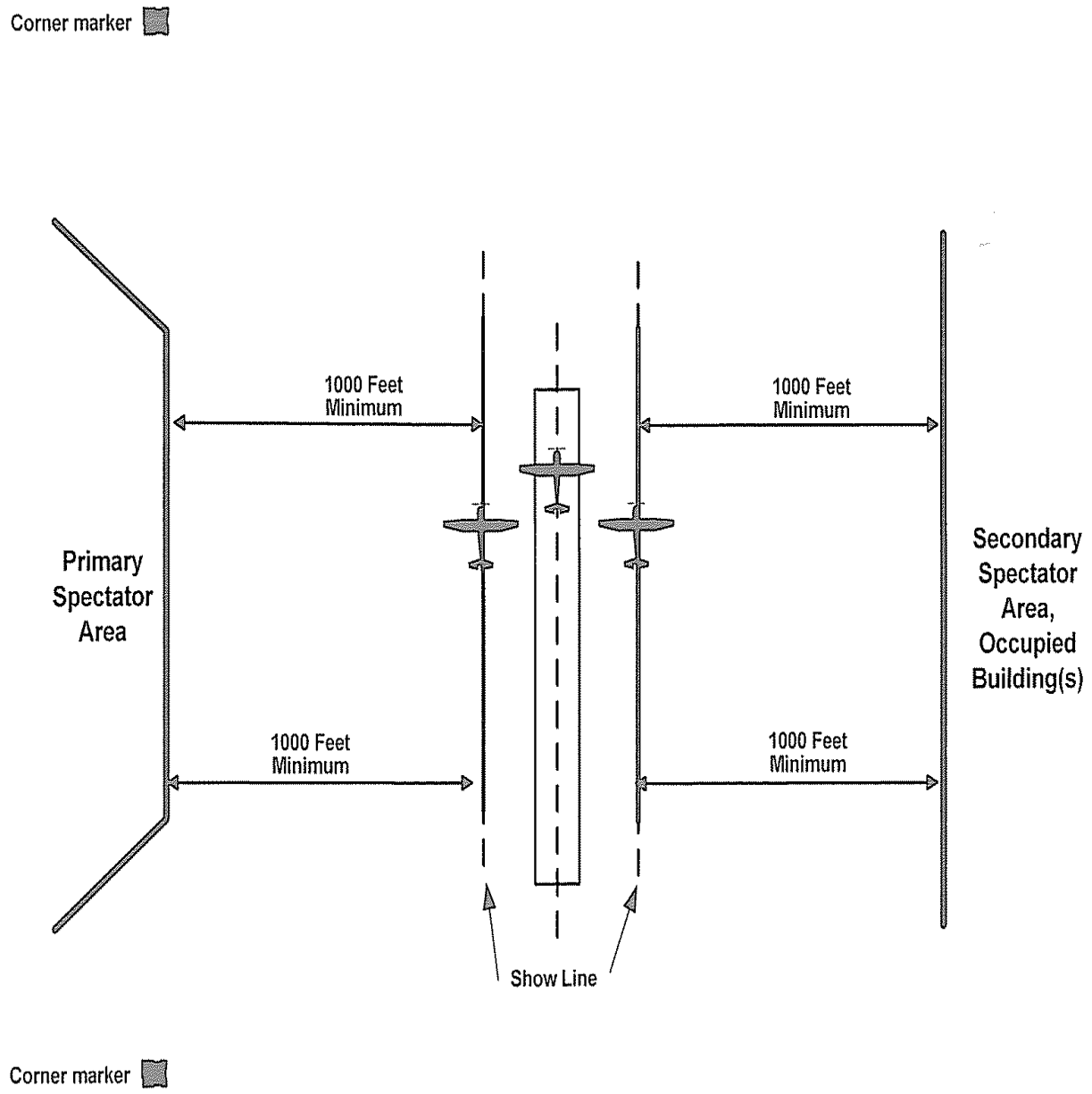

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Figure 3-27. Single Category III Aircraft in Minimum Width Flying Display Area

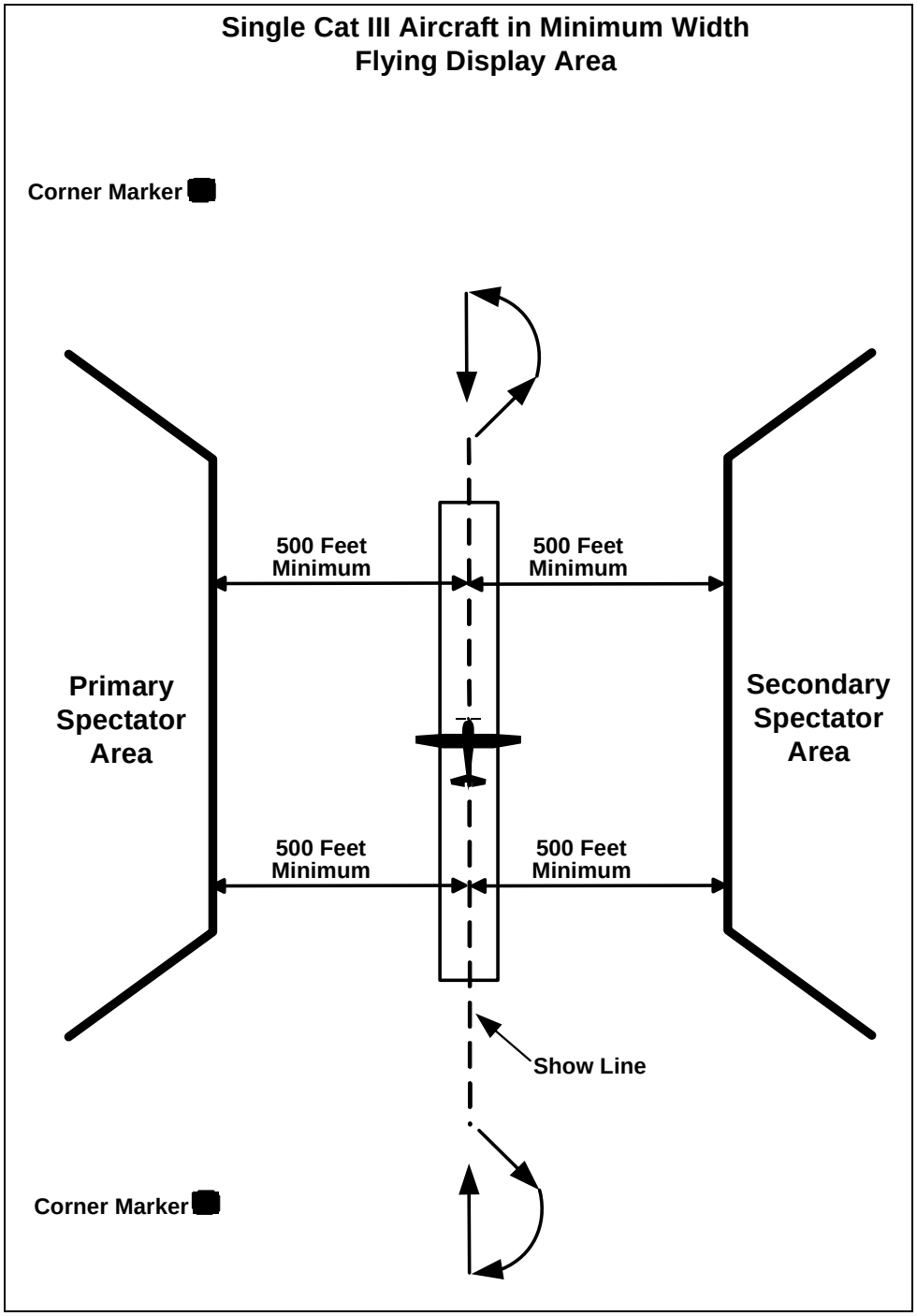

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Figure 3-27A. Minimum Width of a Flying Display Area for Category III Aircraft Performing Lateral and/or Turning Maneuvers

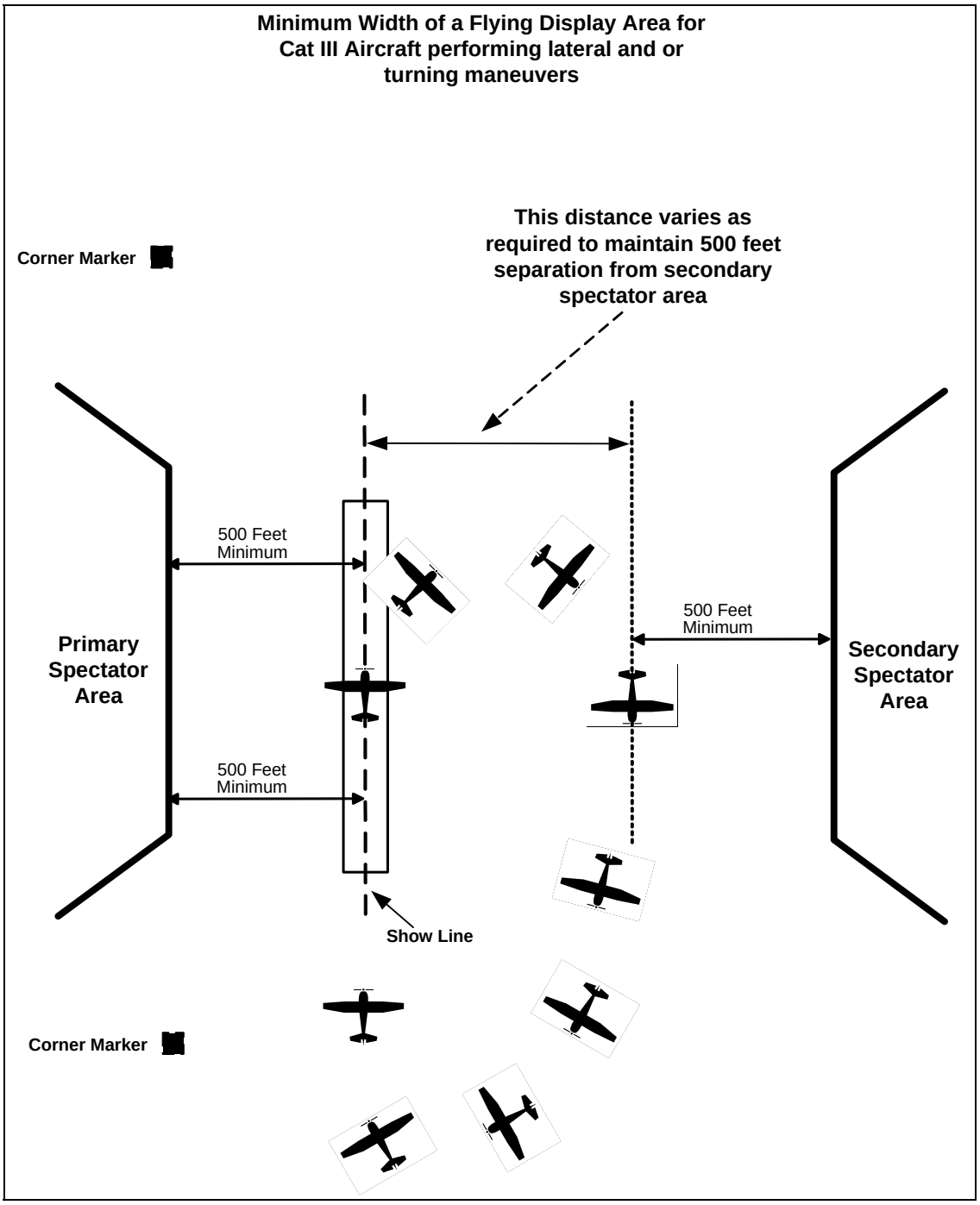

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Figure 3-27B. Minimum Width of a Flying Display Area for Category III Aircraft in Formation Flight

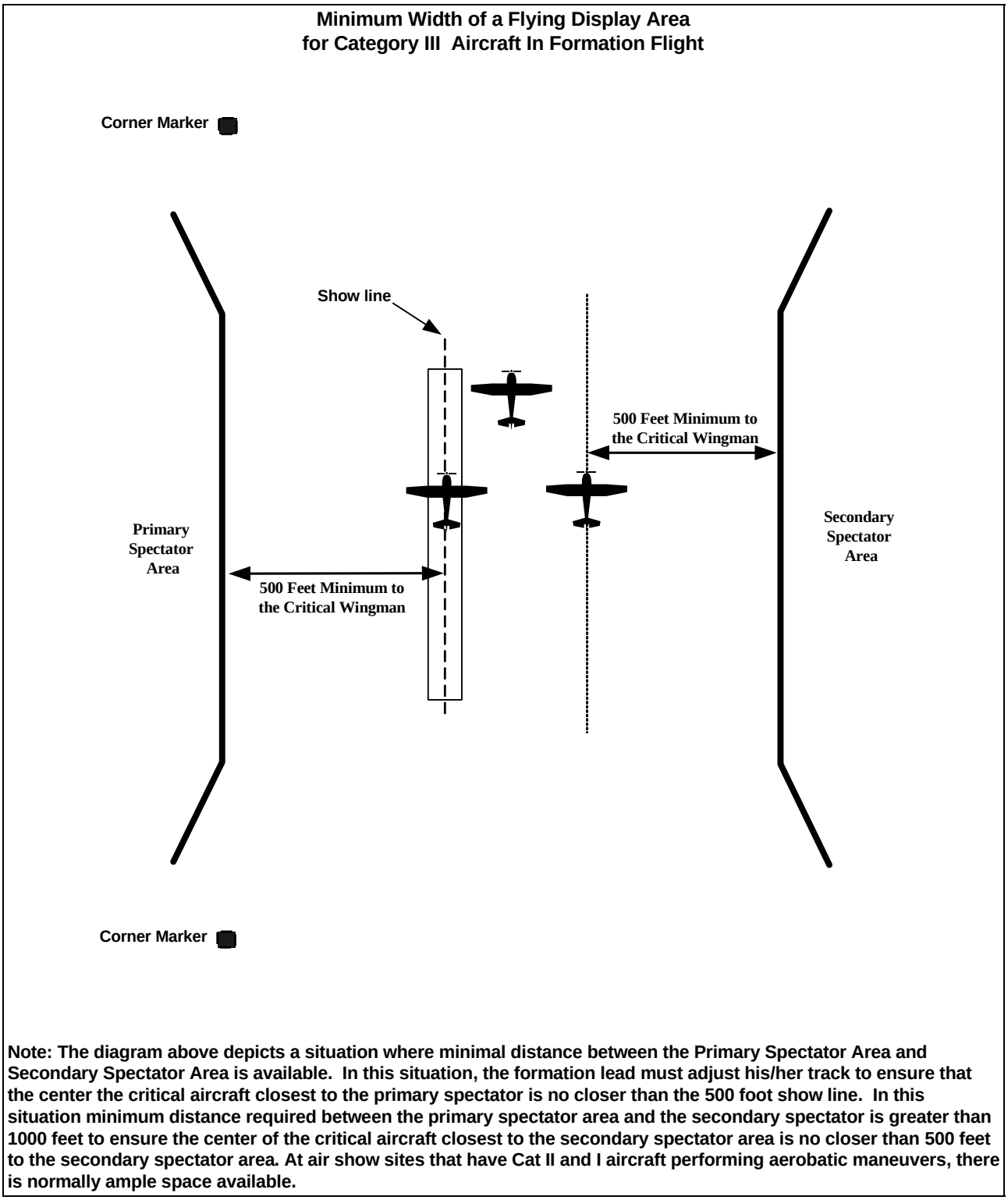

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Figure 3-27C. Example of the Minimum Width of a Flying Display Area for Multiple Category II Aircraft Performing Lateral and/or Turning Maneuvers

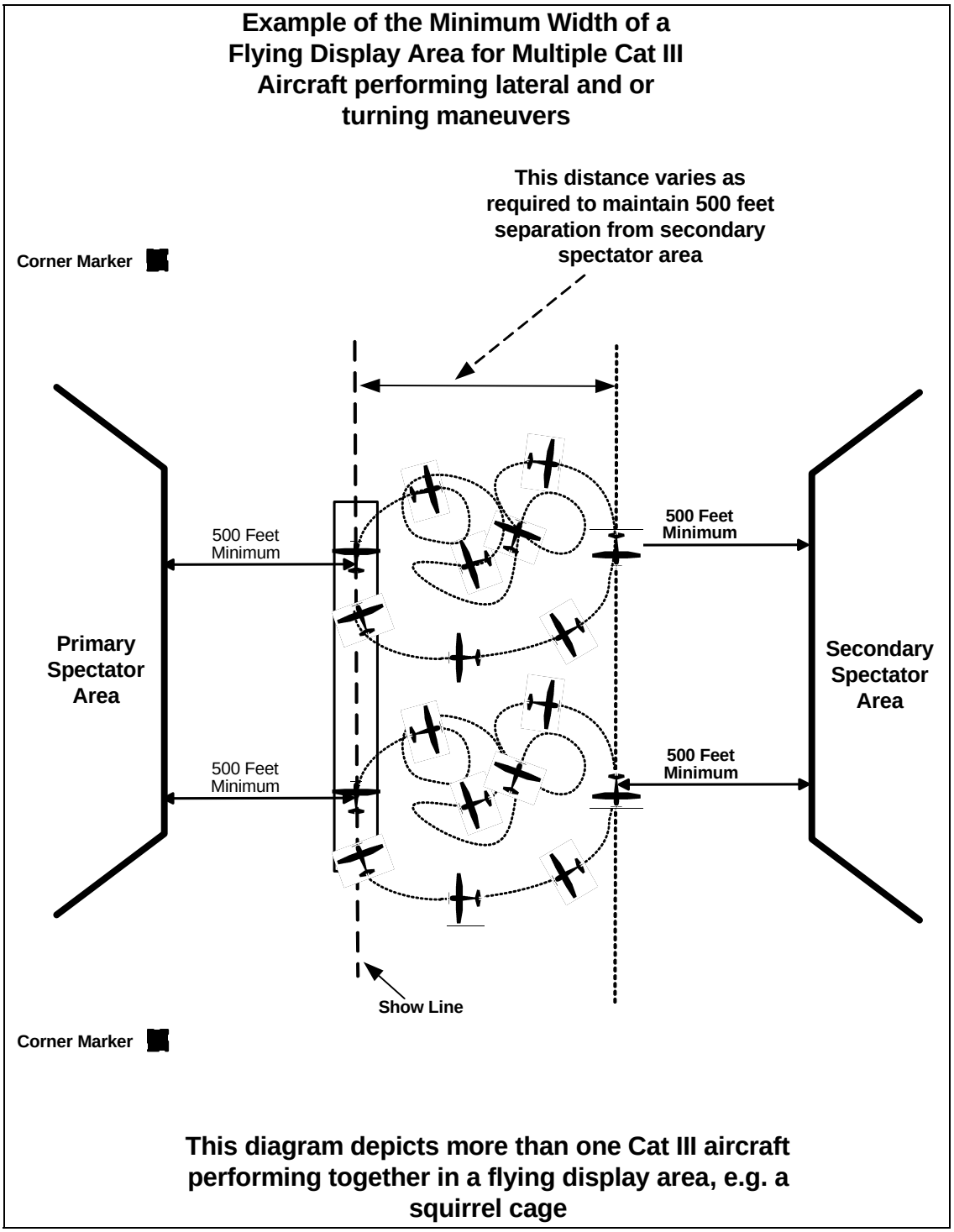

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Figure 3-28. Aerobatic Maneuvers Performed After Aircraft Beyond Spectator Area

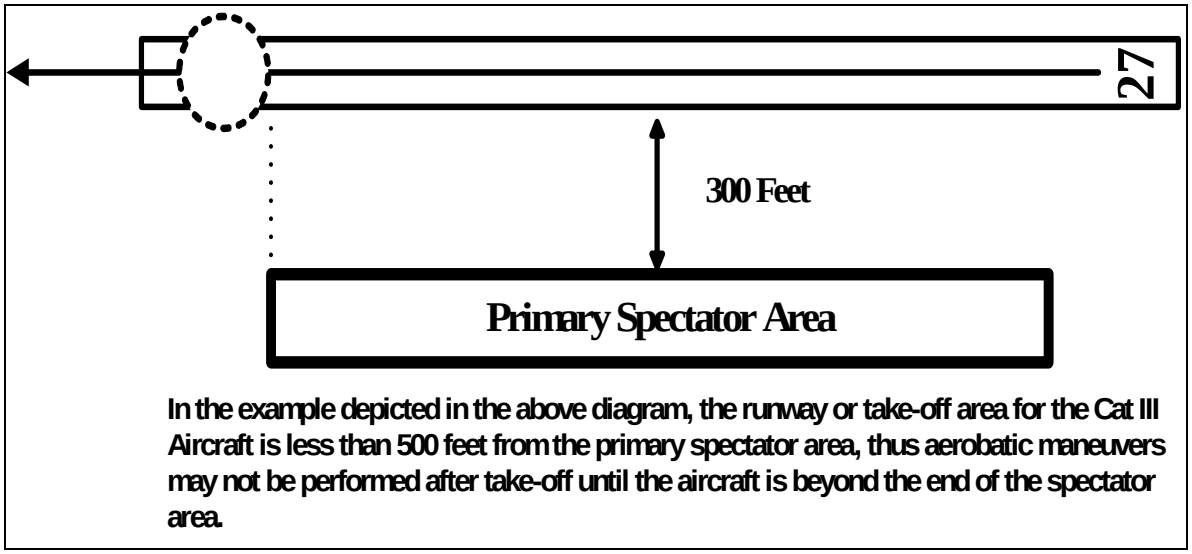

Figure 3-28A. Aerobatic Maneuvers Performed After Turn Away Performed

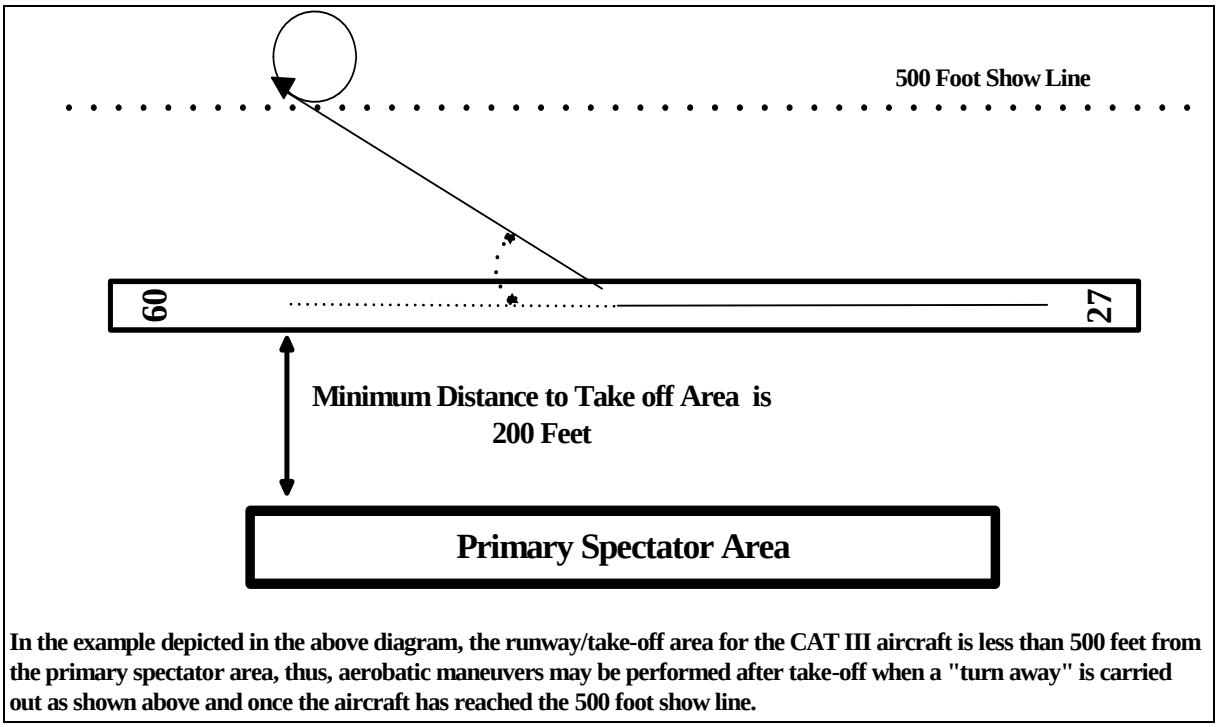

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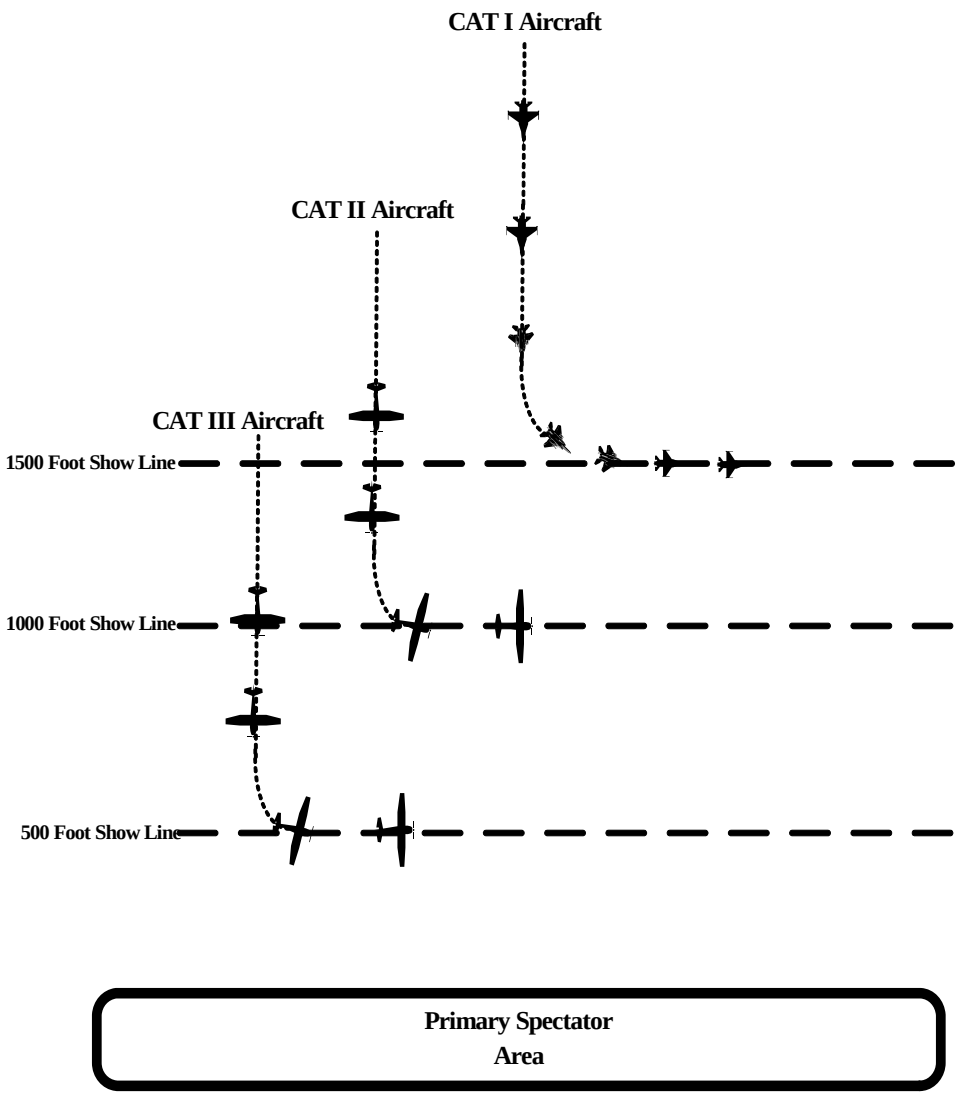
Figure 3-28B. Nonaerobatic Maneuvers by a Single Aircraft with an Energy Vector Directed Towards the Primary Spectator Area

Non-aerobatic maneuvers by a single aircraft with an energy vector directed towards the primary spectator area



In the above diagram, as an example, in order to have all energy directed away from the primary spectator area, a CAT I aircraft flying at 350kts. and using a 75 degree bank would have to initiate the turn a minimum of 2915 feet prior to the 1500 foot show line

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Figure 3-29. Typical Arc-in Review or Banana Pass

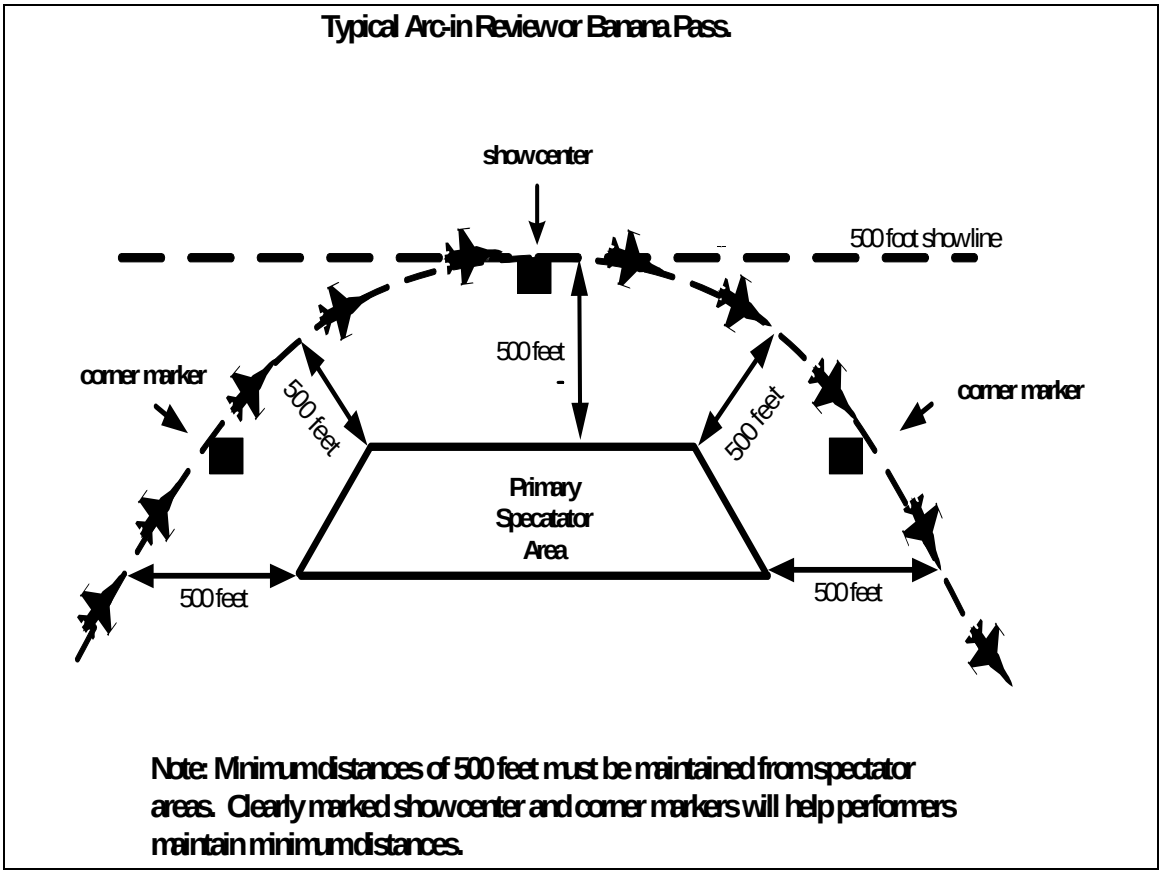

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Figure 3-30. Helicopter Takeoff and Landing Areas

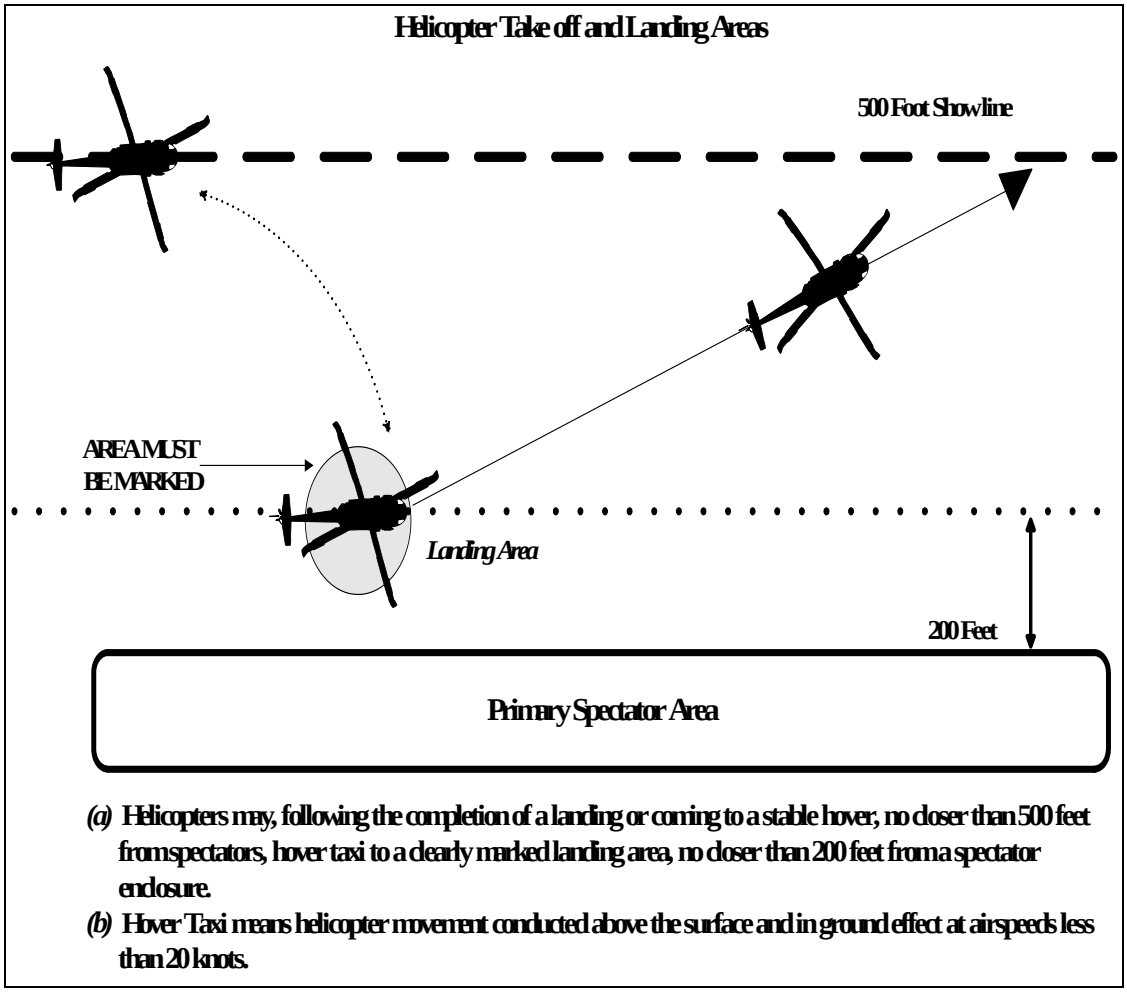

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Figure 3-30A. Maneuvers Toward the Primary Spectator Area-360 Degree Turns Using Bank Angles of Less Than 90 Degrees

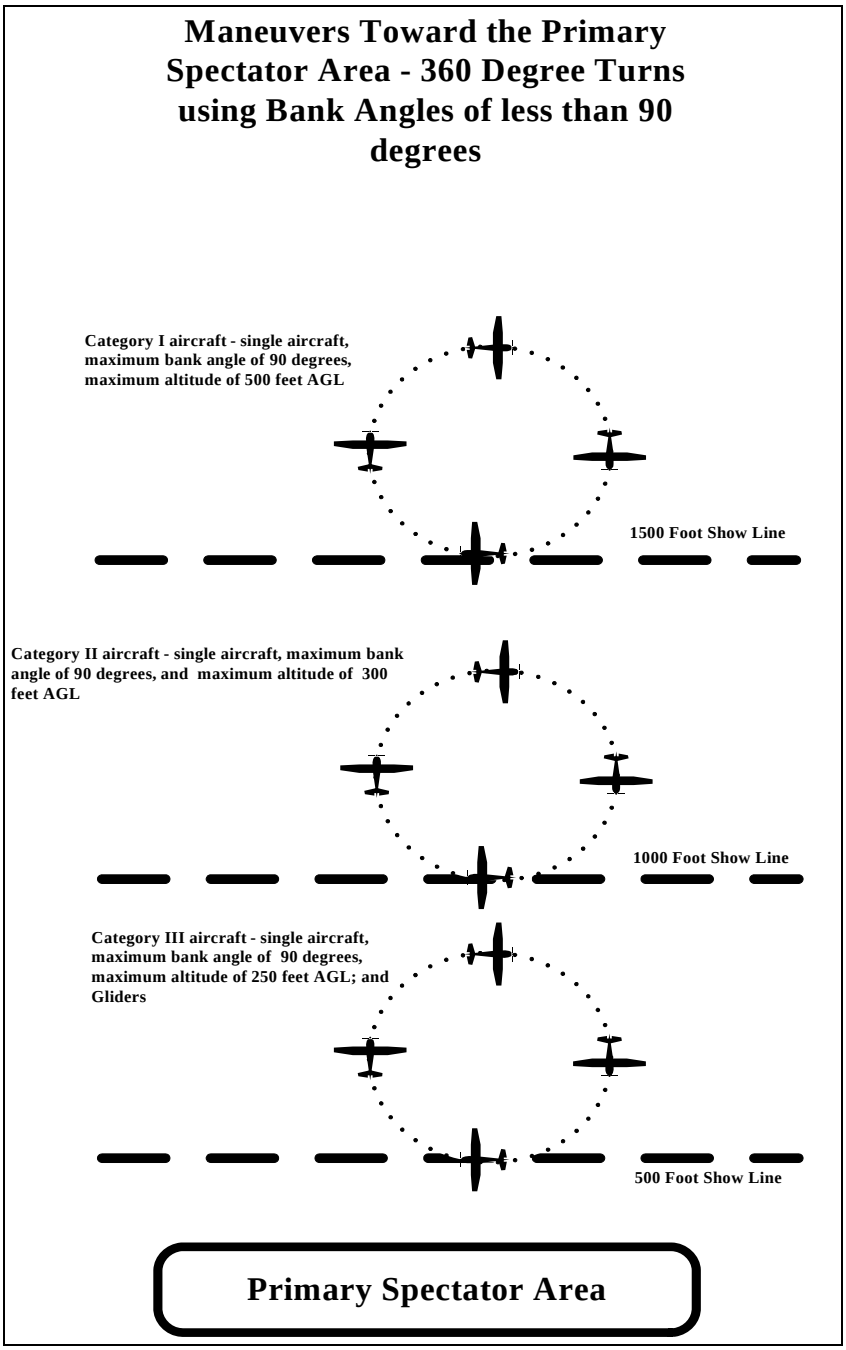

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Figure 3-31. Aircraft Approach and Exit to and from a Flying Display Area Bordered by Congested Areas

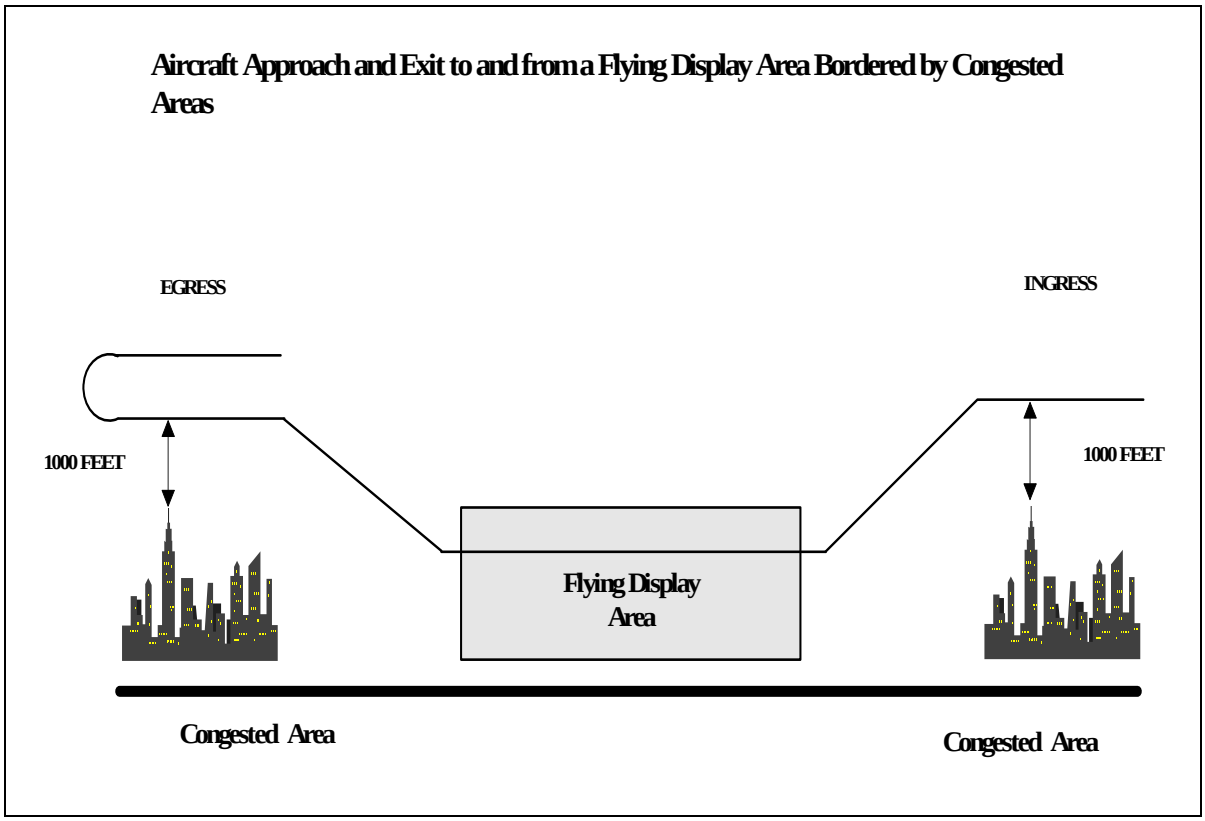

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Figure 3-32. Sample FAA Form 7711-2, Certificate of Waiver Application

No certificate may be issued unless a completed application form has been received (14 C.F.R. 91. 101. and 105).

US Department of Transportation
Federal Aviation Administration

APPLICATION FOR CERTIFICATE OF WAIVER OR AUTHORIZATION

From Approved: O.M.B. No.2120-0027 08/31/2008

APPLICANTS - DO NOT USE THESE SPACES

Region	Date
AWP	03/14/2008

Action
☐ Approved ☐ Disapproved – *"Explain under "Remarks"*

Signature of authorized FAA representative

INSTRUCTIONS

Submit this application in triplicate (3) to any FAA Flight Standards district office.

Applicants requesting a Certificate of Waiver or Authorization for an aviation event must complete all the applicable items on this form and attach a properly marked 7.5 series Topographic Quadrangle Map(s), published by the U.S. Geological Survey (scale 1:24,000), of the proposed operating area. The map(s) must include scale depictions of the flightlines, showlines, race courses, and the location of the air event control point, Police dispatch, ambulance, and fire fighting equipment. The applicant may also wish to submit photographs and scale diagrams as supplemental material to assist in the FAA's evaluation of a particular site. Application for a Certificate of Waiver or Authorization must be submitted 45 days prior to the requested date of the event.

Applicants requesting a Certificate of Waiver or Authorization for activities other than an aviation event will complete items 1 through 10 only and the certification, item 17, on the reverse.

1. Name of organization	2. Name of responsible person
Hayward Air Fair	Peter B. Pilot

3. Permanent mailing address	House number and street or route number	City	State and ZIP code	Telephone No.
	100 Hesperian Blvd	Hayward	CA 94545	510-555-1212

4. State whether the applicant or any of its principal officers/owners has an application for waiver pending at any other office of the FAA.
N/A

5. State whether the applicant or any of its principal officers owners has ever had its application for waiver denied, or whether the FAA has ever withdrawn a waiver from the applicant or any of its principal officers/owners.
N/A

6. FAR section and number to be waived
91.107, 91.117, 91.119(b) and (c), 91.121, 91.155 and 91.303

7. Detailed description of proposed operation *(Attach supplement if needed)*

Air Show with Category I, II and III show lines for aerobatic aircraft and parachuting demonstration (See Certificate of Authorization). Fly-bys of aircraft in all threee categories.

8. Area of operation *(Location, altitudes, etc.)*
Hayward Airport from surface to 8,000 ft. MSL within 5 Nm.

9a. Beginning *(Date and hour)*		b. Ending *(Date and hour)*	
06/27/2008	13:00:00	06/27/2008	17:30:00

10. Aircraft make and model (a)	Pilot's Name (b)	Certificate number and rating (c)	Home address (Street, City, State) (d)
Pitts S2A	Harry Actor	1234567 ATP	123 Main Street, Hayward, CA 94545
PT-17	Gene Smith	123654 CPL	10 10th Avenue, Deca City, TN 10101
SK-61	Chuck Aileron	777777 CPL	1 Last Street, Nowhere, CA 45459
BL-66	John Jay	111 ATP	25 House St., Freemont, CA 94544
(Additional information to be submitted when available)			

FAA Form 7711 -2 (9-08) Supersedes Previous Edition

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Check with FSIMS to verify current version before using

Figure 3-32A. Sample FAA Form 7711-2, Certificate of Waiver Application (Back)

▶ *ITEMS 11 THROUGH 16 TO BE FILLED OUT FOR AIR SHOW/AIR RACE WAIVER REQUESTS ONLY.*

11. The air event will be sponsored by:

Hayward Air Fair

12. Permanent mailing address	House number and street or route number	City	State and ZIP code	Telephone No.
	100 Hesperian Blvd	Hayward	CA 94545	510-555-1212

13. Policing *(Describe provisions to be made for policing the event.)*

Hayward Police Dept., Civil Air Patrol and Girl Scouts

14. Emergency facilities *(Mark all that will be available at time and place of air event.)*

☐ Physician ☒ Fire truck ☒ Other - Specify Medical Evacuation Helicopter

☒ Ambulance ☒ Crash wagon

15. Air Traffic control *(Describe method of controlling traffic, including provision for arrival and departure of scheduled aircraft.)*

Hayward Air Traffic Control Tower and Air Boss. No scheduled air carrier flights at this airport

16. Schedule of Events *(include arrival and departure of scheduled aircraft and other periods the airport maybe open.)*

Hour (a)	Date (b)	Event (c)
1300	06/27/2008	Opening ceremonies with three airplanes circling six jumpers exiting at 7,500 feet. (See jump Authorization)
1315		Harry Actor in Pitts S2
1325		Gene Smith in Stearman with a wing walker
1340		Air National Guard F-15 fly-by with four airplanes
1345		Aerobatic helicopter
1355		Canadian Snowbirds
1430		Air Guard fly-by with C-130 and two helicopters doing an air refueling demonstration
1440		Clown act by John Jay in an Intrastate (See attachment for remainder of show.

If sufficient space is not available, the entire schedule of events may be submitted on separate sheets, in the order and manner indicated above.

Please Read > The undersigned applicant accepts full responsibility for the strict observance of the terms of the Certificate of Waiver or Authorization, and understands that the authorization contained in such certificate will be strictly limited to the above described operation.

17. Certification - I CERTIFY that the foregoing statements are true.

Date	Signature of Applicant

Remarks

FAA Form 7711-2 (8-08) Supersedes Previous Edition

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Check with FSIMS to verify current version before using

Figure 3-33. FAA Form 7711-2, Application for Parachuting Authorization

No certificate may be issued unless a completed application form has been received (14 C.F.R. 91, 101, and 105).

US Department of Transportation
Federal Aviation Administration

APPLICATION FOR CERTIFICATE OF WAIVER OR AUTHORIZATION

From Approved: O.M.B. No.2120-0027 08/31/2008

APPLICANTS - DO NOT USE THESE SPACES

Region	Date
Western Pacific	06/09/2008

Action
☒ Approved ☐ Disapproved – *"Explain under "Remarks"*

Signature of authorized FAA representative
James D. Daly, POI

INSTRUCTIONS

Submit this application in triplicate (3) to any FAA Flight Standards district office.

Applicants requesting a Certificate of Waiver or Authorization for an aviation event must complete all the applicable items on this form and attach a properly marked 7.5 series Topographic Quadrangle Map(s), published by the U.S. Geological Survey (scale 1:24,000), of the proposed operating area. The map(s) must include scale depictions of the flightlines, showlines, race courses, and the location of the air event control point, Police dispatch, ambulance, and fire fighting equipment. The applicant may also wish to submit photographs and scale diagrams as supplemental material to assist in the FAA's evaluation of a particular site. Application for a Certificate of Waiver or Authorization must be submitted 45 days prior to the requested date of the event.

Applicants requesting a Certificate of Waiver or Authorization for activities other than an aviation event will complete items 1 through 10 only and the certification, item 17, on the reverse.

1. Name of organization	2. Name of responsible person
Big Time Skydivers	Allen Gold

3. Permanent mailing address	House number and street or route number	City	State and ZIP code	Telephone No.
	456 Hesperian Blve	Hayward	CA 94545	866-111-222

4. State whether the applicant or any of its principal officers/owners has an application for waiver pending at any other office of the FAA.
N/A

5. State whether the applicant or any of its principal officers owners has ever had its application for waiver denied, or whether the FAA has ever withdrawn a waiver from the applicant or any of its principal officers/owners.
N/A

6. FAR section and number to be waived
None

7. Detailed description of proposed operation *(Attach supplement if needed)*
Sky diving exhibition for Hayward Air Fair. Three (3) jumpers with smoke, pyrotechnics, flags and streamers. One jump for opening ceremony, all out on one pass.

8. Area of operation *(Location, altitudes, etc.)*
Hayward Airport, 6.7 Nautical miles on the 114 degree radial.

9a. Beginning *(Date and hour)*		b. Ending *(Date and hour)*	
06/27/2008	13:00:00	06/29/2008	13:30:00

10. Aircraft make and model (a)	Pilot's Name (b)	Certificate number and rating (c)	Home address (Street, City, State) (d)
Cessna 182	Charles B. Lindburg	1630988	240240 Park Stree, Hayward, CA 94545
List of Jumpers attached			

FAA Form 7711 -2 (8-08) Supersedes Previous Edition

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Figure 3-33A. FAA Form 7711-2, Request for Parachuting Authorization (Back)

▶ *ITEMS 11 THROUGH 16 TO BE FILLED OUT FOR AIR SHOW/AIR RACE WAIVER REQUESTS ONLY.*

11. The air event will be sponsored by:

XYZ Charity

12. Permanent mailing address	House number and street or route number	City	State and ZIP code	Telephone No.
	1234 Anystreet Drive	Anycity	AA 12345	515-555-1212

13. Policing *(Describe provisions to be made for policing the event.)*

14. Emergency facilities *(Mark all that will be available at time and place of air event.)*

☐ Physician ☐ Fire truck ☒ Other - Specify EMS team

☐ Ambulance ☐ Crash wagon

15. Air Traffic control *(Describe method of controlling traffic, including provision for arrival and departure of scheduled aircraft.)*

16. Schedule of Events *(include arrival and departure of scheduled aircraft and other periods the airport maybe open.)*

Hour (a)	Date (b)	Event (c)
1300	June 28, 2008	Three jumper skydiving exhibition with smoke, flags and streamers
1330		Jump exhibition completed
1300	June 29, 2008	Repeat same three jumper exhibition
1330		Jump exhibition completed

If sufficient space is not available, the entire schedule of events may be submitted on separate sheets, in the order and manner indicated above.

Please Read > The undersigned applicant accepts full responsibility for the strict observance of the terms of the Certificate of Waiver or Authorization, and understands that the authorization contained in such certificate will be strictly limited to the above described operation.

17. Certification - I CERTIFY that the foregoing statements are true.

Date	Signature of Applicant
06/24/2008	

Remarks

Jump rmaster Allen Gold USPA D Pro 12344 5,555 Pro

Joe Smith USPA D Pro 123456 2,345 jumps

Robert Jones USPA D 898990 644 jumps

FAA Form 7711-2 (8-08) Supersedes Previous Edition

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Figure 3-34. Sample FAA Form 7711-1, Certificate of Waiver

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

CERTIFICATE OF WAIVER OR AUTHORIZATION

ISSUED TO
City of Hayward

ADDRESS
100 Hesperian Blvd., Hayward, CA 94545

This certificate is issued for the operations specifically described hereinafter. No person shall conduct any operation pursuant to the authority of this certificate except in accordance with the standard and special provisions contained in this certificate, and such other requirements of the Federal Aviation Regulations not specifically waived by this certificate.

OPERATIONS AUTHORIZED
AEROBATIC DEMONSTRARTIONS AND FLY BYS AT THE HAYWARD AIRPORT, HAYWARD, CA, WITHIN FIVE (5) NAUTICAL MILE RADIUS OF THE CENTER OF THE AIRPORT FROM THE SURFACE TO 15,000 FEET MSL, EXCLUDING THE AIRSPACE ABOVE SPECTATORS OR OCCUPIED BUILDINGS.

LIST OF WAIVED REGULATIONS BY SECTION AND TITLE
91.117Aircraft Speed, 91.119 (b & c) Minimum Safe Altitude, 91.155 Distance from Clouds, 91.303 Aerobatics

STANDARD PROVISIONS

1. A copy of the application made for this certificate shall be attached to and become a part hereof.
2. This certificate shall be presented for inspection upon the request of any authorized representative of the Administrator of the Federal Aviation Administration, or of any State or municipal official charged with the duty of enforcing local laws or regulations.
3. The holder of this certificate shall be responsible for the strict observance of the terms and provisions contained herein.
4. This certificate is nontransferable.

NOTE.---This certificate constitutes a waiver of those Federal rules or regulations specifically referred to above. It does not constitute a waiver of any State law or local ordinance.

SPECIAL PROVISIONS

Special Provisions Nos. 1 to 38 inclusive, are set forth on the reverse side hereof. "See Attached" ☐

This certificate is effective from 06/27/2008 to 06/29/2008 1300 to 1700 daily, inclusive, and is subject to cancellation at any time upon notice by the Administrator or his authorized representative.

BY DIRECTION OF THE ADMINISTRATOR

Western Pacific	Mr. Fred A. Alverez
(Region)	(Signature)
June 27 2008	Hayward FSDO Manager
(Date)	(Title)

FAA Form 7711-1 (7-74) AFS Electronic Forms System - v2.2

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Figure 3-35. FAA Form 8710-7, Statement of Aerobatic Competency

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

STATEMENT OF ACROBATIC COMPETENCY

PILOT J. J. JONES	
TYPE CERTIFICATE/NUMBER COMMERCIAL 1234567	
ISSUANCE DATE 03-14-2008	EXPIRATION DATE 12-31-2009
GENERAL AVIATION OPERATIONS INSPECTOR *(Signature)* J. J. SMITH ANE-BED-FSDO	

FAA Form 8710-7 (5-78)

MANEUVER LIMITATIONS NONE	
ALTITUDE LIMITATIONS LEVEL II	AUTHORIZED AIRCRAFT PITTS SPECIAL
I understand that this statement of competency does not authorize deviation from FAR 91 except as defined by waiver thereto, or to the terms of Special Provisions contained in any waiver to FAR 91.	
PILOT *(Signature)*	

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Figure 3-36. Transport Canada Form 26-0307, Statement of Aerobatic Competency

TRANSPORT CANADA TRANSPORTS CANADA
STATEMENT OF AEROBATIC COMPETENCY
ATTESTATION DE COMPÉTENCE EN VOLTIGE AÉRIENNE

PILOT / PILOTE

JOHN DAVID UPWRIGHT

PILOT LICENCE / LICENCE

CA 123456789

DATE OF EVALUATION / DATE DE L'EVALUATION	EXPIRATION DATE / DATE D'EXPIRATION
FEBRUARY 01, 2008	DECEMBER 31, 2009

ISSUING INSPECTORS NAME AND SIGNATURE (PLEASE PRINT)
NOM ET SIGNATURE DE L'INSPECTEUR DE LA DÉLIVRANCE DE L'ATTESTATION (SVP LETTRES MOULÉES)

WAYNE HARPER W Harper

MANOEUVRE LIMITATION / LIMITES DES MANOEUVRES

SOLO AEROBATICS

ALTITUDE LIMITATIONS/LIMITES D'ALTITUDE	AUTHORIZED AIRCRAFT/AÉRONEF AUTORISÉ
LEVEL 3 500 FT	PITTS

PILOTS SIGNATURE / SIGNATURE DU PILOTE

J. Upwright

26-0307(96.04)

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Figure 3-37. Sample Endorsement for Increase Angle of Pitch and Bank

"I have observed Mr. /Ms. [pilot's full name]_____, Certificate Number _____, execute maneuvers up to 90 degrees of pitch and bank and find him/her proficient and competent in those maneuvers in the following Make and Model of airplane: _____. "

This endorsement may be entered in the logbook or issued in the form of a letter. This endorsement may only be made by an FAA operations inspector, an ICAS aerobatic competence examiner or a designated pilot examiner authorized to administer a practical flight test in this make and model of airplane.

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Figure 3-38. Sample Aircraft Status and Inspection Form

Sample Aircraft Status and Inspection Form

N-_____ S/N_____ AC M/M_____

Inspection/Item Pending	Hours/Date:	Next Due
Annual or Progressive Inspection		
100 Hour (If required)		
Static System Check		
Altimeter Check		
Transponder Check		
ELT Battery		

AD Number	Description	Hours/Date Completed	Next Due

I certify this information accurately represents the applicable information from this aircrafts maintenance records and that this aircraft and the aircraft records were inspected on this day and determined to be in an airworthy condition.

A&P or IA Name:_____ Signature: _____

Certificate Number_____ Today's Date _____

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Figure 3-39. Pyrotechnic Briefing Checklist

The following briefing issues must be discussed and deconflict with all pilots during the general safety brief. Each item need only be covered by one person. Any general item covered by the briefer need not be covered by the pyrotechnic shooter in charge (PSIC).

Item	Conducted by Briefer	Conducted by PSIC
EXACT DIMENSIONS AND LOCATION OF THE PYROTECHNICS AREA *	☐	☐
MAGNITUDE OF EXPLOSIVES BEING USED*	☐	☐
AIRCRAFT/PYRO DECONFLICTION PLAN*	☐	☐
PYRO CREW AND CRASH/FIRE/RESCUE POSITIONS	☐	☐
COMMUNICATIONS FREQUENCY AND PROCEDURE*		
PRINCIPAL	☐	☐
SECONDARY	☐	☐
DISCRETE	☐	☐
EMERGENCY PROCEDURES*		
FIRE	☐	☐
ACCIDENT/INJURY	☐	☐
PYRO SEQUENCE BY ACT*		
LOCATION	☐	☐
STRAFE DIRECTION(S)	☐	☐
BOMB DIRECTION(S)	☐	☐
ALTITUDE AND FLYBY LINES*	☐	☐
FORECAST WINDS AND EFFECTS ON PYRO*	☐	☐
FOD POTENTIAL AND EFFECTS	☐	☐
KIO (KNOCK IT OFF) PROCEDURES*	☐	☐

*NOTE: These items comply with, and are required by "Addition to AFI 11-246 V1, ACC Sup 1."

Signatures: _____ Briefer _____ PSIC

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Figure 3-40. Typical Air Race Site

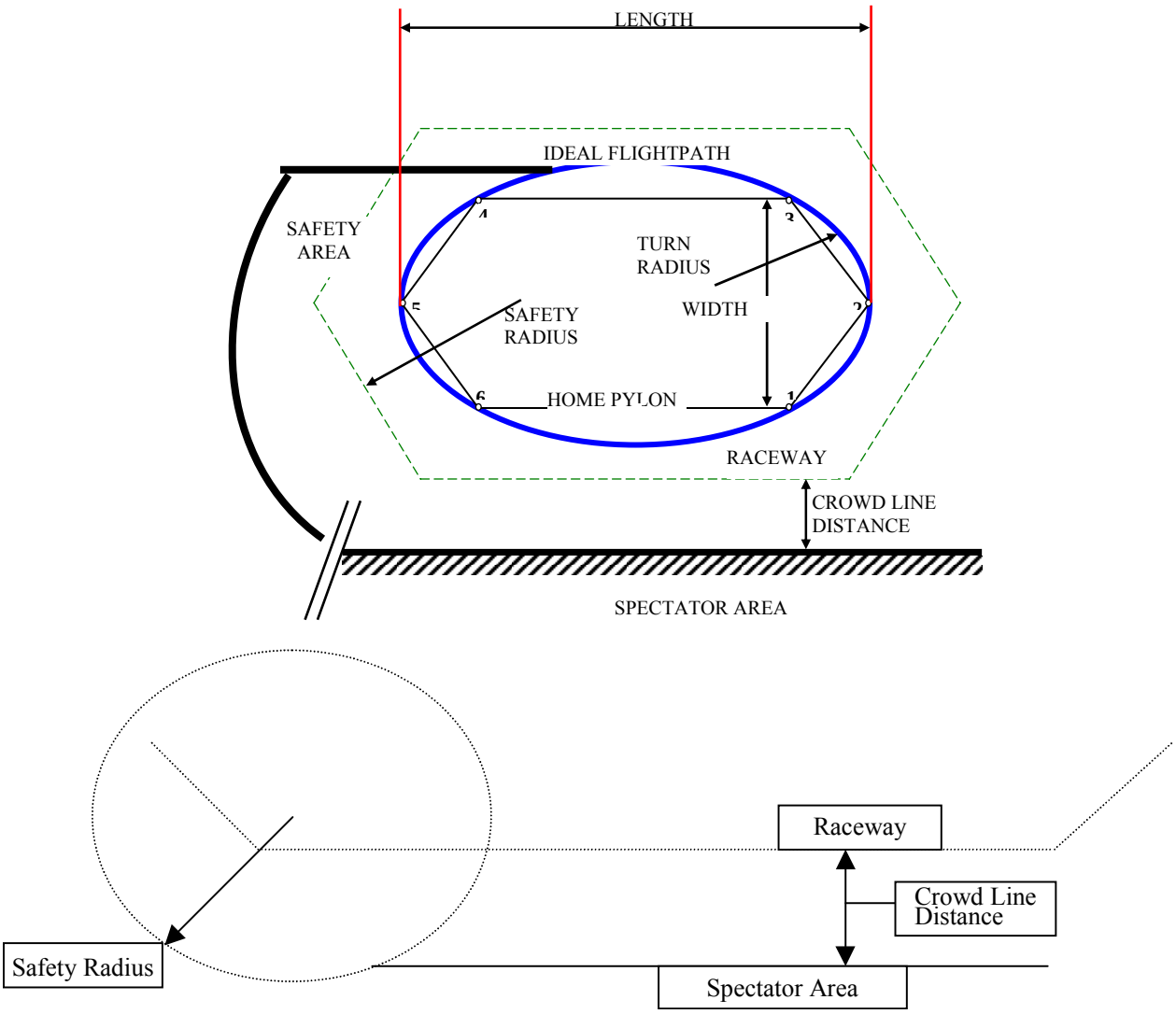

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Figure 3-40A. Typical Unlimited Racecourse Site

Figure 3-54. Typical Unlimited Race Course Site

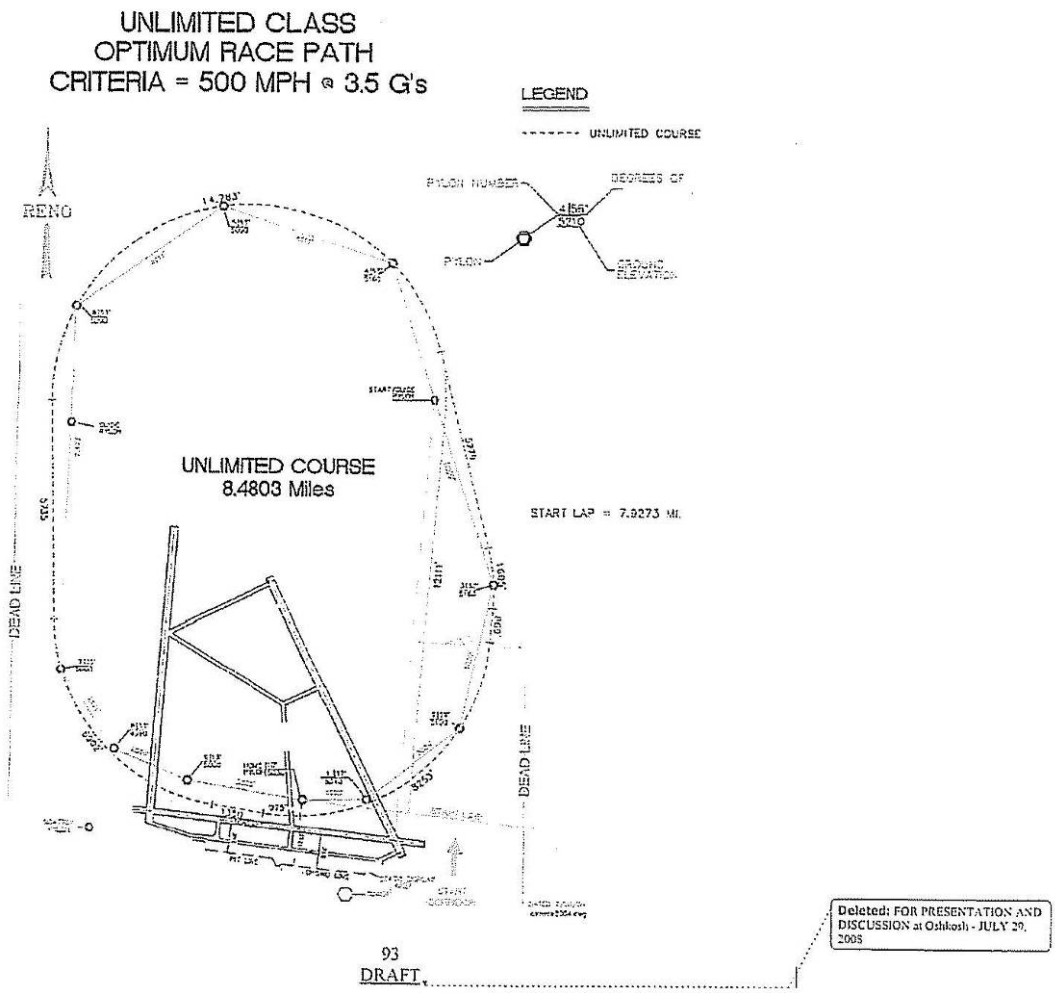

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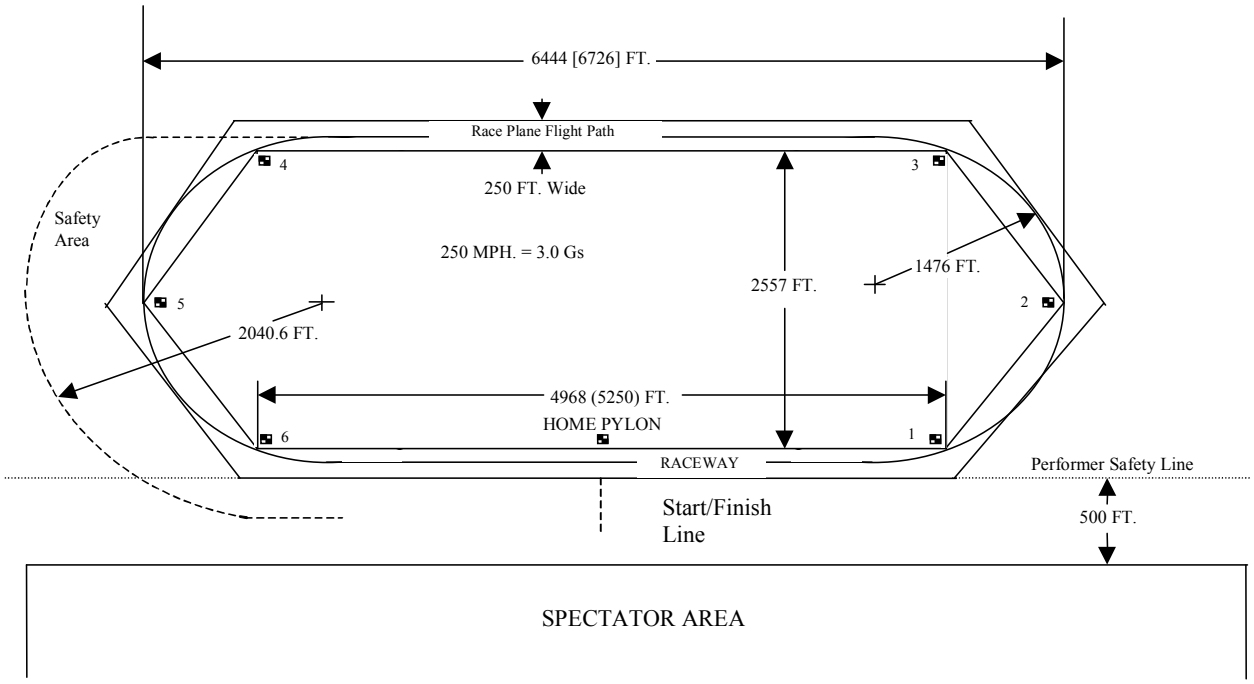
Figure 3-40B. Sample Racecourses

3.0 MILE [5.0 KM] FORMULA ONE AIR RACECOURSE



2.0 MILE FORMULA V AIR RACECOURSE

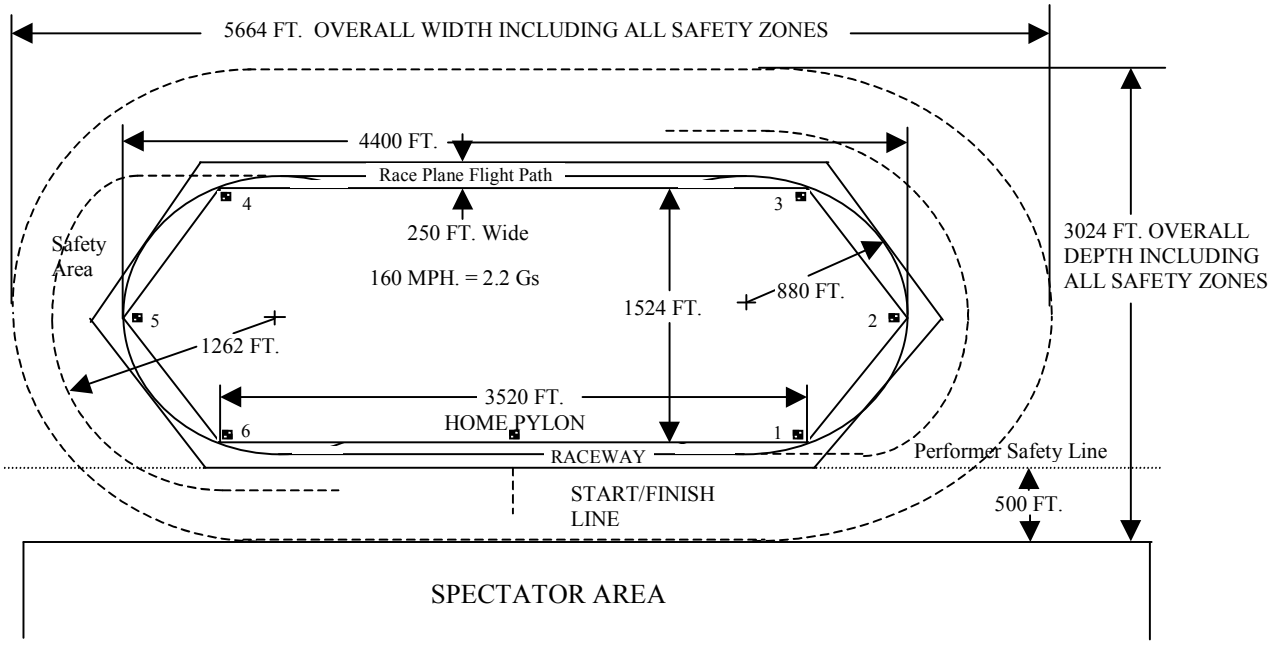


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Figure 3-41. Example of a Balloon Competition Manual

BALLOON COMPETITION MANUAL

This manual has been prepared as part of the application for the issuance of a Certificate of Waiver with attachments and special provisions for a Manned Free Balloon Competition on [insert date]. [Insert event name] BALLOON RACE.

Table of Contents

I. Purpose.

II. Responsibilities and Procedures.

a) Duties of Personnel.
b) Registration and Airworthiness Determination.
c) Pilot and Event Flight Crewmembers.
d) Pilot/Crew Briefing Responsibilities.
e) Letter of Agreement.
f) Event Documentation.

III. Ground Operations.

a) Clear Areas.
b) Spectator Areas.
c) Crowd Control Requirements.
d) Landowner Relations/Notification.

IV. Flight Operations.

a) Areas of Operations.
b) Types of Operations.
c) Altitudes.
d) Weather Requirements.
e) Communications Requirements.
f) Air Traffic Coordination.

Section I. Purpose.

This manual is submitted as a part of an application for a waiver of Title 14 of the Code of Federal Regulations (14 CFR) part 91, §§ 91.119(b) and 91.119(c), by the [insert name of organization] for the [insert name of event] Balloon Race. Specifically, the waiver will allow officially registered balloons to operate at an altitude of no less than [insert number] feet above the highest obstacle within a [insert number]-foot radius of the balloon en route to the target within a [insert number] nautical mile (or other specified distance) radius of the designated launch field or goal. It will also allow for officially registered balloons to operate at [insert number] feet AGL over spectators and to set goals and/or targets at a minimum distance of [insert number] feet from physical barriers provided for spectator control.

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No waiver is requested nor is a waiver required by 14 CFR for any mass ascensions or pilot choice launches.

Section II. Responsibilities and Procedures.

a) Duties of Personnel.

1) Event Director—[insert name].

2) Operations Director—[insert name].

3) FAA Liaison—[insert name].

4) Weather Officer—[insert name].

5) Safety Officer—[insert name].

b) Registration and Airworthiness Determination.

Balloons flown at the event must have current certificates of registration and airworthiness, or in place of the latter, an equivalent document from the Federal Aviation Administration. Chapter [insert number] of the competition rules cover procedures for balloons damaged or otherwise made unairworthy during the event. Throughout the event the Safety Officer or his designees; and appropriate FAA personnel will be consulted as necessary.

c) Pilot and Event Flight Crewmembers.

Each pilot must hold the appropriate pilot certificate (Private or Commercial) with Lighter-than-Air Category and Free Balloon Class Rating. Each pilot must show evidence of current Flight Review (14 CFR part 61, § 61.56) and must also show evidence of currency per § 61.57. Minimum hours as PIC per the organizers specified time must also be shown.

Event flight crewmembers carried on board a balloon during the event must have been briefed by the pilot of the balloon and must attend the pilot briefing for that flight. Each event flight crewmember must sign the waiver form supplied by the pilot. Each event flight crewmember must attest that they have attended the applicable pilot briefing(s) and have read and understand the conditions of the waiver. Only [insert number] event flight crewmember(s) may be carried in each balloon during the flight.

d) Pilot Crew Briefing Procedures.

All pilots are required to sign a statement indicating that they have read and understand the provisions of the waiver and the official [insert title] Competition Rules prior to any competitive flight.

Before each flight all pilots must attend the flight briefing. Chapter [insert number] of the competition rules provides details of all briefings.

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e) Letter of Agreement.

Letter of agreement will be issued and signed as required for the specific type of event.

f) Event Documentation.

All relevant registration files, task data sheets, pilot registration information etc., will be maintained by the organizer at least [insert number] days after the event and will be made available to the FAA Monitor upon request. Competition maps and task sheets will be made available to the FAA Monitor at the time of the pilot briefing.

Section III. Ground Operations.

a) Clear Areas.

Clear areas are established at each target site. These areas are kept clear of spectators and are usually fenced. [Insert type of officials] will police any area (such as the target area on the main launch field) to keep unauthorized persons out. In the Minimum Altitude Diagram, this is referred to as the "Target Area."

b) Spectator Areas.

The primary competitive spectator area is located at the main launch site. Crowd control is initiated by physical barriers around the launch site and target areas controlled by [insert type of officials]. Official and balloon recovery vehicles are parked in restricted areas. Traffic is controlled by local police as required. Use of existing and temporary barriers secure spectators from the briefing area and headquarters and from potential low level flight areas surrounding goals/targets (see additional remarks under "ALTITUDES").

Competitive goals/targets set outside of the primary launch area in remote areas attract few, if any, spectators beyond those involved in race operations (officials and crews). Scoring/measuring officials control these areas as determined by conditions, and will isolate the area surrounding the goal/target from any unauthorized personnel.

c) Crowd Control Requirements.

Crowd control will be provided by [enter law enforcement agency name(s)] agencies and officials of the balloon event under the direction of the Safety Officer.

d) Landowner Relations/Notification.

Positive landowner relations are vital to the continuance of sanctioned events. There is an ongoing effort by all involved persons to maintain good landowner relations for the event. Additionally, as per Rule [enter number] pilots must obtain permission for launch from private property; and per Rule [enter number] minimize disturbing landowners. Landowners may request that their property be indicated on the competition map as a Prohibited Zone (PZ) as per Rule [enter number].

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Check with FSIMS to verify current version before using

Section IV. Flight Operations.

a) Area of Operation.

The operations will occur in a [insert number] mile radius of the launch field located at [insert name] Airport as indicated on the official competition map (to be provided as requested). Final landings may occur beyond these boundaries, but no pilot choice takeoffs or mass ascensions will exceed these boundaries. Headquarters for the event operations will be located at the [insert name of location].

b) Types of Operations.

The event will consist of single and multiple tasks as called by the Director after consultation with other approved competition officials, as appropriate, considering the conditions at hand and forecast to develop during the anticipated flight times.

The tasks will include:

1) Pilot Declared Goal.

Each pilot will fly from a launch area and will attempt to drop a marker close to a goal selected by him/her. Pilots define goals by description and map reference. The goals are declared in writing and given to a timekeeper. Each pilot flies from the designated launch area and attempts to drop a marker close to the selected goal. The result is the distance from the declared goal to the observed mark. The shortest distance wins. The landing after dropping the marker cannot be less than 1,500 feet from the declared goal.

2) Judge Declared Goal.

Each pilot flies from the designated launch area and attempts to drop a marker as close as possible to a goal set by the officials. The result is the distance from the declared goal to the observed mark. The shortest distance wins. The landing after dropping the marker cannot be less than 1,500 feet from the declared goal.

3) Multiple Judge Declared Goal.

Each pilot flies from the launch area and chooses one of a number of goals set by the officials. The pilot attempts to drop a marker near the goal chosen. The result is the distance from the observed mark to the nearest goal. The shortest distance wins. The landing after dropping the marker cannot be less than 1,500 feet from the selected goal.

4) Hare and Hound.

A hare balloon will fly from the launch area and each pilot will attempt to fly near the final landing place of the hare and drop the marker. In the West, this may be referred to as the “Road Runner Race.” The lead balloon, “the hare,” takes off several minutes before the rest of the balloons and drops a marker at a designated point. The hare balloon deflates and is removed from the landing area. The marker dropped by the hare balloon becomes the target for the later

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balloons, “the hounds.” The hounds try to drop markers as close as possible to the hare balloon’s target. After dropping the marker from the hound balloon, landing is at the pilot’s discretion but cannot be less than 1,500 feet from the target.

5) Fly In Task.

Pilots find their own launch areas and attempt to reach a set goal or target.

6) Fly On Task.

A task where a pilot declares a goal to which he flies, after dropping his marker in another task.

7) Gordon Bennett Memorial.

The competitors will maneuver their balloons a prescribed distance from a target on the ground (scoring area). They will then attempt to maneuver back to the scoring area and drop markers on the target.

8) Max Distance—Minimum Distance.

Pilots will attempt to drop their markers in the Scoring Area a maximum or minimum distance from the launch point as specified on the task sheet.

9) Elbow (ELBO).

Each pilot flies from the launch area and attempts to achieve the greatest change of flight direction during the flight with the least angle of divergence. A 180-degree change in direction with a zero angle of divergence is best. Two concentric circles, specific distances apart, surround the launch point. The pilot drops two markers. The first marker must be dropped between the inner and outer circle. The second marker must be dropped within the outer circle. The second marker cannot be less than 5,000 feet from the first marker. Landing after dropping the marker is at the pilot’s discretion.

10) Convergent Navigational Task (CNT).

Officials establish a goal, but pilots find their own launch areas for the attempt to reach the goal. The boundary of the launch area declared by the pilot is the physical boundary of a field or a circle with a 300-foot radius from the inflation point, whichever is less. The officials place a target at the goal 30 minutes before the launch period. The pilot launches from a selected site, attempts to navigate to the target, and drops a marker. The result is the distance from the target to the marker. The shortest distance wins. The landing after dropping the marker is at the pilot’s discretion but cannot be less than 1,500 feet from the target.

11) Watership Down.

This is a two-part task. Pilots find their own launch sites and fly to a target established by the officials. At a specified time before the launch, a hare balloon takes off adjacent to the target and drops a marker at a designated point. This marker becomes the second target. The hare balloon

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deflates, and the envelope remains flattened on the ground to serve as a guide to the second target area. Each competing pilot drops a marker as close as possible to the first target, which was the launch site of the hare balloon. Pilots then fly-on to drop a second marker as close as possible to the target marker placed by the hare balloon.

12) Key Grab.

This event usually has a target (generally a tall pole with the keys to a new automobile affixed to the top) in a centralized location. The balloonist must depart a predetermined distance from the target. The object is to maneuver the balloons, one by one, over the target so the pilot can attempt to grab the keys as the balloon goes by the pole.

The area around the pole must be completely clear of spectators and under the control of the event officials. Event organizers should have portable bull horns or a public address system to control the crowd movements or to direct the balloonist away from the target area in an emergency. If these precautions are observed, a waiver of § 91.119(c) can be issued to allow operations closer than 500 feet to the crowd.

The event organizer must establish procedures to ensure that the balloonists will abort the key grab attempt if it becomes apparent that the balloons' ground tracks will not be within the operating area or when a realistic chance for the key is no longer possible. The landing areas must be segregated from the spectators; only bona fide recovery crews should be present in the landing area to assist the balloonist with recovery. All participants must be briefed before the operations.

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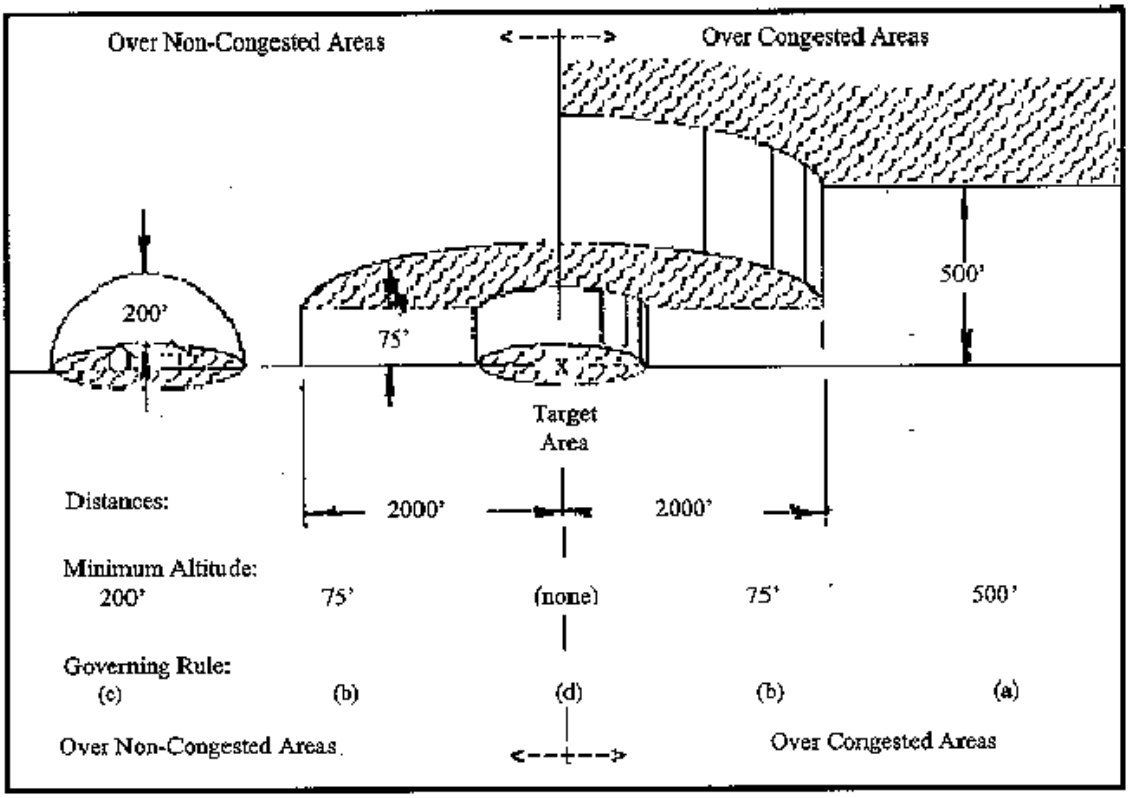
c) Minimum Altitude Diagram.



d) Altitudes.

The waiver provides that registered balloons will be allowed to make approaches to targets and/or goals within the designated areas. Balloons making these approaches will be permitted to fly over the designated spectator areas at an altitude of not less than [insert number] feet AGL. The balloons must have attained a state of altitude equilibrium at this [insert number]-foot minimum altitude and not be descending while passing over designated spectator areas. It is felt that this altitude is sufficient to allow for unusual circumstances with an adequate margin of safety for spectators.

In order to provide the highest possible level of safety for spectators, the scoring officials will cause scoring/measuring officials to be positioned among the spectators to allow crowds to be shifted as necessary and to provide warning regarding any markers that may be dropped in the spectator areas. Announcements over the public address systems will also advise the spectators of the possibilities of both low flying balloons over the area and of markers being dropped in this area.

e) Weather Requirements.

Flight operations will be conducted during the period from published sunrise to sunset, with the visual flight rules (VFR) and weather conditions as specified in § 91.155. Maximum demonstrated surface winds must be [insert number] or less.

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The decision for flight is the sole responsibility of the pilot and the decision of whether to hold a task is the sole responsibility of the director after consultation with appropriate safety officials.

f) Communications Requirements.

Primarily by required pilot briefing, however, supplementary information is also given on local radio stations and on the public address system. Most pilots carry either FM, CB, or aircraft radios, and some communication is possible by radio.

g) Air Traffic Coordination.

A NOTAM will be requested from the [insert name] FSS advising air traffic of numerous balloons in the [insert name] area at varying altitudes from [insert date] through [insert date] during the three hours immediately after sunrise and three hours prior to sunset.

This Operations Manual includes the information and requirements contained in the following attachments.

ATTACHMENTS:

Sectional of Area

List of Pilot Entries

Schedule of Events

Statement of Responsibility

Competition Rules

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Figure 3-41A. Preshow Briefing Guide

AVIATION EVENT PRESHOW BRIEFING GUIDE

WHO SHOULD ATTEND:

ALL PERFORMERS:

- Airshow Pilots
- Tow/Jump Aircraft Pilots
- Skydivers
- Military Flight Demo Pilots
- Air and Ground Pyrotechnic Technicians
- Jet Vehicle Drivers
- Narrator(s)
- Remotely Deployed Aircraft Pilots (via telecon)
- At least one (1) representative pilot for each military team

KEY OPS/SUPPORT PERSONNEL:

- Air Boss
- Air Traffic Control
- Fire Chief/CRS
- EMS Helicopter
- Smoke Oil/Refueling Chief
- Aircraft Marshallers Chief
- Maintenance Chief
- Crowd Control Chief
- FAA (or assigned) MONITOR:

WEATHER BRIEFER:

AIRSHOW DIRECTOR/EVENT SPONSOR:
(Including that person named on the waiver as being "responsible to ensure safety of the event")

WHO SHOULD NOT ATTEND:

- Pets
- Individual Sponsors
- Media Representatives
- Spouses
- Children
- Relatives/Friends
- Anyone not directly associated with the performance

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BRIEFING:

ROLLCALL: Those not attending the briefing MAY NOT participate in this performance!

INTRODUCE KEY OFFICIALS:

TIME HACK:

CURRENT WEATHER AND FORECAST: (Include regional and national weather by quadrants on the last day, for departing aircraft)

REVIEW NOTAM(S)/TFR:

REVIEW WAIVER AND SPECIAL PROVISIONS:

REVIEW AREA MAP:

- Hold Points/Turn Directions Altitudes
- Noise Abatement Procedures
- Sensitive Areas
- Special Use Airspace
- Remote Recovery Airports
- Obstructions
- Controlled/Emergency Bail Out/Ditching Procedures

AIRPORT STATUS:

- Airspace
- Runways In Use
- Facilities
- Arresting Cables
- Traffic Patterns

AIRSHOW LAYOUT:

- Sequence of acts and their cues for positioning
- Show Lines
- Spectator Areas (Primary/Secondary)
- Ground Based Pyro
- Hazards
- Aircraft Parking
- Taxi Routes
- Crash Rescue Runway Watch Locations
- Unique Local Items/Conditions

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Figure 3-42. Circling the Jumpers Briefing

NOTE: An endorsement of "Circling the Jumpers" on FAA Form 8710-7 is no longer required for the circling aircraft pilots.

In the event that a performance involves aircraft operating in the vicinity of parachutists, whether in free fall or under deployed canopies, all pilots and the jump master or team leader of the parachutists involved shall be present at the airshow briefing. The air boss or responsible person shall ensure that each participant understands the details of the performance which shall include, at the minimum, the following information:

a) The number of jumpers performing,

b) The types of and/or colors of parachutes,

c) The exit altitude and deployment altitude,

d) The planned flight path prior to exit, as well as, the descent area of the jump aircraft,

e) The number, make(s)/model(s) and color of the aircraft involved, and

f) Procedures to be used in the event of an unexpected occurrence.

If at any time the air boss determines that the circling the jumpers in not proceeding as briefed, the air boss must give a "Knock It OFF" to the circling aircraft. Upon receiving a "Knock It Off" the circling aircraft will make a cautious turn away from the jumpers and go to the previously determined holding area and wait for instructions from the air boss.

RESERVED. Paragraphs 3-163 through 3-180.

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VOLUME 3 GENERAL TECHNICAL ADMINISTRATION

CHAPTER 8 ISSUE A CERTIFICATE OF WAIVER FOR MOTION PICTURE AND TELEVISION FILMING

Section 1 Issue a Certificate of Waiver for Motion Picture and Television Filming

3-211 PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODE. 1230.

3-212 OBJECTIVE. The objective of this task is to review and issue or deny a request for a Federal Aviation Administration (FAA) Form 7711-1, Certificate of Waiver or Authorization, for motion picture and television operations and determine if an aircraft pilot/operator has developed an acceptable operations manual for use in motion picture and television filming production. Additionally, the aircraft pilot/operator will develop safe operating procedures, guidelines, and criteria to operate below the altitudes required in Title 14 of the Code of Federal Regulations (14 CFR) part 91, General Operating and Flight Rules, §§ 91.119(b) and (c), 91.303, and 91.515(a). Successful completion of this task results in the acceptance or non-acceptance of an operations manual, the issuance of FAA Form 7711-1 for motion picture and television operations, or the disapproval of FAA Form 7711-2, Application for Certificate of Waiver or Authorization.

3-213 GENERAL.

A. Purpose of the Motion Picture and Television Certificate of Waiver.

1) The motion picture and television industry utilize aircraft in support of their filming operations as both subject aircraft and behind the scenes aircraft. These aircraft are often required to be flown at altitudes and/or horizontal radius less then the minimums specified in §§ 91.119(b)(c) and/or 91.515(a). Additionally, these aircraft are often required to perform aerobatics maneuvers below the minimum 1,500 feet above the surface as specified in §§ 91.303(e) or in proximity to persons, property, or airspace as specified in § 91.303(a) through (d).

2) A waiver of § 91.515(a) is required for any flight below 1,000 feet above ground level (AGL). A waiver of the requirements of § 91.119(b) and (c) is necessary when aircraft must be flown closer than 500 feet from participating persons or property. If filming sequences require an aircraft to be flown in aerobatic flight below 1,500 feet AGL, or in certain congested areas, persons, or airspace, a waiver of § 91.303(a) through (e) is required. Blocks 1 through 10, 13, 14, 16 and 17 on FAA Form 7711-2 must be addressed in all cases.

B. Definitions.

1) Participating Person/Authorized Person. All persons associated with the filming production must be briefed on the potential risk of the proposed flight operation(s) and they must acknowledge and accept those risks. Nonparticipating persons are the public, spectators, media, etc., not associated with the filming production.

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2) Subject Aircraft. Any aircraft that is being filmed as part of a motion picture or television filming event.

3) Behind the Scene Aircraft. Any aircraft used in the filming event that is not the subject aircraft (camera aircraft, aircraft carrying lights for the scene, aircraft causing background noise or wind, aircraft placing additional personnel into or around the scene but not in the scene, etc.).

C. Considerations. Essential personnel may be filmed while on the exterior of, or entering or exiting an aircraft in flight. The following are possible scenarios:

1) Airplanes that include traditional external activities such as wing walking, parachuting, air-to-air transfers, air-to-ground transfers, ground-to-air transfers, towing (banners or equipment), and other motion picture and television activities.

2) Balloons that include rappelling, long-line operations, in-flight transfers, rope ladders, and other motion picture and television activities.

3) Helicopter activities that include rappelling, long-line operations, external camera operators, and other motion picture and television activities may constitute an external load. However, the FAA does not provide Class B, C, or D certification for non-jettisonable activities. They would not be approved as external-load operations under 14 CFR part 133. Pilots and/or operators using these techniques will be required to demonstrate their ability to operate with these loads prior to being authorized for flight in the motion picture and television activities for motion picture production activities. The pilot may show competency if he/she has in his/her personal possession either a letter of competency or an appropriate logbook entry in accordance with § 133.37(a)(1)(2).

D. Aircraft.

1) Restricted and Experimental Category Aircraft.

a) Serving as a camera platform for motion picture and television filming is one of the purposes for which FAA issues a restricted Category (CAT) airworthiness certificate under 14 CFR § 21.25(b)(3) (aerial surveying—photography).

b) In order to be used in motion picture and television filming operations as the subject aircraft, the aircraft must have an airworthiness certificate issued in the appropriate CAT (i.e., experimental/exhibition, restricted (if demonstrating its purpose, in the film such as agricultural operations)).

2) Helicopters. Helicopter operations are generally conducted under § 91.119(d). However, movie-making helicopter operations below 500 feet AGL may create a hazard to persons or property on the surface by drawing nonparticipants into the area. Therefore, FAA Form 7711-1 must be obtained for helicopter motion picture and television filming operations. If helicopters are to be used for aerobatic purposes under the provisions of this waiver, refer to subparagraph 3-155D.

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E. Forms Used. FAA Form 7711-2, Application for Certificate of Waiver or Authorization (Figure 3-52), is a multipurpose form used to apply for FAA Form 7711-1, Certificate of Waiver or Authorization (Figure 3-53). Instructions for Completion of FAA Form 7711-2 are in Figure 3-54. All blocks on the form may not be applicable to the application request.

F. Submission. FAA Form 7711-2, including a proposed motion picture and television operations manual, should be submitted at least 45 days before actual filming begins. The completion and submission of FAA Form 7711-2 and a proposed operations manual is the sole responsibility of the applicant.

G. Approval or Disapproval. Applications for FAA Form 7711-1 are processed at the geographically responsible Flight Standards District Office (FSDO). Within 30 days of receipt of the FAA Form 7711-2, an approved FAA Form 7711-1 or disapproval of the application must be issued by the district office. Upon approval, FAA Form 7711-2 and the acceptable operations manual becomes part of FAA Form 7711-1. The jurisdictional FSDO Manager or their designated representative, which may be either the assistant manager or another supervisor from within that jurisdictional FSDO, shall sign the waiver for approval.

H. Expiration Date. An FAA Form 7711-1 expires 24 calendar-months from the date of issuance. FAA Form 7711-1 for motion picture and television filming may be reissued by submission of a properly prepared FAA Form 7711-2 and the applicant's previously accepted operations manual, if appropriate.

I. Motion Picture and Television Operations Manual. Operating and safety procedures must be incorporated in a motion picture and television operations manual. The operations manual, once accepted, becomes part of the waiver. The operations manual is the standard by which a certificate holder must conduct all operations pursuant to FAA Form 7711-1 authorization. The controls, procedures, and conditions set forth in the operations manual are the primary assurance that nonparticipating persons will not be jeopardized. This will be the basis for the authorization of the motion picture and television area of operation and/or the issuance of the waiver. Therefore, failure to comply with the provisions of the operations manual shall be considered a violation of the terms of the waiver and may constitute justification for cancellation of the waiver.

J. Operations Manual Revisions. Inspectors should encourage pilot/operators to discuss manual revisions with the geographically responsible FSDO before they are submitted for acceptance. Proposed revisions to the manuals shall be submitted to the FSDO for review at least 15 days before the proposed effective date. Revisions will not be distributed by the pilot/operator until acceptance by the FSDO and returned to the pilot/operator with an indication of acceptance. If the revisions are not accepted, inspectors must notify the pilot/operator in writing within 10 working days of receipt of the proposed revisions.

K. Special Provisions.

1) The following statement must appear as a special provision:

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- "The certificate holder must adhere to the accepted motion picture and television operations manual."
- The pilot in command (PIC) may remove and install specialty equipment authorized in accordance with an exemption issued for that purpose or under the terms of a Special Technical Committee (STC) or field approval.
- Traditional seating for the PIC of various aircraft does not always lend itself to be the safest position from which to conduct a flight. The primary seat may not be the optimal location, depending on the subject aircraft. The decision on where to sit may be determined by the PIC.
- Additional provisions deemed appropriate to the Administrator to ensure safety of the operation should be prescribed by the FSDO (Figure 3-55).

3-214 CONTENTS OF THE MOTION PICTURE AND TELEVISION OPERATIONS MANUAL. The applicant must submit an original and one copy of the motion picture and television operations manual. (Figure 3-56 is a sample manual development guide for use by the applicant.) The manual must include at least the following:

A. Pilot/Operator Organization.

- Pilot/Operator name,
- Address, and
- Telephone number of applicant or responsible person.

B. Distribution and Revision. This section contains procedures for revising the operations manual to ensure that all manuals are kept current. Revisions for the accepted operations manual shall be forwarded to the FSDO at least 15 days before the proposed effective date.

C. Persons Authorized. § 91.119(c) is waived only with respect to those participating persons, vehicles, and structures directly involved in the performance of the actual filming. The operations manual will include procedures to ensure that no persons are allowed within 500 feet of the area except those consenting to be involved and necessary for the filming production. This provision may be reduced to no less than 200 feet if an equivalent level of safety can be achieved and the Administrator has approved it. For example, an equivalent level of safety may be determined by an ASI's (aviation safety inspector) evaluation of the filming production area to note terrain features, obstructions, buildings, etc. Such barriers may protect nonparticipating persons (observers, the public, news media, etc.) from debris in the event of an accident.

D. Area of Operations. There will be a variety of operational needs, depending upon the activities of the applicant. Certain companies may confine their activities to a local area, while other pilot/operators may conduct activities throughout the entire United States and its territories and possessions. The manual shall define the area authorized by the Certificate of Waiver. While the waiver is issued by the pilot/operator's local FSDO, the pilot/operator must coordinate with the FSDO having geographic responsibility over the area of the filming operations.

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E. Plan of Activities. The manual must include procedures for the pilot/operator to submit 3 days before scheduled filming and a written Plan of Activities to the local FSDO having jurisdiction over the area of proposed filming. The 3-day notification may be waived with the concurrence of the FSDO. Justification of the exception to the 3-day requirement is required. The plan of activities must include at least the following:

1) Dates and times for all flights.

2) Name and phone number of person responsible for the filming production event.

3) Name and phone number of person responsible for the aircraft.

4) Make, model, and serial or N-number of aircraft to be used and type of airworthiness certificate, including CAT.

5) Name and certificate number of pilots involved in the filming production event, including any notation of external load endorsements or aerobatic competency, if required.

6) A statement that the waiver holder has obtained permission from property owners and/or local officials to conduct the filming production event. The list of those who gave permission must be made available to the inspector upon request from the waiver holder.

7) Signature of waiver holder or representative.

8) A description of the flight activity including maps or diagrams of any area, city, town, county, and/or State over which filming will be conducted and the minimum altitudes essential to accomplish the operation.

F. Permission to Operate. The motion picture and television operations manual will specify requirements and procedures for the pilot/operator to obtain permission from property owners and/or local officials (e.g., police, sheriff, fire departments) as appropriate for the conduct of all operations when operating under the provision of the waiver.

G. Security. The applicant will specify the method of security that will be provided to exclude all persons not directly involved with the operation from the location. In the interest of safety, provisions will be made to stop activities when unauthorized persons, vehicles, or aircraft enter the operations area, or for any other reason. If security is not needed “Not Applicable” should be entered.

H. Briefing of Pilot/Production Personnel. Procedures will be included to brief participating personnel of the risks involved, emergency procedures, and safeguards to be followed during the filming production event. Personnel will also be briefed on additional provisions that may be issued by the FSDO that has geographic responsibility for the operational area, including the location of boundaries or time limits. The briefing shall cover:

- Authorization for motion picture and television certificate of waiver and the attached special provisions,
- Operations manual,

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- Plan of Activities,
- Aircraft parking and starting,
- Taxi procedures,
- Radio communications,
- Takeoff procedures,
- Aviation activities to be conducted during the filming production event,
- Approach and landing procedures,
- Recall procedures,
- Emergency procedures,
- Risks to participating personnel, and
- How to control nonparticipating persons.

I. Certification/Airworthiness. The aircraft may be certificated in any CAT, including experimental, provided the requirements of §§ 91.313, 91.319, and 91.203 are met. Procedures shall be included to ensure that aircraft inspections will be in accordance with the applicable parts of part 43, 91, or the assigned operating limitations.

J. Pilot Personnel—Minimum Requirements. The pilot/operator shall establish and specify the minimum pilot requirements. Minimum requirements shall meet or exceed the following:

1) A current U.S. Commercial pilot certificate with ratings appropriate to the CAT, class, and type (if applicable) of aircraft to be used under the terms of the waiver.

2) At least 500 hours logged as the PIC and at least 20 hours logged as the PIC in the aircraft type.

3) A minimum of 100 hours in the CAT and class of aircraft to be used.

4) A minimum of 5 hours in the make and model aircraft to be used under the waiver.

5) In the event that the 1,500-foot minimum standard contained in § 91.303(e) is to be waived, the pilot performing aerobatic maneuvers must hold FAA Form 8710-7, Statement of Acrobatic Competency, to perform the operations.

6) In the event the operation to be conducted contains elements of an external-load operation, whether fixed or rotary wing operations, pilots used in the operation shall be qualified. This qualification may be obtained through a knowledge test (which may be oral and/or written) and/or skill. The inspector or another company pilot approved by the geographically responsible FSDO who is qualified to carry loads externally will give the test(s) which are similar to part 133 requirements and cover the following subjects:

a) Steps to be taken before starting operations, including a survey of the flight area.

b) Proper method of loading, rigging, or attaching the external-load.

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c) Aircraft performance capabilities under motion picture operating procedures and the Aircraft Flight Manual (AFM).

d) Proper instructions for flight and ground crew personnel.

e) AFM, pilot's operations handbook (POH), or a rotorcraft-load combination flight manual and limitations, if appropriate.

K. Communications. The operations manual must contain procedures to provide communications capability to all participants during the actual operation and filming. The communications must be able to keep all the participants apprised of the current status of the operation.

L. Accident Notification. The operations manual must contain procedures for notification and reporting of accidents, notifying National Transportation Safety Board (NTSB) 14 CFR part 830, and protection of the accident scene.

M. Recall/Stop Procedures. The applicant can use radio communications, oral, visual, or any combination acceptable to the Administrator as long as it keeps the participants continuously apprised of the current status of the operation.

N. Aerobatic Competency. If the filming operations require the issuance of FAA Form 8710-7, Statement of Acrobatic Competency, refer to Volume 5, Chapter 9, Section 1, Issue/Renew/Rescind a Statement of Acrobatic Competency.

3-215 REVIEW FAA FORM 7711-2. Pertinent blocks are discussed below for clarity and uniformity. The application should be reviewed upon receipt for obvious discrepancies. The reviewing office must not alter the information submitted by the applicant on FAA Form 7711-2.

A. Blocks 1 and 2. If the applicant is a representative of an organization, the organization's name shall appear in Block 1. The name of the individual and his/her position or authority to represent the organization (e.g., the responsible person) shall appear in Block 2. If the applicant is not representing others, the indication, N/A, shall be entered in Block 1 and the applicant's name entered in Block 2.

B. Blocks 3, 4 and 5. Applicant should state information as explained on each individual block.

C. Block 6—14 CFR Sections Requested Waived. In many instances, the applicant does not know, or is not sure, which sections of 14 CFR are involved. A meeting with the applicant before acceptance of the application may be necessary.

D. Block 7—Description of Operation. Using the term motion picture and television filming to describe the type of operation is sufficient for the applicant.

E. Block 8—Area of Operation. Describe the geographical area of operations desired. A detailed description of any city, town, county, and/or state over which the filming production event operation must be submitted.

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F. Block 9—Beginning and Ending Dates. The applicant must list the beginning date and hour and the ending date and hour for the operation in this block. The dates requested must not exceed 24-calendar-months. In cases involving one-time operations where an alternate date has not been indicated, the inspector should advise the applicant to request an alternate date in order to save time and unnecessary paperwork.

G. Block 10—Aircraft and Pilot Information. When FAA Form 7711-2 for authorization of motion picture and television operation is submitted, the applicant may not know the names of the pilots or the aircraft to be used in a particular operation. The application may be accepted with a notation in Block 10 that a list will be provided along with the Plan of Activities.

H. Block 11—Sponsorship. Not required.

I. Block 12—Permanent Mailing Address of Sponsor. Not required.

J. Block 13—Policing. Although it may be desirable, there is no specific requirement for the use of uniformed police or security guards. The need for special policing depends upon several factors.

1) If fencing is used for crowd control, there may be little need for special crowd-control personnel. On the other hand, if the sponsor intends merely to cordon off the designated areas with rope, it might be necessary to have special crowd-control personnel.

2) It must be remembered that it is not the FAA's responsibility to control the crowd or to decide who can serve to police the filming production event.

3) In every case, the applicant should be advised that it is his/her responsibility to ensure that all reasonable efforts are made to confine spectators to designated areas. If reasonable efforts have been taken and unauthorized persons or vehicles enter the operational area where maneuvers are being performed during the filming production event, the pilot/operators must halt the operation, and efforts must be made to remove them. All parties involved in the production and the inspector shall use good judgment when determining whether it is necessary to halt a filming production event to protect persons on the ground.

K. Block 14—Emergency Facilities. Emergency facilities have also caused problems for production companies. As discussed previously, the application form serves as an all-purpose form, and, therefore, contains blocks that may or may not be appropriate to emergency facilities. Some applications have been denied because the boxes for physician, ambulance, and fire truck were not filled in. Every filming production event sponsor should be encouraged to provide emergency medical service even though this service is not normally necessary. A physician or a rescue squad, paramedics, or emergency medical technicians may be sufficient. Normally, the following rules of thumb are adequate.

1) Physician. Except for events that are a great distance (in a ground vehicle) from a hospital or medical clinic, an emergency rescue squad, paramedics, emergency medical technicians (EMT), or a first-aid station can be substituted for a physician.

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2) Ambulance. If an emergency rescue squad is provided, an ambulance should also be provided. If there is a physician in attendance, any vehicle acceptable to the physician for emergency transportation is sufficient. In fact, many communities rely on a sheriff's or local law enforcement officer's vehicle as their only means of ambulance service.

3) Fire Truck. For the most part, the presence of a fire truck at a filming production event is for the benefit of the performers, not the spectators. If the performers are willing to accept a pickup truck with hand-held fire extinguishers, the FAA should not demand that the sponsor provide a bona fide fire truck with trained firefighters.

4) Crash Wagon. Many locations where events are conducted do not have crash wagons available. If they are not available, the FAA should not require a sponsor to obtain one from a facility that might be hundreds of miles away. Again, crash wagons serve the performers, not the public.

5) Other. A sponsor seldom needs to fill in this block. The following is an example of how the "Other" block might prove useful. In one filming production event, the sponsor had a helicopter and pilot continually ready for emergency transportation of spectators or performers who might be injured or who become ill during the filming production event. Additionally, a military-trained firefighter and medic was standing by the helicopter with extinguishers in case one of the aircraft had an accident anywhere in the operating area. In this particular case, by describing this other emergency facility, the applicant could have been relieved of having to show anything in the preceding blocks.

L. Block 15—Air Traffic Control (ATC). Not required.

M. Block 16—Schedule of Events. The FAA must see a schedule of events in order to evaluate the application. For the purpose of reviewing the application, the schedule does not need to be detailed. It should, at a minimum, contain a general description of the types of maneuvers to be performed during the filming production and their sequence during the filming production event.

1) The applicant must specify a date before the filming production event when he/she will provide a schedule of events. The schedule of events must list the identification of the aircraft and the performers in the sequence of their appearance. This list becomes a part of the official authorization of motion picture and television area of operation and waiver package. At the filming production event the scheduled order of events on the waiver may change because of weather, mechanical problems, etc. Such changes must be coordinated with the FSDO that issued the authorization and/or waiver.

2) Any maneuvers added to the schedule of events will require FAA approval and should be submitted to the jurisdictional FSDO at the earliest opportunity. Cancellation of events does not require advance notice.

N. Block 17—Signature Block. The responsible party must sign this block.

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3-216 PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. This task requires knowledge of the regulatory requirements of part 91 and FAA policies and qualification as an ASI (operations).

B. Coordination. This task may require coordination with the airworthiness unit within the district office, other district offices, Regional Offices (RO), headquarters (HQ), the Aircraft Maintenance Division (AFS-300), or appropriate air traffic facilities, and the General Aviation and Commercial Division (AFS-800).

3-217 REFERENCES, FORMS, AND JOB AIDS.

A. References (current edition):

- Title 14 CFR parts 1, 21, 43, 61, 91, and 133.
- PTRS Procedures Manual (PPM).

B. Forms:

- FAA Form 7711-1, Certificate of Waiver or Authorization (Figure 3-53).
- FAA Form 7711-2, Application for Certificate of Waiver or Authorization (Figure 3-52).
- FAA Form 8000-36, Program Tracking and Reporting System Data Sheet.
- FAA Form 8710-7, Statement of Aerobatic Competency.

C. Job Aids. Sample letters and figures.

3-218 PROCEDURES.

A. Determine if FAA Form 7711-2 is required. Refer to paragraph 3-213 A.

1) If an FAA Form 7711-1 is not required, terminate the task.

2) If an FAA Form 7711-1 is required:

a) Provide the applicant with a copy of FAA Form 7711-2 (Figure 3-52), Instructions for Completion of FAA Form 7711-2 (Figure 3-54), and 14 CFR part 91 Motion Picture and Television Operations Manual Development Guide (Figure 3-56).

b) Advise the applicant to complete blocks 1 through 10, 13, 14, 16, and 17, as applicable, on FAA Form 7711-2.

NOTE: Block numbers 11, 12, and 15, are not required for motion picture and television application of Certificate of Waiver or Authorization.

c) Advise the applicant that the application must be submitted to the FSDO at least 45 days prior to the filming production event.

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B. Open PTRS.

C. Receipt of FAA Form 7711-2 and Motion Picture and Television Operations Manual, if Appropriate. Using the information provided by the applicant and the background in section 1, review FAA Form 7711-2 and the operations manual for all pertinent information for the proposed filming production event. Accept strikeovers that are minor in nature and initialed by the applicant. Blocks 11, 12, 15, and 16 do not need to be completed for motion picture and television applications. The following is a guide for reviewing the completed Form 7711-2.

1) Blocks 1 and 2—Name of Organization/Name of Responsible Person. Ensure that the applicant has indicated the name of the organization or individual applying and the name of a person responsible for matters concerning the application.

2) Block 3—Permanent Mailing Address. Ensure that the applicant has indicated the Permanent-mailing address of the organization or individual named in Block 1.

3) Blocks 4 and 5. Applicant should state information as explained on each individual block.

4) Block 6—14 CFR Sections to be Waived. Ensure that the applicant has listed all sections of the regulations that need to be waived with regard to the filming production event.

5) Block 7—Description of Operations. Ensure that the applicant has indicated the type of motion picture and/or television filming production event to be conducted.

6) Block 8—Area of Operations.

a) Ensure that the applicant has listed the specific locations and altitudes of the proposed filming production event.

b) Ensure that the area of operation is within the jurisdiction of the district office.

7) Block 9—Time Period.

a) Ensure that a beginning date and hour and an ending date and hour for the filming production event has been indicated.

b) Ensure that the time period indicated does not exceed 24 calendar-months.

8) Block 10—Aircraft and Pilots. Check for aircraft make and model, pilot names, and certificate numbers. Block 10 may be accepted with a statement, "A list containing aircraft and pilot information will be furnished on (applicant enters the specific date)."

9) Blocks 11 and 12—Sponsorship. Not required.

10) Block 13—Security. Ensure that the applicant has described provisions for policing the filming production event, if policing is necessary.

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11) Block 14—Emergency Facilities. Ensure that the applicant marked all blocks that will be available at the time and place of the event.

12) Block 15—Air Traffic Control. Not required.

13) Block 16—Schedule of Events. Ensure the applicant provided at least a general description of the types of maneuvers to be performed during the filming production and their sequence during the filming production event.

14) Block 17—Certification. Ensure that the applicant has signed and dated FAA Form 7711-2 and each attachment to the application.

15) If FAA Form 7711-2 has not been completed:

a) List the reasons for disapproval in the "Remarks" section of FAA Form 7711-2.

b) Prepare a letter of disapproval of application (Figure 3-57) with a suspense date for submission of a corrected FAA Form 7711-2.

c) Retain a copy of the application for future comparison.

d) Return the application, operations manual, if appropriate, and the letter of disapproval to the applicant.

e) Make appropriate PTRS entries.

16) If FAA Form 7711-2 has been completed:

a) Prepare FAA Form 7711-1 if an operations manual is not required.

b) If an operations manual is required and has been submitted, review the operations manual.

D. Review Operations Manual. Ensure that the operations manual contains the items discussed in paragraph 3-214.

1) If the manual is unsatisfactory:

a) Contact the applicant and explain areas of the operations manual that need to be corrected.

b) Prepare a letter of non-acceptance of the manual (Figure 3-58) with a suspense date for submission of the corrected operations manual.

c) Mark the "Disapproved" block of FAA Form 7711-2, list reasons for the disapproval in the "Remarks" section of FAA Form 7711-2, and sign and date in the "Action" block of FAA Form 7711-2.

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d) Retain a copy of the operations manual for future comparison.

e) Return the application, one copy of the operations manual, and the letter of non-acceptance to the applicant.

2) If the manual is satisfactory:

a) Mark the Approved block on FAA Form 7711-2, and sign and date in the action block of FAA Form 7711-2.

b) Prepare a letter of acceptance of an operations manual (Figure 3-59).

c) Continue with the task.

E. Aerobatic Competency. Determine if FAA Form 8710-7 is required.

1) If the pilot/operator has requested a waiver of 14 CFR § 91.303(a) through (e), FAA Form 8710-7 for motion picture and television filming must be issued.

NOTE: This waiver is issued only with respect to participating persons, vehicles, and structures directly involved in the performance of the actual filming.

2) Refer to Volume 5, Chapter 9, Issue/Renew/Rescind a Statement of Acrobatic Competency.

F. Prepare FAA Form 7711-1.

1) Fill in the inspector portion of FAA Form 7711-1.

2) Develop any special provisions that are not covered in the applicant's operations manual.

3) If 14 CFR § 91.303 or 91.515 is to be waived, refer to paragraphs 3-154 and 3-155 for additional provisions that may be required.

4) Submit FAA Form 7711-1 to the FSDO manager, or designated representative, for his/her signature. The designated representative may be no lower then the operations unit supervisor.

5) Prepare a reminder notice/letter (Figure 3-60) to the waiver holder reminding him/her that a plan of activities must be submitted and accepted before each filming production event, including any special provisions.

G. District Office File.

1) Prepare a district office file on the applicant that includes, but is not limited to, a copy of the following documents:

- FAA Form 7711-1 and the special provisions,

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- FAA Form 7711-2,
- Operations manual,
- Notice/letter of disapproval of application (FAA Form 7711-2),
- Notice/letter of nonacceptance of the operations manual or
- Notice/letter of acceptance of the operations manual,
- Notice/letter of reminder, and
- Any other documents of correspondence.

2) Send the original of the following documents to the applicant:

- FAA Form 7711-1,
- FAA Form 7711-2,
- Accepted motion picture and television operations manual,
- Notice/letter of acceptance of the operations manual, and
- Notice/letter of reminder.

H. Close PTRS. Make appropriate PTRS entries.

I. enhanced Vital Information Database (eVID). Establish a part 91 pilot/operator eVID record, if appropriate.

3-219 TASK OUTCOMES. Completion of this task results in one or more of the following:

- Issuance of a certificate of waiver,
- An accepted operations manual,
- Letter of acceptance of the operations manual,
- Letter of reminder to submit a plan of activities,
- Part 91 eVID record,
- Issuance of Statement of Acrobatic Competency Card, if required,
- Disapproval of an application, and
- A letter of nonacceptance of the operations manual.

3-220 FUTURE ACTIVITIES.

- Reissue a Certificate of Waiver,
- Cancellation of a Certificate of Waiver,
- Review proposed revisions to the operations manual,
- Review the pilot/operator's plan of activities,
- Surveillance of any operations approved by the certificate of waiver (volume 3, chapter 2),
- Possible enforcement investigation,
- Take part in an investigation as a result of an accident, incident, or violation of the regulations, and
- Rescind FAA Form 8710-7 or require re-evaluation.

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Figure 3-52. FAA Form 7711-2, Application for Certification of Waiver or Authorization

No certificate may be issued unless a completed application form has been received (14 C.F.R. 91. 101. and 105).

US Department of Transportation
Federal Aviation Administration

APPLICATION FOR CERTIFICATE OF WAIVER OR AUTHORIZATION

From Approved: O.M.B. No.2120-0027 08/31/2008

APPLICANTS - DO NOT USE THESE SPACES

Region	Date

Action
☐ Approved ☐ Disapproved – *"Explain under "Remarks"*

Signature of authorized FAA representative

INSTRUCTIONS

Submit this application in triplicate (3) to any FAA Flight Standards district office.

Applicants requesting a Certificate of Waiver or Authorization for an aviation event must complete all the applicable items on this form and attach a properly marked 7.5 series Topographic Quadrangle Map(s), published by the U.S. Geological Survey (scale 1:24,000), of the proposed operating area. The map(s) must include scale depictions of the flightlines, showlines, race courses, and the location of the air event control point, Police dispatch, ambulance, and fire fighting equipment. The applicant may also wish to submit photographs and scale diagrams as supplemental material to assist in the FAA's evaluation of a particular site. Application for a Certificate of Waiver or Authorization must be submitted 45 days prior to the requested date of the event.

Applicants requesting a Certificate of Waiver or Authorization for activities other than an aviation event will complete items 1 through 10 only and the certification, item 17, on the reverse.

1. Name of organization	2. Name of responsible person

3. Permanent mailing address	House number and street or route number	City	State and ZIP code	Telephone No.

4. State whether the applicant or any of its principal officers/owners has an application for waiver pending at any other office of the FAA.

5. State whether the applicant or any of its principal officers owners has ever had its application for waiver denied, or whether the FAA has ever withdrawn a waiver from the applicant or any of its principal officers/owners.

6. FAR section and number to be waived

7. Detailed description of proposed operation *(Attach supplement if needed)*

8. Area of operation *(Location, altitudes, etc.)*

9a. Beginning *(Date and hour)*	b. Ending *(Date and hour)*

10. Aircraft make and model (a)	Pilot's Name (b)	Certificate number and rating (c)	Home address (Street, City, State) (d)

FAA Form 7711 -2 (8-08) Supersedes Previous Edition

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Figure 3-52. FAA Form 7711-2, Application for Certification of Waiver or Authorization (continued)

▶ *ITEMS 11 THROUGH 16 TO BE FILLED OUT FOR AIR SHOW/AIR RACE WAIVER REQUESTS ONLY.*

11. The air event will be sponsored by:

12. Permanent mailing address	House number and street or route number	City	State and ZIP code	Telephone No.

13. Policing *(Describe provisions to be made for policing the event.)*

14. Emergency facilities *(Mark all that will be available at time and place of air event.)*

☐ Physician ☐ Fire truck ☐ Other - Specify _____

☐ Ambulance ☐ Crash wagon _____

15. Air Traffic control *(Describe method of controlling traffic, including provision for arrival and departure of scheduled aircraft.)*

16. Schedule of Events *(include arrival and departure of scheduled aircraft and other periods the airport maybe open.)*

Hour (a)	Date (b)	Event (c)

If sufficient space is not available, the entire schedule of events may be submitted on separate sheets, in the order and manner indicated above.

Please Read > The undersigned applicant accepts full responsibility for the strict observance of the terms of the Certificate of Waiver or Authorization, and understands that the authorization contained in such certificate will be strictly limited to the above described operation.

17. Certification - I CERTIFY that the foregoing statements are true.

Date	Signature of Applicant

Remarks

FAA Form 7711-2 (8-08) Supersedes Previous Edition

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Figure 3-53. FAA Form 7711-1, Certificate of Waiver or Authorization

DEPARTMENT OF TRANSPORTATION

FEDERAL AVIATION ADMINISTRATION

CERTIFICATE OF WAIVER OR AUTHORIZATION

ISSUED TO

(self-explanatory)

ADDRESS

(self-explanatory)

This certificate is issued for the operations specifically described hereinafter. No person shall conduct any operation pursuant to the authority of this certificate except in accordance with the standard and special provisions contained in this certificate, and such other requirements of the Federal Aviation Regulations not specifically waived by this certificate.

OPERATIONS AUTHORIZED

(Indicate in detail all operations authorized. Use a separate sheet of paper if necessary.)

LIST OF WAIVED REGULATIONS BY SECTION AND TITLE

(This section not used for Unmanned Air Vehicle authorizations.)

STANDARD PROVISIONS

1. A copy of the application made for this certificate shall be attached to and become a part hereof.
2. This certificate shall be presented for inspection upon the request of any authorized representative of the Administrator of the Federal Aviation Administration, or of any State or municipal official charged with the duty of enforcing local laws or regulations.
3. The holder of this certificate shall be responsible for the strict observance of the terms and provisions contained herein.
4. This certificate is nontransferable.

Note: - This certificate constitutes a waiver of those Federal rules or regulations specifically referred to above. It does not constitute a waiver of any State law or local ordinance.

SPECIAL PROVISIONS

Special Provisions Nos. 1 to 4, inclusive, are set forth on the reverse side hereof.

This certificate is effective from *(Beginning date/time)* to *(Ending date/time)*, inclusive, and is subject to cancellation at any time upon notice by the Administrator or his authorized representative.

BY DIRECTION OF THE ADMINISTRATOR

(self-explanatory)	*(Signed by Appropriate Waiver Authority)*
(Region)	(Signature)
(Enter date the waiver was signed)	*(self-explanatory)*
(Date)	(Title)

FAA Form 7711-1 (7-74) *1975 - G.P.O. - 1703-M/674-862/199

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Figure 3-54. Instructions for Completion of FAA Form 7711-2

1) PREPARING FAA FORM 7711-2. Blocks from FAA Form 7711-2 are discussed below for purposes of clarity and uniformity of its use. However, not all blocks on the form may be applicable to the application request. Blocks 11, 12, and 15 apply to airshow and air race waiver requests only.

a) **Blocks 1 and 2—Name of Organization/Name of Responsible Person.** If you are a representative of an organization, then the organization's name should appear in Block 1. Your name and title or position, as the organization's representative, for application purposes should appear in Block 2. If you are not representing an organization, the term "N/A" should be entered in Block 1 and your name in Block 2.

b) **Block 3—Permanent Mailing Address.** Self-explanatory.

c) **Block 4—Pending Waiver application.** Self-explanatory.

d) **Block 5—Denial and/or withdrawal of previous Application.** Self-explanatory.

e) **Block 6—14 CFR Section and Number To Be Waived**. All applicable 14 CFR sections and numbers that are to be waived for the operation to be conducted must be listed in this block. If you are unsure which 14 CFR sections will need to be waived, contact the FSDO for guidance.

f) **Block 7—Detailed Description of Proposed Operations.** It is sufficient to use the term "pipeline patrol," "powerline patrol," etc., for a description. However, additional detailed information may be included.

g) **Block 8—Area of Operation.** A detailed description of any city, town, county, and/or state over which the operations will be conducted and the minimum altitude essential to accomplish the operation should be included in this block. The routes for powerline/pipeline operations must be depicted in cartographic or photographic form. This depiction should include every community, settlement, stadium, or other common gathering place located either side of the route. The depiction should also include the areas where powerlines and phone lines or any other obstructions cross the route.

h) **Block 9—Time Period**. List the beginning dates and hours and the ending dates and hours the operation will be conducted. Maximum time period for operations is 24 calendar-months (e.g., June 12, 1996 to June 30, 1998), except for North American Free Trade Agreement (NAFTA) operations, in which the maximum time period for operations is 12 calendar-months. The application should be submitted to the FSDO at least 45 days before the beginning date of the operation. For a onetime operation, consideration should be given to alternate dates. A request for alternate dates may prevent a delay and/or unnecessary paperwork. These alternate dates should be included in this block.

i) **Block 10—Aircraft Make and Model.** List the names of all pilots, their certificate numbers and ratings, full home address, and all aircraft by make and model that will be used in the operation. If the type of aircraft and/or the names of the pilots are not known at

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the time the application is submitted, the FAA will accept the application with the statement, "A list containing aircraft and/or pilot information will be furnished on [insert date.]"

j) **Block 11—Sponsorship.** Not required.

k) **Block 12—Permanent Mailing Address of Sponsor.** Not required.

l) **Block 13—Policing. (Security).** Ensure that the applicant has described provisions for policing the filming production event, if policing is necessary.

m) **Block 14—Emergency Facilities.** Ensure that the applicant marked all blocks that will be available at the time and place of the event.

n) **Block 15—Air Traffic Control.** Not required.

o) **Block 16—Schedule of Events.** Ensure the applicant provided at least a general description of the types of maneuvers to be performed during the filming production and their sequence during the filming production event.

p) **Block 17—Certification.** As the applicant or an organization's representative, you must sign in this block and on each page of the application.

Figure 3-55. Sample Motion Picture and Television Operations Manual Special Provisions

The following special provisions are provided for reference only and may be selected and/or modified as determined by the issuing FSDO.

The certificate holder must adhere to the motion picture and television operations manual.

The controls, procedures, and conditions set forth in the (insert name of company) motion picture and television operations manual is the primary assurance that persons on the surface will not be jeopardized. This is the basis for issuance of the authorization and/or waiver. Therefore, failure to comply with the provisions of the manual will be considered a violation of the terms of the authorization and/or waiver and may constitute justification for cancellation of the authorization and/or waiver.

The aircraft and pilots used under this authorization and/or waiver will only be those specified in the (insert name of pilots and/or operators) motion picture and television operations manual or associated plan of activities. Each pilot's name, and certificate number shall appear on each daily plan of activity.

All civil aircraft and pilot(s) participating in the activity shall be available for FAA inspection before the scheduled event.

The FAA has the authority to cancel or delay some or all participants or events if, in its opinion, the safety of persons or property on the ground or in the air is in jeopardy, or there is a contravention of the terms of the authorization and/or waiver.

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Authority to deviate from the regulations is limited to the specific regulations shown on the Authorization of motion picture and television FAA Form 7711-1.

All flight operations conducted under the authorization of this waiver will be performed in accordance with 14 CFR § 91.155, basic visual flight rules (VFR) weather minimums, except as provided in the waiver holder's motion picture and television operations manual, Special Provisions, Aerobatics.

Aircraft may not be flown along a path that would require excessive maneuvering to avoid nonparticipating persons on the surface in the event of an emergency.

The holder of this manual shall ensure that each pilot-in-command conducting operations authorized under this certificate understands the conditions of issuance, and that it constitutes a waiver of (insert applicable regulations (e.g., 14 CFR §§ 91.119(b) and (c), 91.303((a) through (e), and 91.515)).

Section 91.119(b) is waived only with respect to participating persons, vehicles, and structures directly involved in the performance of the actual filming. Flight operations closer than 500 feet (200 feet, if authorized) or over flight of a group of nonparticipating persons at less than 1,000 feet AGL are prohibited.

Rotorcraft takeoff and landing areas must be protected in a manner that will prevent unauthorized persons from entering the helipad area. The helipads must be located so the aircraft will not pass over nonparticipating personnel during takeoff and landing.

In the event of an accident considered to be the result of an event deficiency or procedure, flight operations will be canceled until the deficiency has been corrected and the correction accepted by the FSDO responsible for the geographic area in which the activity occurred.

The holder of the authorization and/or waiver shall ensure that the participating persons involved in the operations are thoroughly briefed on special procedures, communications, emergency procedures, and on the provisions of the authorization and/or waiver before beginning the activities. This requirement applies to all persons within 500 feet of the aircraft during waived activity. No person may participate in any event unless that person has received a briefing on the provisions of the waiver.

The holder of the (insert name of company) motion picture and television operations manual shall maintain primary responsibility for safeguarding persons and property on the surface.

The certificate holder must submit 3 days prior to scheduled filming, a written Plan of Activities to the FSDO having jurisdiction over the area of proposed filming. The 3-day notification may be waived with the concurrence of the FSDO. Justification of the exception to the 3-day requirement is required.

Aircraft operated under this authorization and/or waiver will have on board an airworthiness certificate appropriate for the operations being conducted.

Revision # (if appropriate)

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_ _ _ FSDO Movie Manual Special Provisions

(enter date of issue)

Figure 3-56. Title 14 CFR Part 91 Motion Picture and Television Operations Manual Development Guide

Each motion picture and television operations manual must contain at least the following items, although it is not restricted to these items.

1. Pilot and/or Operator Organization.

2. Pilot and/or operator name, address, and telephone number of applicant.

3. List of pilots to be used during the filming, including their pilot certificate numbers. This information may be placed in the Plan of Activities. The list must include special pilot authorizations or endorsements (aerobatic, external load, etc.), if applicable.

4. List of aircraft by make, model, serial or registration number. This information shall be placed in the Plan of Activities.

5. Distribution and Revision.

(a) Procedures for revising the motion picture and television operations manual to ensure that all manuals are kept current. A list of effective pages may be appropriate.

(b) Revisions for the accepted motion picture and television operations manual should be forwarded to the FSDO at least 15 days before the proposed effective date.

6. Persons Authorized. The motion picture and television operations manual must include procedures to ensure that no persons, except those persons consenting to be involved and necessary for the filming production, are allowed within 500 feet of the filming production area. This provision may be reduced to no less than 200 feet in the event that a suitable, equivalent level of safety can be achieved. An equivalent level of safety may be determined by evaluation of the filming production area and the degree of terrain features, buildings etc. that will provide a safety barrier to observers.

7. Area of Operations. The motion picture and television operations manual must define the area (city, state or states, etc.) that will be used during the term of the authorization and/or waiver.

8. Plan of Activities. The motion picture and television operations manual must include procedures for the submission, 3 days prior to scheduled filming, which includes a written Plan of Activities, to the local FSDO having jurisdiction over an area of proposed filming. At the discretion of the FSDO, the 3-day notification may be waived. Justification of the exception to the 3-day requirement is needed. The manual shall indicate acknowledgment of the requirement for FAA acceptance of the Plan of Activities prior to beginning filming operations. The Plan of Activities must include at least the following:

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(a) Dates and times for all flights.

(b) Name and phone number of person responsible for the filming production event.

(c) Make, model, and serial number or registration number of aircraft to be used and type of airworthiness certificate, including CAT.

(d) Names and certificate numbers of pilots involved in the filming production event.

(e) A statement that permission has been obtained from property owners and/or local officials to conduct the filming production event.

(f) Signature of waiver holder or a designated representative.

(g) A general outline or summary of the flight activity schedule, including maps or diagrams of the specific filming location, if necessary.

9. Permission to Operate. The motion picture and television operations manual shall specify requirements and procedures that the waiver holder will use to obtain permission from property owners and/or local officials (e.g., police, sheriff, fire departments) as appropriate for the conduct of all filming operations when using the waiver.

10. Security. The manual must specify the method of security that will be used to exclude all persons not directly involved with the operation from the location. This should also include procedures that will be used to stop activities when unauthorized persons, vehicles, or aircraft enter the operations area, or for any other reason, in the interest of safety.

11. Briefing of Pilot/Production Personnel. Procedures must be included to brief personnel of the risks involved, emergency procedures, and safeguards to be followed during the filming production event. Personnel will also be briefed on any additional provisions that may be issued by the local FSDO, including the location of boundaries or any other time limits.

12. Certification/Airworthiness. Procedures must be included to ensure that inspections will be in accordance with 14 CFR parts 43 and 91 and applicable operating limitations. The aircraft to be used may be certificated in any CAT, including experimental, provided the requirements of part 91, §§ 91.7, 91.9, and 91.203 are met.

13. Pilot Personnel—Minimum Requirements. The pilot/operator must establish and specify the minimum pilot requirements. Minimum requirements should meet or exceed the following:

(a) A current U.S. Commercial Pilot certificate with ratings appropriate to the CAT and class aircraft to be used under the terms of the waiver.

(b) At least 500 hours logged as PIC and 20 hours of PIC in the aircraft type.

(c) A minimum of 100 hours in the CAT and class of aircraft to be used.

(d) A minimum of 5 hours in the make and model aircraft to be used under the waiver.

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(e) In the event that the 1,500-foot minimum standard contained in § 91.303(d) is to be waived, the pilot performing aerobatic maneuvers must hold an FAA Form 8710-7, Statement of Acrobatic Competency, for the operations to be performed.

(f) In the event the operation to be conducted contains elements of an external-load operation, whether fixed-wing or rotary operations, pilots used in the operation shall be qualified. This qualification may be obtained through a test of knowledge (which may be oral or written) and/or skill. A FAA inspector will give the test(s) or another company pilot approved by the FSDO and who is qualified to carry loads externally. These tests will be similar to 14 CFR part 133 requirements and cover the following subjects:

- Steps to be taken before starting operations, including a survey of the flight area.
- Proper method of loading, rigging, or attaching the external-load.
- Aircraft performance capabilities under motion picture operating procedures and the Aircraft Flight Manual (AFM).
- Proper instructions for flight and ground crew personnel.
- Aircraft flight manual, pilot operations handbook, or a rotorcraft-load combination flight manual, and limitations, if appropriate.

14. Communications. The motion picture and television flight operations manual must contain procedures to provide communications capability with all participants during the actual operation and filming. The applicant can use oral, visual, or radio communications as along as it keeps the participants continuously apprised of the current status of the operation.

15. Accident Notification. The motion picture and television flight operations manual must contain procedures for notification and reporting of accidents.

Figure 3-57. Sample Letter of Disapproval of an Application

FAA Letterhead

[date]

[applicant's name and address]

Dear [applicant's name]:

This letter informs you that the application you submitted on [indicate date] has been disapproved for the reasons listed in the "Remarks" section of FAA Form 7711-2.

Please make the corrections noted and return to this office within 15 days of receipt of this letter.

If you have any questions or comments, please feel free to contact this office at the following telephone number [indicate number].

Sincerely,

[principal operations inspector's signature]

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Figure 3-58. Sample Letter of Non-acceptance of a Flight Operations Manual

FAA Letterhead

[date]

[pilot/operator's name and address]

Dear [pilot/operator name]:

This letter informs you that the motion picture and television flight operations manual submitted on [indicate date] has been determined unacceptable for the following reasons:

[list all reasons for non-acceptance]

Please make the corrections noted, and resubmit to this office within 15 days of receipt of this letter.

If you have any questions, please feel free to contact this office during regular business hours at the following telephone number [indicate number].

Sincerely,

[principal operations inspector's signature]

Figure 3-59. Sample Letter of Acceptance of a Flight Operations Manual

FAA Letterhead

[date]

[pilot/operator's name and address]

Dear [pilot/operator's name]

This letter informs you that the motion picture and television flight operations manual submitted on [indicate date] has been accepted.

If you have any questions, please feel free to contact this office during regular business hours at the following telephone number [indicate number].

Sincerely,

[principal operations inspector's signature]

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Figure 3-60. Sample Letter of Reminder

FAA Letterhead

[date]

[pilot/operator's name and address]

Dear [pilot/operator's name]:

This letter is a reminder that a plan of activities must be submitted, as outlined in your accepted motion picture and television flight operations manual, to the local Flight Standards District Office (FSDO) having jurisdiction over the area of proposed filming.

The plan of activities must be submitted at least 3 days before actual filming begins.

If you have any questions or comments, please feel free to contact this office at the following telephone number [indicate number].

Sincerely,

[principal operations inspector's signature]

RESERVED. Paragraphs 3-221 through 3-235.

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VOLUME 3 GENERAL TECHNICAL ADMINISTRATION

CHAPTER 12 INTRODUCTION TO 14 CFR PART 91 RELATED TASKS

Section 3 Suspected Violations of 14 CFR § 91.17, Alcohol or Drugs

3-351 GENERAL. The material in this section is a "quick reference guide" that summarizes the authority of Federal Aviation Administration (FAA) personnel in cases where an FAA employee suspects that a crewmember is violating or may violate Title 14 of the Code of Federal Regulations (14 CFR) part 91, General Operating and Flight Rules, § 91.17. This section also contains guidance for the FAA employee to follow in such cases. The guidance in this section applies to any crewmember of a civil aircraft, whether employed by an air carrier or conducting commercial or general aviation operations. This material supplements existing guidance in the most recent edition of FAA Order 2150.3.

3-352 RESPONSIBILITIES AND AUTHORITIES.

A. Air Carrier Responsibilities. Under Title 49 of the United States Code (49 U.S.C.), an air carrier is under a duty to perform its services with the highest possible degree of safety in the public interest. An air carrier and a crewmember of an aircraft primarily are responsible for conducting their operations safely and for ensuring compliance with 14 CFR. Allegations that a crewmember has violated, or may violate, FAA alcohol or drug regulations must be investigated with the highest priority. Prevention of these violations is critical to flight safety.

B. Authority to Prescribe Rules. Under 49 U.S.C. § 44701, it is the FAA's duty to prescribe regulations to promote the safety of flight of civil aircraft in air commerce. Section 91.17 prohibits any person from acting or attempting to act as a crewmember of a civil aircraft under any of the following conditions:

1) Within 8 hours after the consumption of any alcoholic beverage;

2) While under the influence of alcohol;

3) While using any drug that affects the person's faculties in any way contrary to safety; and/or

4) While having 0.04 percent by weight or more alcohol in the blood.

C. Authority to Suspend or Revoke Certificates of Airmen or Air Carriers. Under 49 U.S.C. § 44709, the FAA may amend, modify, suspend, or revoke in whole or in part any certificate issued by the FAA, if, as a result of re examination or investigation, the FAA determines that safety in air commerce or air transportation and the public interest require it. FAA must advise the certificate holder of the charges or reasons for the action and provide the certificate holder with an opportunity to respond; the exception is an emergency requiring immediate action.

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D. Authority to Prohibit the Operation of Aircraft by a Crewmember in Violation of § 91.17. The FAA has full authority over the safety certification of air carrier operations. The FAA may also issue orders, orally or in writing, as deemed necessary to carry out FAA powers and duties under 49 U.S.C. This includes the authority to make such orders immediately effective without notice in order to meet any emergency requiring immediate action in the interest of safety in air commerce.

3-353 SUBMISSION TO ALCOHOL TESTS. Revisions to 14 CFR part 61, § 61.16, 14 CFR part 63, § 63.12(a), and § 91.17 provide an additional enforcement tool and add deterrence to violation of 14 CFR pertaining to alcohol.

A. Alcohol Impairment. Studies have proved that alcohol consumption impairs a pilot's or crewmember's ability to perform. Indeed, the National Transportation Safety Board (NTSB) has determined that alcohol is a cause or factor in a significant number of aircraft accidents, many of which were fatal. The revised rules were, in part, a response to this NTSB determination.

B. Regulatory Requirement. An inspector has the authority to request a law enforcement officer to require a pilot or crewmember of a civil aircraft, in certain circumstances, to submit to testing which will indicate the percentage (by weight) of alcohol in the blood.

1) The request for such a test must be made by the FAA to a law enforcement officer who is authorized under state or local law to conduct the test or to have the test conducted.

2) The request for the test must be part of an investigation of a suspected violation of state or local law governing the same or substantially similar action prohibited by the FAA alcohol rules. However, the officer cannot enforce FAA rules. The law enforcement officer conducting or obtaining the test acts under his or her own state or local authority.

C. Reasonable Basis. There must be a reasonable basis for belief that a pilot or crewmember has unlawfully used alcohol in connection with his or her duties.

1) Compliance with the request for a test is required of the pilot or crewmember.

2) Failure to submit to the test could result in suspension or revocation of any airman certificate and denial of a new certificate or rating. Civil penalty action could also be taken.

3) Civil penalties will also be levied against flight attendants or other crewmembers who do not hold airman certificates.

D. Additional Evidence. The alcohol test required under the revised 14 CFR is not the only way to prove an incident of flying "under the influence." As in the past, any alcohol test or other evidence, such as witness observation of suspicious behavior, may be used.

3-354 INSPECTOR AUTHORITY. Flight Standards inspectors are not authorized under 14 CFR to require a crewmember to submit to an alcohol test. They must have a local or state law enforcement officer request it.

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A. State Laws. Not all states have enacted statutes prohibiting flying under the influence of alcohol or drugs or authorizing state or local law enforcement officers to request blood alcohol tests of crewmembers.

1) Each district office manager should work with regional counsel to become familiar with the laws of each state included in the district office's jurisdiction.

2) Managers should also provide written guidance to all inspectors in the district office for ready reference. The guidance should include specific procedures as to when, and under what circumstances, an inspector should involve state or local law enforcement.

B. Objective. Inspectors must recognize the fundamental objective of the guidance provided here: to use all available FAA resources to prevent any person from acting as crewmembers while that person is under the influence of alcohol or drugs.

1) Accomplishing this sometimes requires ingenuity and quick thinking, especially when time is short.

2) Prompt notification of flight standards management and the air carrier, using the resources of FAA communications centers, usually is the best way to obtain promptly the assistance needed to prevent operation of an aircraft in violation of FAA alcohol and drug regulations.

3-355 INSPECTOR ACTION.

A. Receipt of Information. Any FAA employee who receives information regarding a crewmember's operation of an aircraft in violation of FAA alcohol or drug regulations immediately must contact a flight standards inspector and transmit the information to the inspector.

1) If the inspector has reasonable cause to believe that a pilot or other crewmember is under the influence of or has used alcohol while performing or attempting to perform his or her crewmember duties, the inspector shall use the guidance in this section to determine the appropriate action to take.

2) To the extent possible, the inspector should coordinate with the regional administrator and counsel before taking action. If the circumstances and time do not permit prior coordination, the inspector should provide information as soon as possible to the regional administrator through the appropriate channels on all actions taken to address the situation.

B. Notification of Air Carrier Officials. If the crewmember is an employee of an air carrier, the inspector shall promptly contact an appropriate management official of the air carrier, who is immediately accessible by telephone. (The unofficial source for air carrier contact telephone numbers is the air carrier jump seat list. It is available to FAA personnel only on the Internet at www.faa.gov/fsdo/orl.)

1) The inspector shall inform the official of the following:

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a) All pertinent information to enable an air carrier to conduct its own investigation.

b) The steps that the inspector intends to pursue based on the information.

2) In providing information to the air carrier, the inspector must protect any confidential source who has requested anonymity.

3) The inspector shall urge the air carrier to assist FAA in its investigation and, if appropriate, to take action to ensure that the flight crewmember does not serve on the flight.

4) The inspector should remind the air carrier official of the provisions of § 91.17(a) and the authority of the FAA to prohibit, where warranted, the operation of the aircraft in the event the carrier fails to take action on its own.

5) The inspector should also advise the air carrier official of 18 U.S.C. § 342, a criminal statute that provides for imprisonment and fines against whoever operates or directs the operation of an air carrier while under the influence of alcohol or drugs.

C. Notification of FAA Personnel. The inspector also immediately should notify his or her supervisor and, in the case of an air carrier crewmember, the certificate management unit that holds the air carrier's operating certificate, of the information and the action the inspector intends to pursue. These officials should contact appropriate Washington headquarters officials in their chain of command, as time permits.

D. Notification of Flight Standards Division and Regional Counsel. If the inspector does not receive a response from the air carrier that resolves satisfactorily the inspector's safety concerns, the inspector immediately shall notify flight standards management in his or her chain of command, who in turn shall notify the office of assistant chief counsel in the region. The inspector shall elevate the notification to the highest FAA management official (up to and including the administrator) as necessary to contact air carrier management and to address the agency's concern for flight safety.

E. Means of Notification. The inspector shall use the most expeditious means available to communicate with FAA personnel and air carrier management, normally through the FAA operations center in the field. If necessary, the inspector may contact the Washington Headquarters Operations Center at (202) 267-3333.

F. Notification of State or Local Law Enforcement. Whether the crewmember is an employee of an air carrier or is conducting either commercial or general aviation operations, the inspector shall, as soon as possible, notify state or local law enforcement personnel, when appropriate, and request their assistance in the investigation or other appropriate action in accordance with FAA Order 2150.3.

G. Legal Enforcement Action. If necessary to protect the safety of the traveling public and in furtherance of the public interest, the Administrator, the Chief Counsel, the Deputy Chief Counsel, the Assistant Chief Counsel for Regulations and Enforcement, and each regional Assistant Chief Counsel may issue an emergency order, either orally or in writing, to prohibit an

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air carrier from operating a specific flight with a particular crewmember or crewmembers or to suspend an airman certificate to ensure the safety of flight of civil aircraft in air commerce.

1) The assistant chief counsel for the region shall consult with the regional administrator where possible if consultation will not delay action necessary to protect aviation safety.

2) Any order shall be in writing if time permits. The contents of a written order may be communicated orally by the inspector to the crewmember, the air carrier, or both. An order may be issued orally by counsel and communicated by the inspector if necessary to prevent operations detrimental to aviation safety, but the oral order must be followed up in writing as soon as possible.

3) Each oral or written order must state the grounds for issuance and must notify the respondents of any right of appeal.

4) Any order, whether written or oral, shall be served at the earliest possible time on the crewmember, the air carrier, or both, as named in the order.

H. Scenarios. Following are some situations an inspector may encounter. Time is a critical factor in determining intoxication, since alcohol is dissipated from the blood as time passes.

1) An inspector observes a pilot or crewmember who appears to be intoxicated while performing his or her duties.

a) The inspector must request to see the airman's certificate, medical certificate, and other identification.

b) The inspector shall advise the pilot or crewmember not to fly or perform other crewmember duties.

c) The inspector must contact the local law enforcement office and request the presence of a qualified officer who has the authority to conduct the alcohol test.

d) When the law officer arrives, the inspector must direct the officer to the suspected pilot or crewmember, and provide the crewmember's identification. The officer then asks the individual to submit immediately to an alcohol test in accordance with 14 CFR. (A positive field test is usually the basis for an additional Breathalyzer test and blood test.)

e) If the pilot or crewmember is taken to a hospital for a blood test, the local law officer obtains the test results under local law. The inspector must then obtain the results from the local law enforcement office or request that the pilot or crewmember provide the test results under the authority of § 91.17(c)(2). The inspector should ask the pilot or crewmember to sign a medical release form, FAA Form 8500-21 (Figure 3-63), to assist in obtaining test results. The FAA can request all results of tests taken within 4 hours after acting or attempting to act as a pilot or crewmember.

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f) If the pilot or crewmember refuses to consent to an alcohol test, advise him or her that enforcement action will be taken in accordance with § 61.16 or § 63.12(a). Successful enforcement action may result in revocation or suspension of any airman certificates and denial of an application for additional rating or certificates for a year. The inspector should take either normal or emergency enforcement action depending on the circumstances and severity of the incident. (See Related Task in Volume 7, Chapter 6, Conduct an Investigation of FAA Flight Operations To Determine Compliance. If the airman wishes to voluntarily surrender any airman certificate, see Volume 5, Chapter 2, Section 5, Miscellaneous Part 61 Certification Information). In all cases the district office should consult a regional specialist and regional counsel as soon after the incident as possible to assist in identifying what evidence should be gathered. When the pilot or crewmember refuses to take a test, but other evidence is sufficient to prove the case, enforcement action can still be taken.

g) If the pilot or crewmember tries to leave the scene, the inspector must not attempt to detain the airman. The inspector shall request appropriate action from airport security, if available, or a local law enforcement officer.

h) If the pilot or crewmember refuses to present identification, a description of the pilot or crewmember and any vehicle he or she used (including automobile license plate number) should be noted for use in apprehending the individual. If the pilot or crewmember attempts to leave the scene in an aircraft, notify air traffic control.

i) Upon refusal to provide identification, the inspector shall advise the pilot or crewmember of the requirement to show airman and medical certificates in accordance with §§ 61.3(h) or 63.3(c). If he or she still refuses to provide identification, the inspector should attempt to identify the individual by contacting the local fixed base operator or other airport personnel. If possible the inspector should determine the name and address of the registered owner of the aircraft involved to assist in identifying the pilot or crewmember.

2) A district office receives a telephone or other complaint of a person flying while intoxicated or attempting to operate an aircraft while under the influence of alcohol.

a) If an inspector is unable to go to the scene, the nearest law enforcement office should be called for assistance.

b) The test should be conducted and the evidence obtained as in subparagraph 3-355H1) above.

3) A local law enforcement officer observes an apparently intoxicated pilot or crewmember during the officer's normal course of duty. In the event of this occurrence, the district office should advise all local and state law enforcement offices of the alcohol/drug regulations and give a copy of this section and §§ 61.31(h), 63.3(c), 61.16, 63.12(a), and 91.17. The district office should emphasize to law enforcement personnel that they will be acting in accordance with their local statutes and not under FAA authority. The district office must request them to provide a copy of the results of any tests given an airman to the nearest FAA district office.

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I. Legal Process. Inspectors must make certain all evidence is preserved. It is essential that inspectors make a record of all conversations with the suspected pilot or crewmember. Furthermore, the inspector must record names and addresses of any witnesses to those conversations or to the suspicious behavior.

1) In non emergency cases, the pilot or crewmember will be notified with the usual letter of investigation and allowed to respond to charges.

2) In a case involving the 0.04 percent rule, the inspector should have in hand the results of the alcohol test, showing 0.04 percent or more weight of alcohol in the blood, before sending the letter of investigation.

3) In emergency cases the pilot or crewmember will be advised that the severity of the circumstances endangers life and property and warrants emergency action against his or her airman certificate. The individual should be advised not to exercise the privileges of that certificate. Depending upon the specific incident, the inspector can ask the pilot or crewmember to surrender the certificate to the inspector voluntarily.

J. Privacy Act. Because of the sensitivity of the test results, it is important that the results not be released. As in any enforcement investigation, all evidence must be confidential. Request for release of the information will be handled in accordance with FAA Order 1270.1, Freedom of Information Act Program. An enforcement report or any part of a report can only be released by regional counsel.

K. Summary. It must be reemphasized that the state or local law enforcement officer acts under state or local laws, not under FAA authority.

1) Nearly two thirds of the 50 states currently have “flying while impaired” rules, and most states have laws and procedures for obtaining alcohol tests. District offices should contact state and local law enforcement offices to obtain information and appropriate statute numbers.

2) District office personnel should advise local and state law enforcement officials of the new federal regulations and procedures in order to encourage a spirit of cooperation in obtaining evidence as quickly as possible.

3) Law enforcement officers should be advised to contact their local flight standards district office when they apprehend a pilot or crewmember involved in operating an aircraft under the influence.

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Figure 3-63. FAA Form 8500-21, Medical Release Form

U.S. Department
of Transportation
Federal Aviation Administration

AUTHORIZATION FOR THE RELEASE OF MEDICAL INFORMATION
TO THE FEDERAL AVIATION ADMINISTRATION (FAA)

TO WHOM IT MAY CONCERN, PLEASE PRINT:

I,_____,_____,_____
(FIRST) (MIDDLE) (LAST)

born on_____,_____,_____,at_____
Month) (Day) (Year) (City)

_____, presently residing _____
(State or Country) (Current Residence

_____,_____,_____,_____
Address) (City) (State) (Zip Code)

Hereby authorize any physician or other person who has attended, examined, or treated me, or any clinic, hospital, institution, company, or Federal, State, or municipal agency, office, or bureau which may have information concerning my medical history, to release to the Administrator of the FAA, or the Administrator's medical representative, any available information or records concerning my medical history in their knowledge or possession.

This authorization is given pursuant to Title 14 of the Code of Federal Regulations (CFR), 67.413, which relates to the acquisition of medical information and airman medical certification (14 CFR 67). Alternatively, this authorization is given pursuant to Title 5 U.S.C. 3301 which relates to applicant positions covered by medical standards found in Appendix 1 of FAA Order 3930.3, Air Traffic Control Specialist Health Program. This information is necessary to determine whether I meet the applicable medical standards for an airman medical certificate or alternatively, FAA medical clearance I hold or for which I have made application.

I have also been known by the following names(s): _____. (If none, state "None").

A reproduction of this authorization shall be deemed as effective and valid as the original.

*(Signature)*_____*(Date)*_____

SEND INFORMATION TO:

☐ Aeromedical Certification Division, AAM-300
FAA, Civil Aeromedical Institute
Mike Monroney Aeronautical Center
P.O. Box 26080
Oklahoma City, OK 73126-0080

☐ Other Addressee:

FURNISH SIGNED AND DATED COPY TO PHYSICIAN OR HOSPITAL WHEN REQUESTING COPIES OF RECORDS BE SENT TO THE ABOVE CHECK BOX. ANY EXPENSE INVOLVED IN PROVIDING THESE RECORDS IS THE RESPONSIBILITY OF THE APPLICANT--NOT THE FAA.

FAA Form 8500-21 (9-97) SUPERSEDES PREVIOUS EDITION NSN: 0052-00-406-3003

RESERVED. Paragraphs 3-356 through 3-370.

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VOLUME 3 GENERAL TECHNICAL ADMINISTRATION

CHAPTER 18 OPERATIONS SPECIFICATIONS

Section 3 Part A Operations Specifications—General

3-736 DISCUSSION. This section and sections 4, 5, and 6 of Volume 3, Chapter 18 discuss each standard template available for issuance by the automated Operations Safety System (OPSS), also known as the Web-based automated Operations Safety System (WebOPSS). These templates are more commonly referred to as "paragraphs." The standard paragraphs discussed in this order are limited to operations in accordance with Title 14 of the Code of Federal Regulations (14 CFR) parts 91, 91 subpart K (91K), 121, 125 (including Letter of Deviation Authority (LODA) 125 subpart M (125M)), 135, and 145.

A. Definition of OpSpecs. The standard paragraphs for parts 121, 125, 135, and 145 are called operations specifications (OpSpecs).

B. Definition of MSpecs. The standard paragraphs for part 91K are called management specifications (MSpecs).

C. Definition of LOAs. The standard paragraph for part 91 and 125M are called letters of authorization (LOA).

D. Other Source Documents. References are provided to other sections of this handbook, to advisory circulars, or other applicable documents that discuss detailed requirements for certain standard paragraphs.

E. Ensure Complete Review. Before issuing a standard paragraph, any specific requirements specified by this order or the referenced material (relative to the paragraph being issued) must be met. Before reading the following sections for the first time, review the applicable paragraphs available in the OPSS for the specific regulation.

F. Applicability of Paragraphs. There are some standard paragraphs that are required to be issued to all operators for a specific regulation. There are standard paragraphs that are optional and only issued when the operator is specifically authorized to conduct those operations.

NOTE: All 300-series and nonstandard 500-series OpSpecs/MSpecs/training specifications (TSpecs)/LOAs (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 part 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). Parts 121, 135, and 14 CFR part 145 repair stations 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.

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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.

3-737 PART A OPERATIONS AND MANAGEMENT SPECIFICATIONS PARAGRAPHS.

OPSPEC/MSPEC A001, ISSUANCE AND APPLICABILITY.

A. General. A001 identifies the OpSpec/MSpec holder. The name must be the legal name of the operator. A001 also specifies the kinds of operations authorized, the applicable regulatory sections under which the operations are to be conducted, and any other business names under which the operations are being conducted. See the new OPSS user's manual for additional guidance to issue A001. Figure 3-4 is a summary of the information required in OpSpec/MSpec A001.

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Table 3-4. Summary of Information Required in OpSpec/MSpec A001

Type of Certificate	Any of the following may apply:	Type of Carriage:	Regulation Reference:	Economic Authority Text to be inserted:
Air Carrier	Domestic	Common	119.21(a)(1) (Part 121)	and provided, at all times, the certificate holder has written economic authority issued by the Department of Transportation.
Air Carrier	Flag	Common	119.21(a)(2) (Part 121)	and provided, at all times, the certificate holder has written economic authority issued by the Department of Transportation.
Air Carrier	Supplemental Passenger (more than 60 pax and/or >18,000# payload)	Common	119.21(a)(3)(i) (Part 121)	and provided, at all times, the certificate holder has written economic authority issued by the Department of Transportation.
Air Carrier	Supplemental All Cargo	Common	119.21(a)(3) (ii) (Part 121)	and provided, at all times, the certificate holder has written economic authority issued by the Department of Transportation.
Air Carrier	Commuter (5+ trips/week)	Common	119.21(a)(4) (Part 135)	and provided, at all times, the certificate holder has written economic authority issued by the Department of Transportation.
Air Carrier	On Demand (less than 5 round trips/week)	Common	119.21(a)(5) (Part 135)	and provided, at all times, the certificate holder has written economic authority issued by the Department of Transportation.
Operating	Flight (Part 125)	Private Non Common	119.23(a) (Part 125)	and provided the certificate holder does not conduct any operation which results directly or indirectly from the certificate holder or any other person holding out to the public to provide for the carriage of person or property.

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Operating	On Demand (non scheduled)	Private _____ Non Common	119.23(b) (Part 135) Ltd. to holding out to public _____ # of Con tracts (Definitions) 119.23(b)(3)	and provided the certificate holder does not conduct any operation which results directly or indirectly from the certificate holder or any other person holding out to the public to provide for the carriage of person or property.
Air Carrier	Commuter Rotorcraft	Common	119.25(a)	and provided, at all times, the certificate holder has written economic authority issued by the Department of Transportation.
Air Carrier	On Demand Rotorcraft	Common	119.25(b)	and provided, at all times, the certificate holder has written economic authority issued by the Department of Transportation.
None	Fractional	Non Common	Part 91K	None.

B. Authorization. A001 authorizes the conduct of operations under other business names known as "doing business as" (DBA). If no operations are authorized to be conducted under another DBA, the statement selected will state that "the operator is authorized to use only the business name which appears on the certificate to conduct the operations described in subparagraph a." Other DBAs authorized under 14 CFR parts 215 or 298 must be listed in OpSpecs. Before listing a DBA in an operator's OpSpecs or entering a DBA in an Air Oper Enhanced Vital Information Database (eVID) file, inspectors must verify that the DBA is on file with DOT or an appropriate state agency. This verification can be accomplished by one of the following means:

1) The operator shows that the DBA is listed on a DOT registration (proof of insurance);

2) The operator shows that the DBA is listed on a DOT certificate of public convenience and necessity;

3) The operator shows that the DBA is authorized by a DOT order or other DOT document;

4) When the operator claims the DBA is on file with the DOT, verification must be made by contacting the DOT Office of Aviation Analysis, Air Carrier Fitness Division, (202) 366-9721; or

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5) When an "operating certificate" is involved, the operator shows that the DBA is authorized and registered by an appropriate state authority.

6) DBAs can apply to 14 CFR part 91 subpart K, but they do not have economic authority requirements.

C. Part 145. For part 145 repair stations, A001 lists the:

- Location,
- Mailing address (if different from the fixed location),
- Other DBAs (see subparagraph B above) if authorized, and
- Any delegated authorities.

OPSPEC/MSPEC 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 understandings between the FAA and the aviation industry. Washington headquarters developed definitions must not be changed by regional or district offices. Washington headquarters 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/MSpec request.

OPSPEC/MSPEC A003, AIRPLANE/AIRCRAFT AUTHORIZATION. OpSpec/MSpec A003 authorizes an operator or certificate holder to use specific make, model, and series (M/M/S) of airplanes in 14 CFR part 91 subpart K (part 91K), 121, 125, or 135 operations. A003 is populated with data from the "Maintain Operator Data—Aircraft" area of the automated Operations Safety System (OPSS). The only field that is populated within the A003 template is nonstandard text. If this field is used, the additional text must be coordinated and approved in accordance with Volume 3, Chapter 18, Section 2, paragraphs 3-712 and 3-713. In most cases, the A003 column labels match the data column labels in the "Maintain Operator Data—Aircraft" area of the OPSS. In contrast to OpSpec A001, OpSpec A003 does not identify the air carrier's overall authority to conduct a particular kind of operation. Instead, it represents the FAA's approval of the air carrier's use of a particular airplane in carrying out the kinds of operations that are authorized. The column labeled "Type Section 119" reflects the 14 CFR part 119 operating authorization granted by the certificate holder's Air Carrier/Operating Certificate. Volume 2, Chapter 2, Section 2, paragraph 2-129 explains the hierarchy of part 119 authorizations. The rest of the set of OpSpecs are then put into place to authorize the air carrier to conduct specific types of operations in accordance with the authorizations and airplane identified in A001 and A003. The following provides terminology clarification and guidance on both the "A003" and the OPSS "Maintain Operator Data—Aircraft" columns. A003 templates do not use every data column available in the OPSS "Maintain Operator Data—Aircraft" area. A003 column usage will vary across 14 CFR parts. Each A003 has its columns organized to meet the needs of the 14 CFR part. The column descriptions below are not all-inclusive and, therefore, not every column in every A003 template is described. The columns that are not described are self-explanatory.

D. M/M/S: Parts 91K, 121, 125, and 135. Select the authorized M/M/S using the aircraft listing provided in the OPSS. If the appropriate M/M/S cannot be found in the OPSS,

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inspectors should immediately notify the OPSS help desk so that the airplane listing can be updated.

E. Type of Part 119 Common Carriage Operations. For each aircraft, list the type of operation authorized. This is accomplished in the OPSS "Maintain Operator Data—Aircraft" area. The authorization is aircraft specific. In some cases, more than one part 119 type of operation may be required for an M/M/S. When A003 is generated, the data from the OPSS "Maintain Operator Data—Aircraft" are loaded into the appropriate A003 columns. Part 119 section selections in the OPSS "Maintain Operator Data—Aircraft" area are part 119-specific for each 14 CFR part. Examples of part 119 section selections for parts 121, 125, and 135 include the following:

1) Selections available for part 121:

- Section 119.21(a)(1)—Domestic (D),
- Section 119.21(a)(2)—Flag (F),
- Section 119.21(a)(3)—Supplemental (S), and
- Section 119.21 (a)(1), (2), (3)—(D) (F) & (S).

NOTE: In the cases where more than one type of part 121 operation is authorized for a particular airplane, the certificate holder/principal operations inspector (POI) should select "119.21(a)(1), (2), (3)—(D) (F) & (S)" in the column labeled "Type Section 119." For example, an air carrier who operates a DC-9-82, N12121, in both domestic and international operations (lower 48 states and Canada), the certificate holder/POI should select "119.21(a)(1),(2),(3)—(D) (F) & (S)."

2) Selections available for part 125/125M (Letter of Deviation Authority (LODA)):

- Section 119.23(a)—Private Carriage (Noncommon Carriage), and
- Section 119.23(a)—125M LODA (When Common Carriage is Not Involved).

3) Selections available for part 135:

- Section 119.21(a)(4)—Commuter,
- Section 119.21(a)(5)—On-Demand,
- Section 119.23(b)—Private Carriage (Noncommon Carriage),
- Section 119.25(a)—Rotorcraft Commuter, and
- Section 119.25(b)—Rotorcraft On-Demand.

F. Passenger Seating Terminology for Parts 121 and 125.

1) Passenger seating terminology is derived from and associated with the emergency evacuation demonstrations requirements of 14 CFR part 25, § 25.803; part 121, § 121.291(a) and (b); and part 125, § 125.189. These terms are also consistent with the guidance in Volume 3, Chapter 30.

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2) For the purposes of parts 121 and 125 emergency evacuation demonstration requirements, the terms "capacity" and "configuration" have the same meaning with respect to passenger seating. An airplane with a seating capacity of more than 44 passengers requires a demonstration of emergency evacuation procedures in accordance with § 121.291 or § 125.189.

3) "Certificated seats," as referenced in A003, is a term derived from the emergency evacuation certification requirements of § 25.803. This requirement establishes, by actual demonstration, the maximum certificated seating capacity of the airplane. Volume 3, Chapter 30, Section 9 includes Table 3-121, Maximum Approved Passenger Seating Capacity For Transport, which lists the maximum seating capacity for airplanes typically used in air carrier service. This list is to be considered the primary source document for Flight Standards Service (AFS) inspectors when determining maximum seating capacities. The listed maximum seating capacity values are derived from the airplane Type Certificate Data Sheets (TCDS).

4) "Demonstrated seats" is the number of seats installed in the airplane at the time the certificate holder complied with § 121.291(a) or (b), or § 125.189(a) and (b). This seating configuration will determine the number of Flight Attendants (F/A) required by § 121.391 or § 125.269.

5) "Installed seats" refers to the actual seating configuration of the individual airplane.

NOTE: For part 135 OPSS data entry, "certificated seats" refers to the maximum seating capacity stated in the aircraft TCDS, which includes pilot seats. "Installed seats" are passenger seats actually installed in the individual aircraft. 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, requires the applicant to list the passenger seats installed for the aircraft make and model. This does not include seats occupied by the pilot or co-pilot, unless the latter is available for passenger use. OPSS data feeds the 14 CFR part 298 insurance registration and coverage module from "Maintain Operator Data—Aircraft" for certificated seats only.

6) All-cargo operations allow only passengers as defined in § 121.583(a) and part 135, § 135.85. For all-cargo operations, the number "0" shall be entered into the columns labeled "Certificated Seats," and "Demonstrated Seats."

7) In passenger/cargo operations, the passenger seating guidance in subparagraphs 3-737C1) through 4) apply.

G. Number of F/As: Parts 121 and 125. Enter the number of F/As used during the certificate holder's emergency evacuation demonstration required by § 121.291 or § 125.189 for each airplane listed.

H. F/A: § 135.107. In the OPSS "Maintain Operator Data—Aircraft, Flight Attendant" column enter the F/A requirement for each airplane. If the airplane is configured with more than 19 passenger seats, enter the number "1." If the passenger seating configuration is 19 seats

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or fewer, enter the number "0." There is not a "Number of Flight Attendants" column associated with OpSpec A003 for part 135.

I. Class of Operation. Enter the appropriate class of operation for each airplane listed. Enter only one class of operation for each airplane. The classes of operations are: Single-Engine Land (SEL), Single-Engine Sea (SES), Multiengine Land (MEL), Multiengine Sea (MES), and helicopter (HEL).

J. Type of Operation. Enter the appropriate en route flight rule for each airplane. If the airplane is approved for instrument flight rules (IFR) operations, enter "IFR/VFR" in the column labeled "En Route Flight Rule." Part 121 operations are required to conduct operations in IFR. If the airplane is restricted to visual flight rules (VFR) operations only, select "VFR Only." Select the day/night condition for each airplane. If the airplane is approved for both day and night conditions, select "Day/Night" in the column labeled "Condition." If the airplane is approved for daylight conditions only, select "Day Only."

OPSPEC/MSPEC A004, SUMMARY OF SPECIAL AUTHORIZATIONS AND LIMITATIONS.

A. Purpose. This paragraph summarizes optional authorizations applicable to a particular operator.

B. Part 145. For part 145 repair stations, this paragraph summarizes special (optional) authorizations and/or limitations applicable to the certificate holder. The 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 AND DEVIATIONS. In order for an operator to conduct operations under the provisions of any exemption or deviation, the exemption or deviation must be listed in A005.

A. Exemptions. 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 Remarks and/or References (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 a single high frequency (HF) radio is permitted by exemption in certain areas of en route operation, insert a reference to OpSpec B050 (see paragraph B050). In this example, the appropriate areas of en route operation in B050 should contain a note authorizing the provisions of that exemption for those areas.

B. Deviations. Enter the applicable 14 CFR sections to which a deviation has been granted in A005b. Select the applicable deviations by 14 CFR section. In the space labeled Remarks and/or References (adjacent to each deviation), briefly describe the provisions of the deviation. For example, if an operator is granted a deviation to permit the same person to serve as director of operations and director of maintenance, list the applicable 14 CFR. In the Remarks and/or Reference space, enter information specific to that operator or NA for "not applicable".

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Table 3-5 explains the standard OpSpecs paragraphs that must be referenced and issued when granting deviations in each subject area (others may also be applicable).

NOTE: There are no deviations for part 145 repair stations.

Table 3-5. Standard OpSpecs Paragraphs to Reference When Granting Deviations

SUBJECT	PARAGRAPH NUMBER	APPROPRIATE REGULATION
Management	A006	Various, depends on operating regulation, management position, and qualifications
Extended-Overwater Operations without liferafts	A013	Sections 121.339(a)(2), (3), and (4)
Basic Part 135 Operator On-Demand Operations Only	A038	Sections 119.69(b), 135.21(a), and 135.341(a)
Basic Part 135 Operator Commuter and On-Demand	A037	Sections 119.69(b), 135.21(a), and 135.341(a)
Part 135 Single Pilot-in-Command Operator	A039	Sections 119.69(b), 135.21(a), and 135.341(a)
Extended-Range Operations with Two-Engine Airplanes	B042	Sections 121.161(a)
Special Fuel Reserves in International (Flag) Operations	B043	Sections 121.645(b)(2)

OPSPEC A006, MANAGEMENT PERSONNEL.

A. Titles. An operator's management personnel may have titles different from titles of management positions used in the 14 CFR. The intent of A006 is to clearly identify the operator's management personnel who are fulfilling 14 CFR management positions. A006 is also used to approve deviations from required management positions. Direction and guidance for approving deviations from management requirements is in subparagraph C below. Indicate approval of these deviations in A006 as follows:

1) For deviations that permit less than the required management positions, leave the positions that are not filled blank. Enter "NA" for "not applicable" for single-pilot operators and single pilot in command (PIC) operators.

2) For deviations that permit the same person to fill two or more positions, enter the name and title of that person in the appropriate positions.

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3) For deviations that permit a person to hold a management position when that person does not meet the regulatory qualification requirements, enter the name and title of that person in the appropriate position.

4) In all cases list the appropriate regulatory section in OpSpec A005(b) of the OpSpecs.

B. Required Information. The OPSS must be accurate and contain at least the information required for OpSpecs in order for them to be correct. Additional text may be added to A006 without making it nonstandard, provided the extra paragraph is used to identify additional management positions (such as more than one chief pilot), or to specify conditions of a deviation. If the extra paragraph provides for anything other than the preceding, it must be processed in accordance with Volume 3, Chapter 2, Section 1, paragraph 3-37B.

C. Required Management and Technical Personnel Positions.

1) Title 14 CFR part 119, § 119.65 requires management and technical personnel positions for certificate holders operating under 14 CFR part 121 (i.e., Director of Safety (DOS), Director of Operations (DO), chief pilot, Director of Maintenance (DOM), chief inspector).

2) Section 119.69 requires management and technical personnel positions for certificate holders operating under 14 CFR part 135 (i.e., DO, chief pilot, DOM).

3) Sections 119.67 and 119.71 specify the airman and experience qualifications for personnel serving in these positions for parts 121 and 135, respectively.

4) Sections 119.67(e) and 119.71(f) specify airman, managerial, and supervisory experience deviation authority.

5) The regulations are intended to ensure that persons holding these required management and technical positions have the measure of experience as well as the demonstrated capability needed to effectively manage these types of programs. In addition, persons exercising control over the maintenance and operations programs must have that level of qualification and experience that will allow these persons to carry out their duties and responsibilities with the degree of expertise consistent with the certificate holder's responsibility to operate with the highest possible degree of safety.

6) The deviation request element of the regulations is intended to provide the certificate holder a measure of flexibility in order to allow employment of persons who may not possess the exact type or level of experience outlined in the regulations but who have other experience that is found to be comparable. Further, the deviation request procedure is not intended to accommodate individuals who do not possess the length of experience required by the regulations.

D. Management Deviation Request. When a certificate holder requests a management experience deviation, or management positions or numbers of positions other than the requirements of §§ 119.65 through 119.71, it must make such requests through its certificate-holding district office (CHDO). The request must adhere to the following processes

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and procedures and contain a minimum of the information shown in subparagraph D1) below for evaluation:

1) Management Deviation Request Contents.

a) Full certificate name including doing business as (DBA) of the requesting entity (e.g., ABC Airlines, Inc. DBA XYZ Air);

b) Complete address and certificate number of certificate holder;

c) Full name and airman certificate number of the management applicant;

d) Number of aircraft by category, class, and type;

e) Number of employees/pilots/other crewmembers;

f) Areas and kinds of operations (e.g., Continental United States (CONUS), domestic) authorized;

g) Statement of operations authorized (e.g., single PIC, basic part 135 on-demand only, part 121);

h) Any other management deviations held by the certificate holder;

i) Statement of why the certificate holder requires a management deviation, management position(s) involved, and what comparable experience the individual has that would justify the management deviation; and

j) A resume for the individual that specifically outlines their work experiences and duration of each work experience to include, if appropriate, PIC, certified mechanic, and/or management experience for the kind of operations conducted.

NOTE: The information contained in the resume must be verified by the principal operations inspector (POI) or principal maintenance inspector (PMI), as appropriate.

2) Evaluating Management Experience Deviation Requests (Part 119).

a) Lack of Airmen Certificates. The regulations do not permit the issuance of an airman certificate requirement deviation for individuals who do not hold the required airmen certificates or ratings. However, they may apply for an exemption under 14 CFR part 11.

b) DOS Position. Each certificate holder that conducts operations under part 121 must have a DOS. This person is responsible for keeping the certificate holder's highest management officials fully informed about the safety status of the company. An independent, full-time position is required. However, in a small part 121 operation, the DOS functions may be an additional function of a current manager. Any request for a management deviation involving a DOS position must be approved by the Air Transportation Division (AFS-200).

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NOTE: Requests for one individual to fill this position for more than one certificate holder concurrently will not be considered.

c) Comparable Experience. A management position experience deviation may be issued for individuals who lack the precise experience requirements (specified in §§ 119.67 and/or 119.71) if acceptable comparable experience is presented and accepted by the Administrator.

1. DO/Chief Pilot Positions. Experience in any position where the normal duties and responsibilities included management/supervisory oversight and/or control of the development upkeep and the performance of one or more elements of an operator's operational control system may be considered as comparable experience. Management positions, wherein the applicant exercised management decisionmaking processes, may be considered as comparable experience (e.g., assistant DO, assistant chief pilot, general manager). Experience involving operational control may also be acceptable (e.g., supervisory aircraft dispatcher, supervisory flight follower).

2. Comparable Experience. For certificate holders with only a single PIC or a basic part 135 operation, the following examples may be considered as comparable experience:

- Experience as a PIC conducting the same kinds of operations that the applicant would be responsible for managing;
- Experience as a manager of a corporate flight department with operations similar to an air carrier;
- Experience in a military PIC position with responsibilities and experience comparable to a civil aircraft operation PIC; or
- Experience in a management position with responsibilities for safely transporting passengers and/or military executive charter.

3. Unacceptable Experience. All acceptable, comparable experiences added together must equal the required 3 years. However, experience as a military fighter pilot flying in combat scenarios, a flight instructor, a crop duster, or a helicopter external load operator, would not be considered comparable experience. A college education or educational experience in aviation or writing manuals does not substitute for actual work experience.

Table 3-6. Example for a Chief Pilot Deviation

POSITION/TITLE	LENGTH OF EMPLOYMENT	COMPARABLE EXPERIENCE
Part 135 PIC	24 months	Acceptable (24 months)
Assistant Chief Pilot	13 months	Acceptable (13 months)
Flight/Ground Instructor	26 months	Unacceptable (0 months)
		Total: 37 months

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4. Months of Experience. In the example, the applicant would be approved. The applicant had 24 months of actual experience required by the regulation combined with 13 months of comparable experience for a total of 37 months (36 months required). The 26 months as a flight instructor is not comparable experience.

5. DOM Positions. Experience in any position where the normal duties and responsibilities included management oversight and/or control of the development, upkeep, as well as the performance of one or all of the following elements of an aircraft maintenance or inspection program, including:

- The maintenance program manual;
- Responsibility for airworthiness;
- Maintenance and inspection organization;
- Performance and approval of maintenance, preventive maintenance, and alterations;
- Alterations performed by maintenance providers or contractors;
- Continuing Analysis and Surveillance System (CASS);
- Maintenance recordkeeping; and
- Maintenance personnel training.

6. Chief Inspector Positions. Experience in any position where the normal duties and responsibilities included management oversight and/or control of the development, upkeep, as well as the performance of one or all of the following elements of an aircraft maintenance inspection, quality control (QC), or quality assurance (QA) functions within a maintenance or inspection program, including

- The inspection program policy and procedures;
- Responsibility for airworthiness;
- Inspection organization;
- QA of the performance and approval of maintenance, preventive maintenance, and alterations;
- Alterations performed by maintenance providers or contractors;
- Maintenance recordkeeping; and
- Inspection personnel training.

7. Combined Positions. Any certificate holder who requests approval to combine two or more required management positions into one position must ensure that the person who will serve in that position meets the qualifications for, or receives a deviation for, each management position to be combined (e.g., chief pilot and DO), in addition to receiving an approval to combine the management positions. The size, scope, complexity, and work load of the operations that the applicant has been involved with, and will be involved with in the combined management position, must be considered when evaluating this request. Requests to combine the positions of DOM and chief inspector will not be approved.

NOTE: Applicants who serve in a combined management position should not be assigned to any additional duties (e.g., check airman, aircraft instructor).

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3) Authority to Approve or Deny Management Requests. Deviation authority in § 119.71(f) extends the accountability for granting or denying deviations from this section to the AFS-200 division manager and the Aircraft Maintenance Division (AFS-300) division manager.

a) A certificate holder may request a deviation through the assigned principal inspectors (PI). If the CHDO approves the deviation, the endorsement is then forwarded to the regional Flight Standards division (RFSD) for concurrence.

b) The request to employ a person who does not meet the appropriate airmen experience requirements, managerial experience requirements, or supervisory experience requirements of this section will be reviewed by the AFS-200 or AFS-300 division manager, as appropriate.

c) If the division manager finds, after consideration is given to the size and scope of the operation, that the person's qualifications and experience are comparable with the sought after position, a deviation may be granted under § 119.71(f). The Administrator may, at any time, terminate any grant of deviation authority issued under this paragraph.

d) AFS-200 and/or AFS-300, as appropriate, will return the package to the RFSD. AFS-200 and/or AFS-300 will reply in writing to the CHDO through the RFSD with a statement of approval or denial of the request. AFS-200 and/or AFS-300 will not take action on requests received directly from certificate holders or CHDOs without CHDO manager and RFSD manager recommendations.

E. Program Tracking and Reporting Subsystem (PTRS) Input. Enter activity code 1381 or 3381, as appropriate, and enter "119DEV" in the "National Use" field. POIs/PMIs should record comments of interaction with the operators in the "Comments" section.

OPSPEC/MSPEC A007, OTHER DESIGNATED PERSONS.

A. Template A007. In the automated Operations Safety System (OPSS), Template A007 is used for identifying each operator's agent for service, persons designated to apply for and receive applicable authorizations, persons designated to receive Safety Alerts for Operators (SAFO) and/or Information for Operators (InFO), and other designated persons. Each Template A007 is labeled specific to the OPSS 14 CFR database:

1) Title 14 CFR parts 121, 125, 133, 135, and 145 databases: Template A007 is labeled an operations specification (OpSpec).

2) Title 14 CFR parts 141 and 142 databases: Template A007 is labeled a training specification (TSpec).

3) Title 14 CFR part 91 subpart K (part 91K) database: Template A007 is labeled a management specification (MSpec).

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4) Part 91 subpart J and part 125 subpart M databases: Template A007 is labeled a letter of authorization (LOA).

5) Title 14 CFR part 137 and other databases also have A007 templates to identify designated persons.

B. Agent for Service. An agent for service is a person or company designated by the operator upon whom all legal notices, processes and orders, decisions, and requirements of the Department of Transportation (DOT), FAA, and National Transportation Safety Board (NTSB) shall be served. Once any of these documents has been served upon the operator's agent for service, the certificate holder cannot claim (legally) that it did not receive the documents. Title 49 of the United States Code (49 U.S.C) § 46103 requires air carriers to designate an agent for service. The name, title, and address of the agent for service must be obtained from the operator and correctly entered into the OPSS Certificate Holder's Personnel tab. This information will load into the A007 template.

C. Persons Designated to Apply for and Receive OpSpecs/TSpecs/MSpecs/LOAs. Names and titles of persons designated by the operator as authorized to apply for and receive OpSpecs/TSpecs/MSpecs/LOAs must be entered in Template A007. The "Parts" of the operator's authorizations for which the designated person is responsible must also be entered. Principal inspectors (PI) may determine that it is appropriate to have signatures of these designated persons recorded in this subparagraph.

D. Persons Designated to Receive SAFOs and/or InFOs. All A007 templates (with the exception of part 141 and 142 databases in the OPSS) are used to collect the name, email address, telephone number, and type of SAFO/InFO information that person should be sent (i.e., Operations, Airworthiness, or both). Part 141 pilot schools and part 142 training centers will not have a person designated to receive SAFOs or InFOs in Template A007. Part 145 repair stations will have a person designated to receive InFOs in Template A007. A reply message signifying receipt of the SAFO/InFO information by a designated person is not required. (Refer to the current editions of FAA Orders 8000.87, Safety Alerts for Operators, and 8000.91, Information for Operators (INFO).)

NOTE: If an operator does not have an email address, a facsimile number may be entered in the email address block.

1) A SAFO contains important safety information, often of an urgent nature, and may include recommended action. SAFO content is valuable to air carriers and other air operators in meeting their statutory duty to provide service with the highest possible degree of safety in the public interest.

2) Much like a SAFO, which contains critical safety information, an InFO contains valuable information for operators that should help them meet administrative requirements or certain regulatory requirements with relatively low urgency or impact on safety.

3) Government and industry have agreed on the importance of having a prompt, reliable delivery system for SAFOs and InFOs and taking advantage of email and postings at FAA public Web sites. Accordingly, they have ratified that a recipient of SAFOs and InFOs

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must be identified in Template A007 so that the FAA may notify an operator of a new SAFO or InFO and recommended action to be taken by the respective operators identified in each SAFO/InFO.

E. Part 91K. Part 91K fractional ownership operations must identify the specific persons in MSpec A007 as follows:

1) Agent for service for the program manager.

2) Personnel designated to apply for and receive management specifications for the program manager.

3) Point(s) of contact (POC) and required positions for those authorized a Continuous Airworthiness Maintenance Program (CAMP).

4) Voluntary Disclosure Program Personnel for part 91K only. Reference Advisory Circular (AC) 00-58, Voluntary Disclosure Reporting Program, current edition, and Volume 11, Chapter 1, Section 1.

5) Personnel designated to receive SAFOs/InFOs for the program manager.

F. Part 145 Repair Stations. List the authorized person(s) by name, title, and the paragraph of the OpSpec he/she is authorized to sign.

NOTE: Individuals' titles listed in Template A007 should match the title in the Enhanced Vital Information Database (eVID).

OPSPEC A008, OPERATIONAL CONTROL; MSPEC A008, FLIGHT MANAGEMENT.

A. General. Each 14 CFR part 121 and part 135 operator must have a system and/or procedures for the control of flight movements. The intent of A008 is to promote a mutual understanding between an operator and the FAA concerning the system and/or procedures used by that operator. Volume 3, Chapter 25, Operational Control for Air Carriers details the three basic systems and/or procedures required by parts 121 and 135. The three systems and/or procedures are as follows:

1) Part 121 domestic and flag operations must have dispatch systems. See Volume 3, Chapter 25, Section 2, Flight Dispatch Systems and Domestic Operating Rules.

2) Part 121 supplemental operations must have flight following systems when the operator does not have an established dispatch system. See Volume 3, Chapter 25, Section 3, Part 121 Flight Release Systems and Supplemental Operating Rules.

3) Part 135 operators use flight locating procedures. See Volume 3, Chapter 25, Section 5, Title 14 CFR Part 135 Flight Locating Systems and Operating Rules.

4) MSpec A008 must describe the flight management used by the program manager to provide program control for flight operations and other procedures and policy instructions

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regarding program operations. This information may also be notated by reference to the appropriate manual (part 91, § 91.1029). In addition, MSpec A008 requires the program manager to give the location of the current list of fractional aircraft owners (part 91, § 91.1027).

B. Referencing With Paragraph A008. Describe or reference the system and/or procedures used by an operator in A008. It is preferable to complete A008 with references to an operator's manual or sections of an operator's manual which describe the system and/or procedures used by that operator. It is not necessary to control these references by date. Change the references only when a revision to the operator's manual makes the reference in the OpSpecs incorrect. When an operator's manual does not adequately describe the system and/or procedures used, a narrative description combined with references may be necessary. Often, it may not be appropriate to use references in this paragraph, (especially with smaller part 135 operators). In these cases narrative description may be necessary. When a narrative description is used, it should be brief but provide sufficient information so that the FAA and the operator have the same understanding about the system and/or procedures used by the operator.

C. Necessary Information for Description of Systems/Procedures. The description of the systems and/or procedures for controlling flight movement as described in the operator's manual and referenced in the OpSpecs, or as narratively described in the OpSpecs, should include the following 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 operator in the exercise of operational control;
- Communication systems and procedures used by the operator;
- Special coordination methods and/or procedures used by the operator to assure the aircraft is airworthy; and
- Emergency notification procedures.

OPSPEC A009, AIRPORT AERONAUTICAL DATA; MSPEC A009, AERONAUTICAL DATA.

A. General. Part 121, §§ 121.97 and 121.117 require part 121 operators to have an approved system for obtaining, maintaining, and distributing airport aeronautical data. A009 provides the method for approving airport aeronautical data systems for part 121 operators. Title 14 CFR part 91, § 91.103 and 14 CFR part 135 subpart I, § 135.83 require part 135 operators to obtain, maintain, and distribute essentially the same types of airport aeronautical data. Although a part 135 operator is not required to obtain FAA approval of the system used, A009 provides a method of promoting the same understanding between the operator and FAA concerning the system used to comply with the regulations pertinent to airport aeronautical data. Volume 4, Chapter 3, Section 4, Airport Data Acquisition Systems provides direction and guidance concerning airport aeronautical data systems.

B. Referencing Systems Used for A009. Describe or reference the system approved for part 121 operators or used by part 135 operators in A009. When possible, the paragraph should

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be completed by referencing pertinent sections of the operator's manual or other documents which describe the system used by the operator. When the airport aeronautical data system is not described in a manual or another document, a narrative description of the system must be used to complete A009. When a narrative description (or outline) is used, it should be brief but provide sufficient information to describe the system used to obtain, maintain, and distribute required airport aeronautical data.

C. Description of Aeronautical Data System. The program manager's description of the aeronautical data system in MSpec A009 should be brief but provide sufficient information describing the system used to obtain, maintain, and distribute required aeronautical data.

OPSPEC/MSPEC A010, AERONAUTICAL WEATHER DATA.

A. General. OpSpec A010 is intended to promote understanding between the operator and the FAA concerning the system used for obtaining and disseminating required weather data and other aeronautical data. Numerous regulatory requirements in 14 CFR parts 121 and 135 require operators to have or use a system for obtaining and disseminating aeronautical weather data.

- Part 91 subpart K program managers are expected to maintain an equivalent level of safety as a part 135 certificate holder.
- Part 121, § 121.97 requires operators who conduct domestic and flag operations to use an FAA-approved system for obtaining, maintaining, and distributing current aeronautical data.
- Part 121, § 121.101 requires operators who conduct domestic and flag operations to use an FAA-approved system for obtaining forecasts and reports of adverse weather phenomena.
- Part 121, § 121.117 requires operators who conduct supplemental operations to use an FAA-approved system for obtaining, maintaining, and distributing current aeronautical data.
- Part 121, § 121.119 requires operators who conduct supplemental operations to use an FAA-approved system for obtaining forecasts and weather reports.
- Part 125 has no requirement for using an FAA-approved system for weather or aeronautical data.
- Part 135, § 135.213 requires operators who conduct instrument flight rules (IFR) operations under that part to use the U.S. National Weather Service or a source approved by the Administrator.

B. Approving Weather Collection and Dissemination System. OpSpec A010 provides the method for approving this adverse weather phenomena collection and dissemination system. Volume 3, Chapter 26, Aviation Weather Information Systems for Air Carriers, provides additional direction and guidance on aeronautical weather data systems.

C. Approval to Use Enhanced Weather Information Systems. Enhanced Weather Information Systems (EWINS) are approved by OpSpec/MSpec A010. Approval for an operator to use EWINS must be accomplished by referencing the EWINS Policy and Procedures Manual in OpSpec/MSpec A010. The original date of the EWINS manual and the last revision must also

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be referenced in OpSpec/MSpec A010. See Volume 3, Chapter 26, Section 4, Sources of Weather Information.

D. Approval for Adverse Weather Phenomena Reporting and Forecasting System. Part 121 operators (domestic and flag operations) who are not approved to use EWINS must obtain approval of an Adverse Weather Phenomena Reporting and Forecasting System. For these operators, OpSpec/MSpec A010 must be completed as follows:

1) Reference sections of the operator's manual or other documents that describe the operator's Adverse Weather Phenomena Reporting and Forecasting System. If such manual sections or other documents do not clearly describe the Adverse Weather Phenomena Reporting and Forecasting System, a narrative description (combined with references where available) of the approved system must be added to OpSpec/MSpec A010. See Volume 3, Chapter 26, Section 3, Parts 121/135 Weather Information Systems, paragraphs 3-2096 and 3-2097.

2) Reference or describe the methods used for obtaining and disseminating other types of weather data (not related to the approved Adverse Weather Phenomena Reporting and Forecasting System) in OpSpec/MSpec A010.

E. Requirement to Use Qualified Internet Communications Provider. For Internet communications of aviation weather and Notices to Airmen (NOTAM) used in flight operations, all part 121 and 135 operators are required to use an approved Qualified Internet Communications Provider (QICP).

1) List the QICPs used by the operator in OpSpec/MSpec A010 subparagraph a, Table 1.

2) The QICP used must be obtained from the approved list provided by the FAA.

3) For more detailed information in regard to QICPs, refer to AC 00-62, Internet Communications of Aviation Weather and NOTAMs, and Volume 3, Chapter 26, Aviation Weather Information Systems for Air Carriers.

OPSPEC/MSPEC A011, APPROVED CARRY-ON BAGGAGE PROGRAM.

A. General. Part 121, § 121.589 requires part 121 operators to have an approved carry-on baggage program. This regulation also requires FAA approval to be in the operator's OpSpecs. When the FAA issues OpSpec/MSpec A011, the operator is authorized to either allow passengers to stow carry on bags in the aircraft cabin or restrict the items brought inside the aircraft cabin to passenger personal items. Operators that do not allow carry-on bags in the cabin of the aircraft are considered to have a no-carry-on baggage program. Advisory Circular (AC) 120-27, Aircraft Weight and Balance Control, current edition, provides further details regarding the definitions of carry-on baggage and personal items. OpSpec/MSpec A011 must describe or reference the carry-on baggage program or the no-carry-on baggage program. It is permissible for OpSpec/MSpec A011 to reference a separate carry-on baggage document developed by the operator that describes the program. However, the operator may elect to implement the carry-on baggage program by describing the requirements of the program in various sections of its manuals, such as the passenger services manual and the flight attendant

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manual. In this case, template A011 should reference specific sections of the pertinent manuals. Reference to the approved program in the template must be controlled by revision number and/or date, as appropriate. When an operator's manual or separate carry-on baggage document does not adequately describe the approved carry-on baggage program, a combination of references and narrative description may be necessary. The description of the approved carry-on baggage program must address the items discussed in the current editions of AC 121-29, Carry-On Baggage, and AC 120-27. Additionally, one or more of templates A096, A097, A098, and/or A099 must be issued to track the approved carry on bag/personal item actual or average weights.

B. Accounting for Carry-On Baggage Weight. Parts 91, 91 subpart K, and 135 operators requesting authorization to use average or segmented passenger weights that meet the requirements specified in AC 120-27, current edition, must either have a letter of authorization or been issued OpSpec/MSpec A011 to account for the actual or average weights used to account for carry-on baggage. Additionally, one or more of OpSpecs/MSpecs A096, A097, A098, and/or A099 must be issued to track the approved carry-on bag/personal item actual or average weights.

C. No Carry-On Baggage Program. Operators of small- and medium-cabin aircraft, as referenced in AC 120-27, current edition, may elect to only allow personal items onboard the aircraft. Operators with no-carry-on baggage programs must have procedures in place that ensure carry-on bags are either checked at the ticket counter, the gate, or plane side. Training programs should include the recognition of carry-on bags and procedures for removing such bags if they are inadvertently brought onboard the aircraft.

OPSPEC A012, PART 121 DOMESTIC OPERATIONS TO CERTAIN AIRPORTS OUTSIDE THE 48 CONTIGUOUS UNITED STATES AND ALASKA.

A. General. Title 14 CFR part 119, § 119.3(2)(iv), definition of "domestic operation," gives the Administrator the authority to allow a 14 CFR part 121 certificate holder with flag authority to conduct operations to and from specific airports outside the 48 contiguous United States and Alaska, in accordance with the rules applicable to domestic operations instead of the rules applicable to flag operations. Operations specification (OpSpec) paragraph A012 is the method that the Administrator uses to grant this authorization.

B. Applicability. A012 is an optional OpSpec paragraph that is applicable to part 121 certificate holders who hold economic authority and are authorized in OpSpec paragraph A001 to conduct domestic and flag operations.

C. Conditions and Limitations. The following are some of the key conditions and limitations that must be met in order for certificate holders to operate under the authority granted by OpSpec paragraph A012:

1) The origin and destination airports must be listed in the certificate holder's OpSpec paragraph C070 as a regular, provisional, or refueling airport. Although some certificate holders list alternate airports in their C070, part 121, § 121.631(a) specifically states,

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"A certificate holder may specify any regular, provisional, or refueling airport, authorized for the type of aircraft, as a destination for the purpose of original dispatch or release."

2) Destination airports outside of the contiguous United States that are not located in the state of Alaska must be within 950 nautical miles (NM) from the territorial limits of the 48 contiguous United States.

3) An alternate airport for the destination must be listed in the dispatch release:

a) If the flight is scheduled for more than 6 hours, regardless of the destination.

b) For flights conducted to Alaska if the destination airport does not have more than one separate suitable runway authorized for the type of aircraft to be used.

4) Certificate holders must comply with all regulations applicable to domestic operations when conducting operations in accordance with OpSpec paragraph A012.

NOTE: Principal operations inspectors (POI) must ensure that certificate holders fully understand the provision in subparagraph C4), particularly when it comes to fuel planning. There are several OpSpecs paragraphs, such as B043, B044, and B343, which apply only to flag and supplemental fuel reserves. A certificate holder operating flights in accordance with the provisions of OpSpec A012 cannot apply any regulations or OpSpec paragraphs applicable to flag or supplemental operations. In other words, OpSpec A012 cannot be combined with OpSpecs such as B043, B044, and B343.

NOTE: Please review the actual OpSpec paragraph A012 template in the Web-based Operations Safety System (WebOPSS) to view the full authorization contained in the OpSpec, along with all of the conditions and limitations listed therein.

D. Policies and Procedures. Certificate holders who are seeking approval for OpSpec A012 must have adequate policies, procedures, and training in place for dispatchers and flightcrew members to ensure that flights are scheduled, planned, and released in accordance with all of the limitations and provisions of OpSpec A012.

E. If Conditions Cannot Be Met. If all of the limitations and provisions contained in OpSpec paragraph A012 cannot be met, the certificate holder is prohibited from conducting operations in accordance with its use and must conduct operations in accordance with flag rules.

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OPSPEC/MSPEC A013, OPERATIONS WITHOUT CERTAIN EMERGENCY EQUIPMENT.

A. General. Use OpSpec/MSpecs A013 and A005 to approve deviations from the requirements for certain emergency equipment for extended over water operations for turbojet-powered airplanes.

1) Authorization for issuance requires the concurrence of the principal operations inspector (POI), the appropriate region, and the Air Transportation Division, AFS-200.

2) Approval is indicated by listing in OpSpec/MSpec A013 the make and model of the aircraft and the routes and/or areas to which the deviation applies.

B. Applicability of OpSpec/MSpec A013 and Associated Deviations.

1) Part 91 subpart K fractional ownership program managers may apply for a deviation from part 91, § 91.509 to permit extended over water operations without carrying certain emergency ditching equipment.

2) Part 121 certificate holders may apply for a deviation from part 121, § 121.339 to permit extended over water operations without carrying certain emergency ditching equipment.

3) Part 135 certificate holders may apply for a deviation from part 135, § 135.167 to permit extended over water operations without carrying certain emergency ditching equipment.

C. Granting Deviations. If the FAA grants a deviation and issues OpSpec/MSpec A013:

1) Part 91K, fractional ownership program managers must list part 91, §§ 91.509(b)(2), (3), (4), and (5) in MSpec paragraph A005 with the reference to A013.

2) Part 121 certificate holders must list part 121, § 121.339(a)(2), (3), and (4) in OpSpec A005 with the reference to OpSpec A013.

3) Part 135 certificate holders must list part 135, § 135.167(a)(2) in OpSpec A005 with the reference to A013.

D. Life Preserver Deviation. It is FAA policy that deviations from the requirement to carry life preservers (§§ 121.339(a)(1), 135.167 (a)(1), or 91.509(b)(1), as applicable) will not be approved.

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E. Deviations From Carrying Liferafts. Deviations from the requirements for carrying liferafts and the liferaft's required attached equipment may be approved. There is no individual deviation provision or requirement for a deviation for the following required items:

- Survival kits (§§ 91.509(e), 121.339(c), and, 135.167(c), as applicable);
- Pyrotechnic signaling devices (§§ 91.509(b)(3), 121.339(a)(3), and 135.167(b), as applicable); and
- Emergency locator transmitters (§§ 91.509(b)(3), 121.339(a)(4), and 135.167(b), as applicable).

F. Permitted Areas of Operation. The area(s) of operation permitted is any offshore area adjoining the 48 contiguous states of the United States, the Gulf of Mexico, and the Caribbean Islands, as follows:

1) The south and east coasts of the United States, below 35 degrees North latitude, the Gulf of Mexico, and the Caribbean Islands, not to exceed 30 minutes' flying time in still air with one-engine inoperative, or 162 nautical miles (NM) from the nearest shoreline, whichever is less.

2) The east coast of the United States, 35 degrees North latitude and above, not to exceed 30 minutes' flying time in still air with 1 engine inoperative or 100 NM from the nearest shoreline, whichever is less.

3) The west coast of the United States, not to exceed 30 minutes' flying time in still air with one-engine inoperative or 100 NM from the nearest shoreline, whichever is less.

G. Requirements for Supporting Documentation for Deviation Request. The operator must submit an application with supporting documentation for the deviation request with at least the following information about the conditions that must be met for the approval:

1) Aircraft operational capabilities for diversion due to an engine failure. This information must include drift down profiles, engine out cruise performance for two- and three-engine aircraft, and two-engine cruise performance for four-engine aircraft.

2) A graphical presentation of the areas and routes of en route operation and/or routes over which provisions of the deviation will apply, including proposed minimum en route altitudes and airports which could be used if diversion is necessary. The A013 authorization contains a limitation that in flight operations must not exceed the distance allowed under subparagraph F, as applicable, from a shoreline at any time. An exception is allowed for temporary maneuvering for weather avoidance.

3) Navigation and communication equipment requirements and capabilities for normal flight conditions and for engine inoperative flight conditions in the proposed areas of en route operation.

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4) Existing and/or proposed procedures for diversion contingency planning and training curricula for flight and cabin crewmembers concerning ditching without liferafts.

5) A description of search and rescue facilities and capabilities for the proposed areas of en route operations.

H. Reviewing the Application.

1) The principal operations inspector (POI), in coordination with the principal maintenance inspector (PMI) and principal avionics inspector (PAI), must evaluate and substantiate submitted information. If a POI does not concur with the operator's proposal, the POI will forward a letter to the operator denying the application for a deviation with an explanation of the reasons for denial. If a POI concurs that the deviations should be approved, the POI will prepare and forward a recommendation along with the operator's application and supporting information to the Air Transportation Division, AFS-200, through the regional Flight Standards division.

2) AFS-200 will review the application, the supporting information, and the POI's recommendation. If AFS-200 does not concur with the POI's recommendation, AFS-200 will forward a letter to the POI, with a copy to the region, indicating nonconcurrence with an explanation of the reasons. If AFS-200 agrees with the POI's recommendation, AFS-200 will advise the POI by letter of the concurrence. With AFS-200 concurrence, the POI may approve the deviation by issuing A013 and A005.

OPSPEC A014, IFR EN ROUTE OPERATIONS IN CLASS G AIRSPACE.

A. General.

1) A014 provides the initial authorization for instrument flight rules (IFR) en route operations in Class G airspace. Other IFR en route authorizations may be found in OpSpecs B031, B034, B035, and B036, as applicable and appropriate.

2) OpSpec B032 prohibits special IFR en route operations in Class G airspace unless the POI approves such operations by issuing A014. IFR operations in Class G airspace are not provided any air traffic control (ATC) separation services. The certificate holder and the pilot in command (PIC) are responsible for avoiding obstacles and other air traffic.

B. Prerequisites for Authorizing En Route IFR Operations. Before authorizing en route IFR operations in Class G airspace to part 121, 121/135, 125, or 135 certificate holders:

1) The POI must confirm that the operator has a method or procedure for assuring that any facilities and services that this type of operation depends upon are operational during the periods in which flights are to occur.

2) The POI must also confirm that the operator has developed procedures and guidance for crewmember use while operating in areas of en route operations in Class G airspace. Aeronautical Information Publications (AIP) or flight information region (FIR)

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publications have broadcast in the blind procedures and other guidance for crewmember use when large areas of Class G airspace are within the area covered by the AIP or FIR.

NOTE: See Volume 4, Chapter 1, Section 1, General Navigation Concepts, Policies, and Guidance, and Section 4, Class II Navigation, for further discussion on en route operations in Class G airspace.

3) The reference to OpSpec B051 is to provide for part 121 reciprocating and turbo propeller powered aircraft operations only.

C. Special Terminal Area IFR Operations. OpSpecs C064, C080, and/or C081 now authorize special terminal area IFR operations in Class G airspace or at airports without an operating control tower. One or both types of these operations may be authorized.

D. Program Manager Authorizations. MSpec A014 authorizes the program manager to conduct IFR operations in Class G airspace and at airports without an operating control tower. Part 91 subpart K program managers will not have a separate MSpec C064 or C080.

OPSPEC A015, AUTOPILOT IN LIEU OF REQUIRED SECOND IN COMMAND.

A. General. In accordance with part 135, § 135.105(b), a part 135 operator may apply for authorization to use an autopilot in place of a second in command. The principal operations inspector (POI) must coordinate with an avionics inspector to ensure each particular aircraft/autopilot combination is installed in accordance with FAA-approved data, is airworthy, and is operationally capable of maintaining control of the aircraft to the degree specified in § 135.105(c).

B. Making Note of Conditions and Limitations. List the aircraft make and model and the autopilot manufacturer and model identification in A015. Any conditions or limitations which the POI determines necessary for a particular aircraft/autopilot combination must also be listed. It is not necessary to repeat conditions or limitations already specified in an Airplane Flight Manual (AFM) or AFM supplement. If no conditions or limitations apply, enter the word "none" in that part of the listing.

OPSPEC A016. Reserved. It was split into four separate authorizations: A037, A038, A039, and A040.

OPSPEC A017, APPROVED SECURITY PROGRAM FOR HELICOPTERS.

A. General. Title 49 of the Code of Federal Regulations part 1,500 does not include provisions for helicopter security programs. Helicopter operators who wish to enplane or deplane passengers or checked luggage into "sterile areas" must apply for, and receive authorization to use, an approved security program. A017 conveys the authority for helicopter operators to use an approved security program. Principal operations inspectors will not issue A017 without concurrence of the Civil Aviation Security Field Office.

B. Using References. Describe or reference the security program used by the operator in A017a. Reference sections of the operator's manual that describe the program used by that

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operator. It is not necessary to control these references by date. Change the references only when a revision to the operator's manual makes the reference in the OpSpecs incorrect. When the operator's manual does not adequately describe the system and/or procedures used, a narrative description combined with references may be needed.

C. Listing Airports and/or Heliports. List the airports and/or heliports where operators must comply with the approved security program in A017b.

OPSPEC A018, SCHEDULED HELICOPTER OPERATIONS. A018 is issued to helicopter operators who operate scheduled passenger or cargo carrying operations.

A. Completing Approach and Landing With Powerplant Failure. Subparagraph A018a(2) authorizes scheduled helicopter operations along "Restricted Helicopter Routes" with helicopters which do not have Transport Category "A" one engine inoperative performance capabilities. The operator must show that helicopters using these routes can, at any point along the route and while at the minimum authorized altitude, complete a safe approach and landing if powerplant failure occurs. Determining compliance with these conditions will almost always be a controversial and difficult inspector task. For this reason, only currently qualified and highly experienced helicopter specialists should be used to evaluate these types of routes. In controversial cases, a team of helicopter specialists should be employed for this task.

B. Defining Restricted Helicopter Routes. OpSpec B050 must precisely define "Restricted Helicopter Routes." This may be accomplished in accordance with instructions in Volume 3, Chapter 18, Section 4, Part B Operations Specifications—En Route Authorizations and Limitations, paragraph B050, subparagraph B(2)(e). In certain situations, detailed descriptions (including maps, charts, ATC letters of agreement, special provisions, and limitations) of "Restricted Helicopter Routes" may be lengthy and complex. Therefore, it is permissible to incorporate these documents in B050 by reference.

OPSPEC A019, AUTOMOTIVE GASOLINE AS AIRCRAFT FUEL. A certificate holder may request authorization to use automotive gasoline as fuel in reciprocating engine aircraft used in 14 CFR part 135 cargo operations. When an inspector receives a request for this authorization, he must take all of the following actions before issuing A019:

A. Approval to Use Automotive Gasoline. In coordination with an Airworthiness inspector, determine that the specific aircraft is approved to use automotive gasoline as fuel.

B. Inspect the List of Aircraft. Inspect the proposed list of aircraft the certificate holder must maintain under 14 CFR part 119, § 119.59(b) for compliance with the provision of A019b(2).

C. Inspect Certificate Holder Procedures. In coordination with an Airworthiness inspector, determine that the certificate holder has written procedures which provide compliance with the requirements of OpSpec paragraphs A019b(3) and (4).

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D. Necessary Entry in Aircraft and Powerplant Historical Record. The certificate holder must enter, in each appropriate aircraft and powerplant historical record, the following entry:

> "This aircraft/powerplant has been operated using automotive gasoline as fuel and is prohibited for use in part 135 passenger carrying operations until the following events have been completed and documented by a person authorized to perform an annual inspection of this aircraft:
>
> **1)** Remove all automotive fuel and fuel residue from the aircraft and powerplant fuel systems.
>
> **2)** Inspect all components of the aircraft fuel system and appropriate components of the powerplants to determine that those components are airworthy and conform to the appropriate type design.
>
> **3)** Record events (1) and (2) in the aircraft and/or powerplant records."

OPSPEC A020, AIRPLANE OPERATIONS WITHOUT INSTRUMENT RATED PILOTS. A certificate holder who applies for this authorization may be issued A020 after each of the following considerations are satisfied.

A. Criteria for an Isolated Area. The area to be approved must be isolated. In determining whether an area is an "isolated area," consider the following criteria:

1) Isolated areas may include small settlements or villages. Commercial transportation, such as bus or train, is not available. Major highways do not transit or penetrate isolated areas although secondary and unimproved roads (suitable for cars and trucks) may be available. In many cases, the destinations are so isolated that air travel is the primary means of transportation.

2) Landing areas may be unimproved strips or water sites depending on the kinds of airplanes used and the time of year. Ski equipped airplane operations would be appropriate to frozen lakes or rivers and to suitable, snow covered land areas.

3) The size of isolated areas may vary considerably, depending on the needs of a particular certificate holder. However, part 135, § 135.243(d) states that flights may not exceed 250 nautical miles (NM) from the operator's base of operations. The point of departure, en route portion of flight, and landing site all must be within the boundaries of the approved isolated area.

4) Within isolated areas flight planning and navigational requirements are normally performed by pilotage only. Radio navigational signal coverage (very-high frequency omnidirectional range or nondirectional radio beacon facilities) is usually limited, or largely ineffective, in these areas. However, a radio facility may be located at or near a landing site without changing the classification of the isolated area.

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5) Weather hazards that may be encountered in the proposed area and planning strategies that may reduce risk. (e.g., valleys may produce heavy fog in morning hours. Should a destination airport become fogged in while en route, consider using ABC airport as an alternate.)

B. Application for Isolated-Area Operations Using a PIC Without an Instrument Rating. Applicants requesting approval for these operations must hold an Air Carrier Certificate or an Operating Certificate and OpSpecs authorizing part 135 on-demand visual flight rules (VFR) day-only operations using single-engine land or seaplanes. Isolated-area operations using a pilot in command (PIC) without an instrument rating must not be authorized for commuter operations. Application for this authorization must be made by letter requesting amended OpSpecs. A map or current aeronautical chart identifying the area involved must be attached to the letter of application. This chart must clearly show the boundaries of the isolated area, the principal landing sites, and the distances from the operator's operations base.

C. Review of the Application for Compliance. Inspectors must review the application to confirm compliance with § 135.243(d)(3) (that the area is isolated) and § 135.243(d)(6) (flight distances do not exceed 250 NM). Inspectors must determine whether the certificate holder has a manual that incorporates instructions concerning operations in isolated areas. This manual must include a procedure that guarantees that noninstrument-rated PICs will not be used outside of the approved isolated areas. The principal operations inspector must determine that the following requirements are met before issuing A020.

1) All aircraft to be used are single, reciprocating engine powered, nine or fewer passenger airplanes equipped for at least day VFR operations.

2) Operations are limited to on demand, day VFR flights within the boundaries of the approved isolated area and not more than 250 NM distance from the base of operation.

3) Flight locating procedures are adequate.

4) The regional Flight Standards division concurs with the approval of the isolated area operation.

OPSPEC A021, HELICOPTER EMERGENCY MEDICAL SERVICES (HEMS)/AIR AMBULANCE OPERATIONS—HELICOPTER.

A. General. OpSpec A021 authorizes a certificate holder operating under part 135 to conduct air ambulance visual flight rules (VFR) emergency medical service operations in helicopters. The terms air ambulance, helicopter emergency medical services (HEMS), and helicopter emergency medical evacuation services (HEMES) are used interchangeably in regard to this authorization.

1) This HEMS/air ambulance authorization requires that the intended takeoff and landing site be adequate for the proposed operation considering the size of the site, type of surface, surrounding obstructions, and lighting.

2) If the HEMS operation is to be conducted at night, the takeoff and landing site must be clearly illuminated by a lighting source that will provide adequate lighting for the site

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itself and for any obstructions that could create potential hazards during approach, hovering, taxiing, and departure operations.

B. Provisions and Limitations. OpSpec A021 specifies that the certificate holder may not use a pilot in command (PIC) in HEMS operations unless that PIC has satisfactorily completed the certificate holder's FAA-approved training program for such operations. Because HEMS operations often involve flights during periods of inclement weather, the training program for HEMS operations must include a segment that covers the recovery from inadvertent instrument meteorological conditions encountered because of unforecasted weather conditions.

1) OpSpec A021 specifies the conditions (day/night), area (local/cross country), ceiling, and visibility the certificate holder is authorized to use for HEMS operations in Class G (uncontrolled) airspace. Night conditions are further defined by identifying different minimums for high and low lighting conditions. In addition, OpSpec A021 specifies different ceiling and visibility minimums for these considerations and areas when operating in mountainous and nonmountainous areas. Each specific combination of conditions and areas are listed in OpSpec A021.

a) The possible combinations of conditions and area include time of day (night or day), level of light available at night (low and high lighting conditions), area of operation (local or cross country), and the kind of area (mountainous or non-mountainous). Each of these combinations is specified along with ceiling and visibility authorizations.

b) Instrument flight rules (IFR) operators authorized to fly point-in-space special instrument approach procedures (IAP) with a "Proceed VFR" transition to the heliport must apply their visual flight rules (VFR) weather minimums in determining their landing minimums.

1. Since these operations require that the aircrew be specifically qualified for the use of these approaches, the visual segment area may be considered "local" in nature.

2. Because the pilot and aircraft are trained, equipped, and authorized as fully IFR capable under Part H authorizations, the area may be considered the equivalent of a "high lighting conditions" area at night.

3. The effect of precipitous terrain has been accounted for in the development of the minimum descent altitude (MDA) so, for purposes of applying VFR minimums in determining IFR landing visibility minimums, the area may be considered "nonmountainous." For planning purposes, this consideration applies when the distance from the missed approach point to the landing area is less than 3 NM.

4. Therefore, when applying the VFR weather minimums of OpSpec A021 in determining the minimums for all Special PinS approaches, with a "Proceed VFR" transition to the heliport, apply the local, nonmountainous, day, or night high lighting conditions (as appropriate) minimums in Table 1 of OpSpec A021 in determining the landing minimum if the distance from the missed approach point to the heliport is 3 NM or less. However, if the distance from the missed approach point to the heliport exceeds 3 NM, the certificate holder must apply the VFR minimums prescribed in Table 1 of OpSpec A021 appropriate to the actual existing conditions (local, mountainous, day or nonmountainous, cross country, night, etc.).

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NOTE: For instrument approaches with a "Proceed visually" visual segment, the minimums provided in OpSpec A021 do not apply; the minimums specified in the instrument approach procedure apply.

c) Requests for lower weather minimums for operations in uncontrolled airspace must be coordinated with and approved by AFS-200 through the regional Flight Standards division (RFSD). These requests must follow the nonstandard OpSpec approval process outlined in Volume 3, Chapter 18, Section 2, Automated Operations Safety System (OPSS), paragraph 3-713, Procedures for Requesting Nonstandard Authorizations.

C. Local Area. OpSpec A021 contains a description of the "local area." The local area is an area designated by the certificate holder which generally may not exceed 50 NM from the dispatch location, taking into account man made and natural geographic terrain features that are easily identifiable by the PIC, and from which the PIC may visually determine a position at all times.

1) The local area may be the same for night and day operations unless the terrain features used for the day local area would not be discernible at night. In such a case, both a day and night local area must be described.

2) For example, in mountainous or desert locations, geographical features may facilitate day operations but because of the lack of such features and/or lighted landmarks, night operations would not be authorized.

3) Additional information on local flying areas is provided in Volume 4, Chapter 5, Section 3, Air Ambulance Service Operational Procedures, paragraph 4-947, Local Flying Area for HEMS Operations.

D. Additional Information. For more information, see OpSpec A024, Air Ambulance Operations—Airplane, and OpSpec A050, Helicopter Night Vision Goggle Operations, in this section.

OPSPEC A022, APPROVED EXIT ROW SEAT PROGRAM. Reserved.

OPSPEC A023, USE A PROGRAM DURING GROUND ICING CONDITIONS.

A. Part 121. Part 121, § 121.629(c) requires part 121 certificate holders to have an approved ground deicing/anti-icing program, unless the certificate holder complies with § 121.629(d), which requires an outside the aircraft pretakeoff contamination check. Principal inspectors (PI) will issue OpSpec A023 to authorize the use of an approved ground deicing/anti-icing program or the use of an outside the aircraft pretakeoff contamination check. See Volume 3, Chapter 27, Ground Deicing/Anti icing Programs, for guidance on approving a ground deicing/anti-icing program.

B. Parts 125 and 135. Part 125, § 125.221 and part 135, § 135.227 require parts 125 and 135 certificate holders who operate during ground icing conditions to have approved aircraft pretakeoff contamination check procedures. PIs will issue OpSpec A041 to authorize a pre takeoff contamination check (not necessarily outside the aircraft). A part 125 or 135 certificate

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holder may choose to comply with § 121.629(c) by having an approved ground deicing/anti icing program, in which case the PI will issue OpSpec A023. If a part 125 or 135 operator chooses to operate without a pre takeoff contamination check or without a § 121.629(c) program, then PIs may only authorize them to operate when ground icing conditions do not exist by issuing OpSpec A042. See Volume 3, Chapter 27 for guidance on approving a ground deicing/anti-icing program.

OPSPEC A024, AIR AMBULANCE OPERATIONS—AIRPLANE.

A. General. Airplane air ambulance operations do not differ significantly from other types of airplane air carrier operations. A024 authorizes a certificate holder operating in accordance with parts 121 or 135 to conduct EMS operations in airplanes.

B. Requirement for Aircraft Used in Air Ambulance Operations. The aircraft used in air ambulance operations must be equipped with at least medical oxygen, suction, and a stretcher, isolette, or other approved patient restraint/containment device. The aircraft need not be used exclusively as an air ambulance aircraft, and the equipment need not be permanently installed.

C. Air Ambulance Operations Definition.

1) Air transportation of a person with a health condition that requires medical personnel as determined by a health care provider; or

2) Holding out to the public as willing to provide air transportation to a person with a health condition that requires medical personnel including, but not limited to, advertising, solicitation, association with a hospital or medical care provider.

D. Complete the Training Program Before Starting Air Ambulance Flights. A024 specifies that the flightcrew must satisfactorily complete the certificate holder's approved training program prior to commencement of air ambulance flights.

E. Additional Information. For further guidance see Volume 4, Chapter 5, Air Ambulance Operations, and OpSpec A021, Air Ambulance Operations—Helicopter.

OPSPEC/MSPEC A025, ELECTRONIC RECORDKEEPING SYSTEM.

A. General. A025 is required for 14 CFR part 121 air carriers in accordance with part 121, § 121.683. It is an optional paragraph for 14 CFR part 91 subpart K (part 91K) program managers and 14 CFR part 135 air carriers. Recordkeeping for part 121 air carriers is covered in part 121 subpart V, and 14 CFR part 145 for repair stations.

1) The full description of the electronic recordkeeping system may be kept in the operator's General Operations Manual (GOM). Reference the GOM appropriately in A025.

2) Volume 3, Chapter 31, Sections 1–4 give details of the requirements for approving an air carrier's recordkeeping system.

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3) Volume 6, Chapter 2, Section 24 provides guidance for inspections that include the review of required records.

B. Additional Information. See the A025 job aid in the automated Operations Safety System (OPSS) for other current information.

C. Part 145. For 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 A026, RESTRICTED OPERATION OF CERTAIN STAGE 2 AIRPLANES. Reserved.

OPSPEC/MSPEC A027, LAND AND HOLD SHORT OPERATIONS. (OPTIONAL)

A. General. OpSpec A027 authorizes Land and Hold Short Operations (LAHSO) for part 121, 125, and 135 certificate holders, and part 91 subpart K program managers. Certificate holders must meet certain requirements for operational policies, procedures, and training for LAHSO before the principal operations inspector (POI) may issue this OpSpec. No operator may participate in LAHSO unless it has accomplished flightcrew training. FAA Air Traffic Order 7110.118, Land and Hold Short Operations (LAHSO), must be used in conjunction with the information provided in this paragraph.

NOTE: Waivers will not be issued to any LAHSO procedures.

B. Requirement for Participating in LAHSO. Operators may not participate in LAHSO and the FAA will not issue OpSpec A027 until the following are met:

1) Local Flight Standards District Office (FSDO) managers and local and regional Air Traffic managers must coordinate, (in accordance with FAA Order 7210.3, Facility Operation and Administration and Order 7110.118) the following for airports in their district conducting LAHSO:

- Participation of Flight Standards Service (AFS) representatives in local LAHSO development teams;
- Review of air traffic control (ATC) procedures to ensure that procedures are consistent with aircraft/aircrew performance capabilities according to the type of aircraft operations involved;
- Assisting in the identification of eligible aircraft that may operate on each runway, based on the available landing distance (ALD); and
- Ensuring that no air carrier is approved to operate aircraft to a runway, for the purpose of conducting LAHSO, with less than that specified on Order 7110.118, appendix 1, Aircraft Group/Distance Minima.

NOTE: Aircraft not identified in Order 7110.118, appendix 1 do not participate in LAHSO. Aircraft additions to Appendix 1 may be requested through the local ATC facility manager to Air Traffic Service (AAT) and AFS at FAA Headquarters.

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2) POI.

a) Each POI must review the following:

- FAA Order 7110.118, in order to identify AFS roles and responsibilities to support joint development of procedures for conducting LAHSO at specific airports. FAA Order 7110.118 may be found at http://ato.faa.gov.

NOTE: If Internet access is unavailable, contact ATP 120 at (202) 267-7265 for the most current guidance document.

- Regulatory requirements, as applicable: parts 125 and 135 subpart I; and §§ 91.1037, 23.75; 25.125; and 121.195.

b) Each POI must ensure the following actions have been accomplished before issuing or re-issuing, as appropriate, OpSpec A027:

- The air carrier has instituted flightcrew member training on LAHSO;
- The air carrier has a system that accurately determines the landing distance or maximum landing weight required for LAHSO and that ensures no aircrew accepts a landing clearance to a runway with a landing distance less than the distance identified in FAA Order 7110.118, appendix 1;
- The air carrier has provided flightcrew members with all necessary information needed to conduct LAHSO; and
- Paragraph A027c describes the location of the air carrier's LAHSO procedures. These procedures may be contained in any flightcrew member manual or document readily available to flightcrew members for reference.

NOTE: The FAA strongly recommends that all carriers provide aircrews with in flight single source documentation on LAHSO procedures. See Volume 4, Chapter 3, Section 5, Selected Practices, paragraph 600, Land and Hold Short Operations (LAHSO), for additional information.

OPSPEC A028—AIRCRAFT WET LEASE ARRANGEMENTS. In FAA use, the term "wet lease" is any leasing arrangement whereby a person agrees to provide an entire aircraft and at least one crewmember (part 119, § 119.3). This OpSpec authorizes certificate holders who conduct common carriage operations under parts 121 and 135 to enter into wet lease arrangements with other part 119 certificate holders. See Volume 12, Chapter 2, Section 9, Lease, Interchange, and Charter Arrangements, for the wet lease of any aircraft by a U.S. air carrier to a foreign air carrier or foreign person engaged in common carriage wholly outside the United States. Volume 3, Chapter 13, Section 4, Wet Lease Agreements, provides direction and guidance for processing and authorizing wet lease arrangements.

A. Reviewing Wet Lease Arrangements. When reviewing proposed § 119.53 wet lease arrangements between U.S. certificate holders authorized to conduct common carriage

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operations, there are two critical factors to consider: (1) whether or not the lessee has exclusive legal possession and use of the entire aircraft, and (2) whether or not the lessor retains actual possession and operational control of the aircraft by virtue of providing and controlling the crewmembers.

1) Possession. In an FAA-defined wet lease, the lessor surrenders legal possession of specific aircraft to the lessee, but in general retains actual possession of the aircraft by virtue of providing and controlling the crewmember(s). This form of lease implies that the lessee has possession or custody, not ownership, of the aircraft for a specified period of time or a defined number of flights.

a) The lessor is the certificate holder who grants legal possession and use of specific aircraft to another certificate holder.

b) The lessee is the certificate holder who obtains legal possession and use of specific aircraft from another certificate holder.

c) If the lessor/grantor never transfers legal possession or custody of the entire aircraft, the arrangement is not a § 119.53 wet lease. Likewise, if the arrangement makes it clear that actual possession of the entire aircraft is never transferred; the arrangement is not a § 119.53 wet lease. In this case the arrangement might actually be a charter. An example of such an arrangement is a provision of "aircraft with crew" agreement where no legal or actual transfer of the possessory rights to the aircraft occurs. Such an arrangement is a services agreement for provision of a flight service to a customer even if characterized as a wet lease by the parties to the agreement.

2) Operational Control. As defined in 14 CFR part 1, operational control is the exercise of authority over initiating, conducting, or terminating a flight. The certificate holder exercising operational control—generally the lessor—is responsible for the safety and regulatory compliance of the flights. The FAA rarely has allowed operational control to be exercised by the lessee certificate holder. An example of such a case entails a lessee certificate holder who obtains legal possession of the lessor certificate holder's aircraft and, as part of the arrangement, the lessor agrees to furnish two flight attendants with the aircraft. In addition, the lessee furnishes the pilot crewmembers to operate the aircraft. In this case, the lessee certificate holder obtains both actual and legal possession of the aircraft and operational control by virtue of providing and controlling the pilot crewmembers. If there is a question that the lessee may have operational control, the lease must also be reviewed by AFS-200 and AGC-300. In this case, both must concur in the issuance of OpSpec A028.

3) Wet Lease Types. Operational control under an FAA-defined wet lease will be one of two types.

a) The lessor 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 Table 1 of the OpSpec.

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1. The certificate holder issued this authorization must at all times be responsible for and maintain the operational control and airworthiness of each aircraft identified in each lease arrangement. The lease arrangement(s) must be listed in Table 1 of the OpSpec.

2. The nationality, registration, and serial number of each aircraft to be 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.

3. While conducting operations under this authorization, the lessor may 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 flight is actually being conducted under the call sign and flight number(s) of the lessee.

4. Both lessor and lessee certificate holders will have their role and information of the wet lease arrangement documented in OpSpec A028 of their respective OpSpecs.

b) The lessor 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 to it 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 Table 2, of the respective certificate holders' OpSpecs. Under this example, the lessor certificate holder not having operational control will exercise the wet lease arrangement(s) listed in Table 2 with the following limitations and provisions:

1. The lessee, as the party exercising operational control, is singularly responsible for the safety and regulatory compliance of the flights.

2. The lessee, as the party having operational control in the wet lease arrangement listed in Table 2, must at all times be responsible for, and maintain the operational control and airworthiness of the aircraft identified in each wet lease arrangement listed.

3. 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 subparagraph of the OpSpec.

4. Both lessor and lessee certificate holders will have their role and information of the wet lease arrangement documented in OpSpec A028 of their respective OpSpecs.

B. Wet Leasing Prohibitions. Section 119.53(b) prohibits part 119 certificate holders' wet leasing from a foreign air carrier or any other foreign person or any person not authorized to engage in common carriage. This prohibition is to prevent confusion as to which carrier would be held accountable for the safety of the flight, which country's air carrier safety rules would be followed, and which civil aviation authority would have primary oversight responsibilities.

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1) It is common practice among commercial operators to enter into agreements which the two parties characterize as wet leases but which actually are charters when compared to the FAA definition of wet lease. The term "charter" is not defined in FAA regulations. However, in operational terms, a charter is an agreement whereby a person provides lift capacity (cargo or passengers) to another person for a defined period of time or number of flights. In other words, a charter is a services agreement for the provision of a flight service—not transfer of possession or custody of an aircraft and the FAA expects the charter operator providing an aircraft with crew to have operational control over all flights conducted pursuant to the agreement.

2) A U.S. air carrier that enters into an agreement with a foreign air carrier for both an aircraft and crew to perform part of the U.S. air carrier's international operations may not be entering into a wet lease as defined by the FAA if certain conditions (described below) are met. Note that, for commercial reasons both U.S. and foreign air carriers may characterize such arrangements as wet leases even though they are more in the nature of a charter. These agreements, even if characterized by the parties as wet leases, are a type of charter and are subject to the requirements of 14 CFR part 212.

3) In some commercial arrangements, the term provision of aircraft with crew (or similar phrasing) rather than charter may be used. The provision of aircraft with crew arrangement does not involve any legal or actual transfer of the possessory rights to the aircraft; it is a services agreement or arrangement for a lessor to provide a flight service and does not transfer possession of the aircraft to the lessee.

4) Charter or provision of aircraft with crew arrangements are commercial arrangements between carriers that require a statement of authorization from the Office of the Secretary of Transportation (OST); they are not documented by OpSpec. The OST authorization process includes a determination that the requirements of part 212 are met and the proposed operation is in the public interest. Such determinations are made in coordination with the FAA, which will review the arrangements and make determinations relating to operational control, possession of the aircraft, the safety oversight of the operation, and the safety audit of the foreign air carrier. Where a foreign air carrier will be involved in such a lease or provision of aircraft with crew arrangement to a U.S. air carrier, approval will be subject to the following requirements:

a) The foreign air carrier involved holds a foreign air carrier permit or exemption authority from OST to conduct charter operations;

b) The country that issued the foreign air carrier's air operator certificate has been rated as Category 1 under the FAA's International Aviation Safety Assessment program.

c) The operations to be conducted represent foreign air transportation and not prohibited cabotage, in accordance with Title 49 of the United States Code, § 41703;

d) The foreign air carrier would be conducting a flight or series of flights. The U.S. air carrier has the economic authority for the flight or series of flights that will be conducted with the foreign air carrier's aircraft and crew;

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e) The foreign air carrier files an application for a statement of authorization for any such operation proposed;

f) The foreign air carrier demonstrates that it would be in operational control of the proposed operation, for example, by providing with its application, for review by the FAA, copies of the lease arrangement for the aircraft with crew, that it has entered into with the U.S. certificated air carrier;

g) The foreign air carrier demonstrates that it will retain legal and actual possession of the aircraft;

h) The foreign air carrier provides evidence, for example, that the U.S.-certificated air carrier involved has conducted a safety audit of the foreign carrier, consistent with an FAA-approved safety audit program, and has submitted a report of that audit to the FAA for review; and

i) The FAA notifies the OST that it has determined that operational control of the proposed flights rest with the foreign air carrier applicant, that the oversight of the operation will remain with the country that issued the foreign air carrier's air operator certificate, and that the safety audit meets the standards of the U.S.-certificated air carrier's safety audit program.

OPSPEC A029, AIRCRAFT INTERCHANGE ARRANGEMENTS. Volume 3, Chapter 13, Section 5, Interchange Agreements, provides direction and guidance for processing and authorizing interchange arrangements. When an interchange arrangement is authorized, A029 must be issued to both parties of the interchange agreement by each responsible principal operations inspector. All interchange arrangements authorized for an operator must be listed in A029. Enter the name of the operator who would normally operate the aircraft if an interchange agreement were not in effect in the column labeled Primary Operator. List the name of the other party to the interchange agreement in the column labeled Interchange Operator. List the aircraft make/model/series of the aircraft used and all specified interchange points for each agreement in the appropriate columns. If it is necessary to specify other conditions or limitations such as expiration dates, they should be specified by adding text to A029.

OPSPEC A030, SUPPLEMENTAL OPERATIONS BY A CERTIFICATE HOLDER AUTHORIZED TO CONDUCT DOMESTIC OR FLAG OPERATIONS.

A. General.

1) A030 is an optional OpSpec that authorizes a 14 CFR part 121 certificate holder to conduct supplemental operations between airports listed for scheduled operations in that certificate holder's OpSpec C070. Principal operations inspectors (POI) may issue A030 to a certificate holder who is authorized in OpSpec A001 to conduct the following types of operations:

- Domestic and supplemental.
- Flag and supplemental.
- Domestic, flag, and supplemental.

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2) POIs may not issue A030 to a certificate holder who is only authorized to conduct supplemental operations because such a certificate holder is not issued an OpSpec C070. Thus, the certificate holder would be required to operate under supplemental rules at all times.

B. Authorizations.

1) Conducting Supplemental Operations in Accordance with Domestic or Flag Rules to Airports Listed in C070. OpSpec A030 subparagraph b authorizes a certificate holder with domestic and/or flag authority to conduct supplemental operations using domestic or flag rules, as applicable, between the regular, provisional, and refueling airports listed in the certificate holder's OpSpec C070. A030 may not be applied to airports listed solely as alternate airports.

2) Conducting Supplemental Operations in Accordance with Supplemental Rules to Airports Listed in C070. OpSpec A030 subparagraph c authorizes a certificate holder with domestic and/or flag authority to conduct supplemental operations between the airports listed in the certificate holder's C070 under supplemental rules.

3) Optional Nonstandard Provisions. OpSpec A030 contains a field in which POIs can enter optional/nonstandard text. This field is commonly referred to as "TEXT99." POIs may not issue nonstandard text to OpSpec A030 without obtaining prior approval from the Air Transportation Division (AFS-200).

OPSPEC A031, ARRANGEMENTS WITH TRAINING CENTER(S) OR OTHER ORGANIZATION(S) FOR CERTIFICATE HOLDER TRAINING; MSPEC A031, ARRANGEMENTS WITH TRAINING CENTERS, AIR AGENCIES, AND/OR OTHER ORGANIZATIONS FOR PERSONNEL TRAINING. This paragraph is used to document the approval of the operator's/certificate holder's training program.

OPSPEC A032, ADOPTION OF FLIGHT CREWMEMBER FLIGHT TIME LIMITATION RULES TO ESTABLISH FLIGHT ATTENDANT DUTY AND FLIGHT TIME LIMITATIONS AND REST RESTRICTIONS; MSPEC A032, FLIGHT ATTENDANT FLIGHT, DUTY, AND REST RULES. The program manager may be authorized to adopt the flightcrew member's flight, duty, and rest requirements for its flight attendants in accordance with written approved procedures as provided in part 91, § 91.1062(b) and described or referenced in MSpec A032.

OPSPEC A033, TITLE 14 CFR PART 135 FLIGHT AND REST TIME LIMITATIONS FOR CERTAIN PART 121 AND CERTAIN 135 OPERATIONS.

A. General. A033 is issued to authorize the certificate holder to conduct:

1) Certain part 121 operations with airplanes having a passenger seat configuration of 30 seats or fewer and a payload capacity of 7,500 pounds or less in accordance with part 121, §§ 121.470(a), 121.480, and/or 121.500, using flight and rest time limitations under part 135, §§ 135.261 through 135.273, and/or

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2) Certain 14 CFR part 135 operations using flight and rest time limitations under § 135.265, in lieu of any other §§ 135.261 through 135.273.

B. Compliance With Applicable 14 CFR Sections. Part 119 establishes that all certificate holders conducting scheduled passenger-carrying operations with turbine-powered airplanes and/or airplanes having 10 or more passenger seats must operate under part 121, § 121.470(a), Flight Time Limitations, Domestic Operations; § 121.480, Flight Time Limitations, Flag Operations; and § 121.500, Flight Time Limitations, Supplemental Operations. These sections contain, in pertinent part, the provisions that a certificate holder conducting operations with airplanes having a passenger seat configuration of 30 seats or fewer, excluding each crewmember seat, and a payload capacity of 7,500 pounds or less may comply with the applicable requirements of §§ 135.261 through 135.273. Section 135.261(a)(2) allows certain part 135 certificate holders to comply with the requirements of § 135.265, when OpSpec A033 is issued.

MSPEC A033, FLIGHT AND REST TIME REQUIREMENTS. As allowed by part 91, § 91.1057(j), the program manager may be authorized to conduct program operations using the applicable unscheduled flight time limitations, duty period limitations, and rest requirements of part 121 or 135, instead of the flight time limitations, duty period limitations, and rest requirements of part 91 subpart K, as described in MSpec A033.

OPSPEC/MSPEC A034, ADVANCED QUALIFICATION PROGRAM (AQP).

A. When to Issue OpSpec A034. Following initial/Phase IV approval, all Advanced Qualification Program (AQP) air carriers must be issued OpSpec paragraph A034. For all AQP documents and phases for which the Extended Review Team (ERT) is designated as the approval authority, the FAA manager AQP and the principal operations inspector (POI) or training center program manager (TCPM) will cosign the approval letters. Following approval for continuing operation (Phase V), the POI will manage and sign approved curriculum outline changes.

B. About AQP. AQP is a voluntary program; Flight Standards Service encourages air carriers to participate. AQP provides for enhanced curriculum development and a data driven approach to quality assurance along with the flexibility to target critical tasks during aircrew training. The AQP methodology directly supports the FAA's safety enhancement goals. The Voluntary Safety Programs Branch, AFS-230, will provide assistance to the Flight Standards District Office (FSDO), certificate management office (CMO), or Certificate Management Unit (CMU) from initial application through the final fleet approval as a collaborative effort. An accepted air carrier AQP application will initiate the AFS-230/FSDO/CMO/CMU partnership. AFS-230 will assist in the development, implementation, and review as well as follow on reviews for the air carrier's AQP. AFS-230 and the FSDO/CMO/CMU will manage program approvals and revisions through an ERT process.

C. Additional Information. More detailed information on AQP can be found in Volume 3, Chapter 21, The Advanced Qualification Program, Sections 1 through 5.

OPSPEC A035, U.S. REGISTERED AIRCRAFT—FOR PART 129 ONLY.

OPSPEC A036. Reserved.

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OPSPEC A037, BASIC 14 CFR PART 135 OPERATOR—COMMUTER AND ON DEMAND OPERATIONS. A016 was comprised of four different authorizations. Because of the new OPSS, the four authorizations were split into OpSpecs A037, A038, A039, and A040. The four types of operations authorized are: Single-Pilot Operators, Single Pilot-in-Command Operators, Basic Part 135 Operators (On-Demand Operations Only), and Basic Part 135 Operators (Commuter and On-Demand Operations). Further direction and guidance for certification of these types of operators are in Volume 2, Chapter 4, The Certification Process—Title 14 CFR Part 135, sections 1 through 6. Deviations are required to authorize a single pilot in command or a basic part 135 operator. The appropriate regulatory sections that an operator is authorized deviations from will also be listed in OpSpec A005.

OPSPEC A038, BASIC TITLE 14 CFR PART 135 OPERATOR—ON DEMAND OPERATIONS ONLY. A016 was comprised of four different authorizations. Because of the new OPSS, the four authorizations were split into OpSpecs A037, A038, A039, and A040. The four types of operations authorized are: Single-Pilot Operators, Single Pilot-in-Command Operators, Basic Part 135 Operators (On-Demand Operations Only), and Basic Part 135 Operators (Commuter and On-Demand Operations). Further direction and guidance for certification of these types of operators are in Volume 2, Chapter 4, The Certification Process—Title 14 CFR Part 135, sections 1 and 2. Deviations are required to authorize a Single Pilot in Command or a Basic Part 135 Operator. The appropriate regulatory sections that an operator is authorized deviations from will also be listed in OpSpec A005.

OPSPEC A039, SINGLE PILOT IN COMMAND OPERATOR (PART 135). A016 was comprised of four different authorizations. Because of the new OPSS, the four authorizations were split into paragraphs A037, A038, A039, and A040. The four types of operations authorized are: Single-Pilot Operators, Single Pilot-in-Command Operators, Basic Part 135 Operators (On-Demand Operations Only), and Basic Part 135 Operators (Commuter and On-Demand Operations). Further direction and guidance for certification of these types of operators are in Volume 2, Chapter 4, Section 2, Phase 2—Formal Application. Deviations are required to authorize a single pilot in command or a basic part 135 operator. Therefore, the appropriate regulatory sections that the operator is authorized deviations from must also be listed in OpSpec A005.

OPSPEC A040, (PART 135 AND 135/121 DATABASES ONLY) SINGLE PILOT OPERATOR (PART 135). A016 was comprised of four different paragraphs. Because of the new Operations Safety System, the four authorizations were split into paragraphs A037, A038, A039, and A040. The four types of operations authorized are: Single Pilot Operators, Single Pilot-in-Command Operators, Basic Part 135 Operators (On-Demand Operations Only), and Basic Part 135 Operators (Commuter and On-Demand Operations). Further direction and guidance for certification of these types of operators are in Volume 2, Chapter 4, Section 1. It is not required to issue an A005 for the single pilot operator for deviations from the requirements for an operations manual, management personnel and positions, and an approved pilot training program. However, OpSpec A005 must list other appropriate regulatory sections from which the operator is authorized deviations.

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OPSPEC A041, PRETAKEOFF CONTAMINATION CHECK OR APPROVED ALTERNATE GROUND DEICING/ANTI-ICING PROCEDURE FOR TITLE 14 CFR PART 125/135 AIRPLANE OPERATIONS.

A. Part 125, § 125.221 and Part 135, § 135.227. These sections require part 125 and 135 certificate holders who operate in ground icing conditions to have approved aircraft pretakeoff contamination check procedures or an approved alternate ground deicing/anti-icing procedure to determine the airplane is free of frost, ice, or snow. Principal inspectors (PI) will issue OpSpec A041 to authorize a pretakeoff contamination check (not necessarily outside the aircraft) or the approved alternate procedure. A part 125 or 135 certificate holder may choose to comply with part 121, § 121.629(c) by having an approved ground deicing/anti-icing program, in which case the PI will issue OpSpec A023. See Volume 4, Chapter 8, Low Visibility Taxi Operations, for guidance on approving a ground deicing/anti icing program.

B. OpSpec Paragraph A041. This paragraph will be used to authorize the use of the alternative procedure using the services of a provider with an approved § 121.629 program and thereby authorizing the use of the holdover times (HOT) as limiting values instead of as advisory information only. The conditions specified in this OpSpec must be complied with in order for the operator to use this alternate procedure. Before issuing the OpSpec the operator's General Operations Manual (GOM) and training program must be updated to include the elements contained in this guidance. The flightcrew, and, if appropriate, other ground personnel (example: persons charged with prearranging ground deicing services) must be trained as per the approved training program as updated to address the elements contained in this guidance. For an operator choosing to implement this alternate procedure, OpSpec A041 allows the operator to chose for each takeoff between conducting a pretakeoff contamination check in accordance with the Aircraft Flight Manual (AFM) or certificate holder's approved program within five minutes of takeoff, or, if authorized, and all the conditions of their approved alternate procedure and the OpSpec can be met, to use the holdover time/allowance times as limiting values. OpSpec A023 should not be issued for the purpose of authorizing this alternate procedure. This is an alternate procedure to conducting a pretakeoff contamination check and not in full compliance with the requirements of an approved § 121.629 program.

C. Approved Alternate Ground Deicing/Anti-icing Procedure. By providing this guidance for the development of an alternate ground deicing plan the FAA anticipates an improvement in the level of safety in winter operations by encouraging part 125 and 135 operators to develop aircraft ground de/anti-icing plans similar to an approved § 121.629 program. By incorporating the procedures outlined in this guidance and by incorporating and conducting the training specified, the operator will have available for use quality assured de/anti-icing fluids, applied with equipment meeting the proper specifications, and applied by qualified ground personnel under the quality assurances built into a § 121.629 approved ground deicing program. An operator under part 125 or 135 may choose to implement the alternate procedures for ground de/anti-icing as outlined in this guidance or continue to operate in ground icing conditions by conducting a pretakeoff contamination check within five minutes of takeoff using procedures in their approved ground deicing plan, and AFM limitations. Under these alternate procedure guidelines the operator is restricted to using the ground deicing services of an air carrier or an air carrier contract service provider conducting ground deicing service under an approved § 121.629 ground deicing program. Since the quality control requirements for the

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fluids and application equipment along with the activation of the program/plan as it relates to the ground service readiness is under the control of the holder of the § 121.629 approved program, the operator under these alternate procedures need not have policies and procedures for these elements in their alternate plan. Likewise, all ground deicing personnel are required to have been trained and qualified by the holder of the § 121.629 approved program being used, therefore the holder of these alternate ground deicing procedures must conduct only aircraft-specific training. In lieu of prior training of the ground deicing personnel on the specific aircraft, the flightcrew may, in person, supervise the de- /anti-icing process. This supervision must be supplemented by pictorial description (provided to the application personnel) of the aircrafts critical and sensitive surfaces indicating those areas that must be checked as part of the post deicing and anti-icing inspections. In order to use this flightcrew supervision provision the flightcrew must be trained on all fluid application procedure requirements except for actual hands on practice. In essence, the operator's ground de/anti-icing alternate procedures plan must contain all other elements of an approved § 121.629 program as detailed in the current edition of AC 120-60, Ground Deicing and Anti-icing Program, except as indicated above. The required elements of the operator's alternate procedure plan and required training is provided below. This guidance is extracted from AC 120-60 with limited additional guidance from other FAA ground deicing guidance material. In addition, inspectors and certificate holders should consult the AFS-200 Web site for current guidance.

1) Required Ground De/Anti-Icing Elements. This paragraph describes ground de/anti-icing elements required to be contained in a part 125 and 135 alternate procedures in-lieu of a pretakeoff contamination check in order to be authorized the use of the current FAA-published fluid HOT as limiting time values rather than advisory times when utilizing the ground de/anti-icing service provider with an approved part 121, § 121.629 program.

a) Management Plan. In order to properly exercise operational control (when conditions are such that frost, ice, snow, or slush may reasonably be expected to adhere to an aircraft), the certificate holder should develop, coordinate with other affected parties, implement, and use a management plan for proper execution of its alternative de/anti-icing plan. A plan encompassing the following elements is acceptable:

1. Responsibility. Where operations are expected to be conducted in conditions conducive to ground icing, determine who is responsible for deciding when ground deicing/anti-icing procedures are in effect and the ambient conditions for implementing ground deicing procedures.

2. Manuals Requirements. The certificate holder should incorporate a detailed description of the deicing/anti-icing plan in its manuals for flightcrew members, flight followers, ground operations personnel, and management personnel to use when conducting operations under ground icing conditions. This description should include the functions, duties, responsibilities, instructions, and procedures to be used.

3. Coordination. The certificate holder should develop a winter operations plan to include procedures for coordination with the deicing service provider, air traffic control (ATC), and airport authorities as appropriate.

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b) De/Anti-icing Fluid Application Procedures. In an appropriate manual, certificate holders must specify the deicing and anti-icing fluid procedures for each type of aircraft operated. Thickened anti-icing fluids (Type II, III, and IV), may only be used on aircraft that the aircraft manufacturer has provided documentation that these fluids are safe to be used on that make and model aircraft. Type I deicing fluid may be used on any aircraft with a takeoff rotation speed of 65 knots or greater with an outside air temperature of -19 C or warmer. In order to use the HOT as limiting time values the de/anti-icing service must be provided by an operator with an approved de/anti-icing program approved under § 121.629 or a contract provider to that operator under the operators approved § 121.629 approved program. Ground personnel trained and qualified to apply deicing and anti-icing fluid, in accordance with a certificate holder's approved § 121.629 program, do not require additional training and qualification to deice and anti-ice similar aircraft operated by another certificate holder. If the deicing service provider has been trained by another part 125 or 135 air carrier using an alternate deicing procedures in accordance with this guidance for the same type of aircraft additional training under the provisions of this guidance is not required. However, specific training and/or direct flightcrew supervision, supplemented with pictorial descriptions of the de/anti-icing procedures to be used identifying the critical aircraft surfaces, sensitive areas, and areas to be checked in the post deicing and post anti-icing inspections is needed for deicing personnel to deice different types of aircraft or aircraft with different configurations.

c) HOT Tables and Procedures for Their Use. The operator's alternate ground de/anti-icing procedures must include HOT tables and the procedures for the use of these tables by the certificate holder's personnel. The following elements must be included in the operator's alternate plan:

1. Responsibilities and Procedures. The certificate holder's program must define operational responsibilities and contain procedures for the flightcrew, ground personnel, and maintenance personnel that apply to the use of HOTs and resultant actions if the determined HOT is exceeded.

i. Procedures to address deicing operations at specific deicing locations (e.g., gate, remote, or centralized facilities, engines running/not running, auxiliary power unit (APU), etc.), including how to determine radio frequencies to be utilized for communications between the flightcrew and the ground personnel.

ii. Procedures for ground crew and flightcrew to communicate:

- During aircraft positioning, (if required),
- Other pertinent information regarding the deicing/anti-icing process,
- Start of the HOT (start time of final fluid application),
- The aircraft departure process from the deicing area, and
- Equipment clear/job done (post de/anti-icing inspections completed)—safe to start taxiing.

iii. In addition, procedures must be developed for the flightcrew's use of the pertinent HOT tables, coordination with flight followers and ATC as appropriate.

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2. FAA HOT Tables. An operator's alternate procedure must implement HOT tables for use by its personnel. The FAA develops HOT tables for Type I deice/anti-ice fluid and manufacturer specific and generic Type II, III, and IV anti-ice fluid in accordance with SAE ARP 4737, Aircraft Deicing/Anti-Icing Methods, and ISO 11076, Aerospace Aircraft Deicing/Anti-Icing Methods with Fluids. HOTs that exceed those specified in the current edition of the FAA specific HOT of approved fluids are not acceptable. However, the certificate holder may require the use of more conservative times than those specified in the FAA tables.

3. Use of HOT Tables. HOT ranges are an estimate of the time that deicing/anti-icing fluid will prevent the formation of frost or ice and the accumulation of snow on the unprotected surfaces of an aircraft. HOT begins when the start of the final application of deicing/anti-icing fluid commences and expires when the deicing/anti-icing fluid applied to the aircraft loses its effectiveness (e.g., when ice begins to form on or in the fluid). HOTs vary with weather conditions. The effectiveness of deicing/anti-icing fluids is based on a number of variables (e.g., temperature, moisture content of the precipitation, wind, and the aircraft skin temperature). The HOT tables are to be used for departure planning and in conjunction with pretakeoff check procedures.

d) Frozen Contaminants on the Aircraft. The operators must have procedures that insure the aircraft is free of all frozen contaminants adhering to the wings, control surfaces, propellers, engine inlets, or other critical surfaces before takeoff.

1. Identification of Critical Aircraft Surfaces. The critical aircraft surfaces, which must be clear of contaminants before takeoff should be described in the aircraft manufacturer's maintenance manual or other manufacturer-developed documents, such as service or operations bulletins.

i. Generally, the following should be considered to be critical aircraft surfaces, if the aircraft manufacturer's information is not available:

- Pitot heads, static ports, ram-air intakes for engine control and flight instruments, other kinds of instrument sensor pickup points, fuel vents, propellers, and engine inlets. These are both critical areas for flight safety and classified as sensitive surfaces because they may be adversely affected by direct de/anti-icing fluid application and therefore require special attention during cold weather preflight and fluid application.
- Wings, empennage, and control surfaces.
- Fuselage upper surfaces on aircraft with center mounted engine(s).

ii. Certificate holders must list in the general operations manual, for each type of aircraft used in their operations, the critical and sensitive surfaces that should be checked on flight-crewmember preflight inspections, pretakeoff checks, and pretakeoff contamination checks.

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iii. Critical surfaces must be defined for the use of ground personnel for conducting the check following the deicing/anti-icing process and for any pretakeoff contamination checks that may be accomplished by ground personnel.

2. Identification of Representative Aircraft Surfaces (if used in place of critical surfaces). Representative aircraft surfaces are for use in conducting pretakeoff checks only; this is not to be confused with pretakeoff contamination check requirements. For each type of aircraft operated, certificate holders should list, in the general operations manual, the representative surfaces that may be checked while conducting pretakeoff checks. Some aircraft manufacturers have identified certain aircraft surfaces that the flightcrew can readily observe to determine whether or not frozen contaminants are accumulating or forming on that surface and, by using it as a representative surface, can make a reasoned judgment regarding whether or not frozen contaminants are adhering to other aircraft surfaces. When identifying a representative aircraft surface, the following guidelines should be considered:

i. The surface can be seen clearly to determine whether or not frozen contaminants are forming or accumulating on the surface and if the estimated HOT is valid considering the precipitation conditions actually present.

ii. The surface must be unheated.

iii. If using a treated surface during the deicing/anti-icing procedure, the representative surface should be one of the first surfaces treated with deicing/anti-icing fluid. However, the designation of representative surfaces is not limited to treated surfaces.

3. Recognition Techniques. Certificate holders must have aircraft specific guidance for the recognition of contamination on aircraft surfaces. The flightcrew and other personnel should use these type-specific techniques while conducting preflight aircraft icing checks, pretakeoff checks, and pretakeoff contamination checks. Frozen contaminants can take the form of ice, frost, snow, or slush. Initial, Transition, Recurrent, Upgrade, or Advanced Qualification Program and Continuing Qualification training curricula should include aircraft type-specific techniques for use by the flightcrew and other personnel for recognizing contamination on aircraft surfaces. The flightcrew and other personnel should use these type-specific techniques while conducting preflight aircraft icing checks, pretakeoff checks, and pretakeoff contamination checks. Frozen contaminants can take the form of ice, frost, snow, or slush. The formation of clear ice may be difficult to detect visually. Therefore, specific techniques for identification of clear ice should be included.

e) Types of Icing Checks. The operator's alternate ground deicing/anti-icing plan must include procedures for pretakeoff and pretakeoff contamination checks that, when applicable, are required to be accomplished. The aircraft deicing/anti-icing procedure must also include a post deicing/anti icing check of all aircraft critical surfaces.

1. Pretakeoff Check (within the HOT, not to be confused with a pretakeoff contamination check that is applied after the expiration of the HOT). This check is required anytime HOT are used. The flightcrew must accomplish the check within the HOT. The flightcrew should check the aircraft's wings or representative aircraft surfaces for frozen

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contamination. The surfaces to be checked are determined by manufacturer's data or guidance contained in AC 120-60, current edition. The pretakeoff check is integral to the use of HOTs. Because of the limitations and cautions associated with the use of HOTs, the flightcrew must assess the current weather and other situational conditions that affect the aircraft's condition and not rely on the use of HOTs as the sole determinant that the aircraft is free of contaminants. Several pretakeoff checks may be required during the HOT period based on factors that include the length of the HOT range, weather, or other conditions. The flightcrew must maintain a continued awareness of the condition of the aircraft and accomplish, as a minimum, a pretakeoff check just before taking the active runway for departure. When conducting the pretakeoff check, the flightcrew must factor in the application sequence (i.e., where on the aircraft the de/anti-icing process began).

2. Pretakeoff Contamination Check (when HOT has been exceeded). Completing a pretakeoff contamination check is one of the conditions that allows a takeoff after a HOT has been exceeded. When a HOT has been exceeded, certificate holders must have appropriate pretakeoff contamination check procedures for the flightcrew's and/or other qualified ground personnel's use to ensure that the aircraft's critical surfaces remain free of frozen contaminants. Flightcrews and/or other qualified ground personnel must complete the pretakeoff contamination check within 5 minutes before beginning takeoff. This check must be accomplished from outside the aircraft unless the certificate holder's program specifies otherwise. If any doubt exists concerning the aircraft's condition after completing this check, the aircraft cannot takeoff unless it is deiced again and a new HOT is determined. The following should be considered while developing procedures for this check:

i. For all hard wing aircraft (those without leading edge devices) this check must be an outside the aircraft tactile check (feel). For all high wing aircraft this check must also be an outside the aircraft check and maybe visual or tactile based on the aircraft manufacturers procedures or as approved by the FAA. Also aircraft with aft, fuselage-mounted, turbine-powered engines must conduct pretakeoff contamination checks from outside the airplane.

ii. Operators of aircraft other than those addressed in paragraph a) above, should conduct this check from outside the aircraft unless they can show that the check can be adequately accomplished from inside the aircraft. The operators plan must detail procedures and requirements for this check. When developing a procedure—not described in the AFM—for conducting the pretakeoff contamination check from inside the aircraft, certificate holders should consider if crewmembers are able to see enough of the wings, control surfaces, and other surfaces to determine whether or not they are free of contaminants. When making this determination, consider the aircraft type, the method of conducting the check (from the cockpit or cabin), and other factors, such as aircraft lighting and ambient conditions.

3. Post-Deicing/Anti-Icing Check. The operator must have procedures outlining these check procedure for each aircraft. This multi-part check is an integral part of the deicing/anti-icing process. The check ensures that:

i. All critical surfaces are free of adhering frozen contaminants after deicing.

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ii. If anti-icing fluid is to be applied it assures that all critical surfaces are free of frozen contaminants before the application of any anti-icing fluid.

iii. All critical surfaces are free of frozen contaminants before pushback or taxi. And if anti-icing fluid has been applied that all critical surface have been treated with an even coating of the applicable fluid.

NOTE: Certificate holders must have procedures that require that qualified ground personnel or flightcrew personnel conduct this check. If conducted by qualified ground personnel, certificate holders should establish communication procedures to relay pertinent deicing/anti-icing information and the results of this check to the pilot in command (PIC).

f) Communications. The operator must have standardized communication procedures for communications between the flightcrew and ground deicing personnel. Communication between ground personnel and the flightcrew before commencing deicing/anti icing operations is critical. Upon completion of deicing/anti-icing operations, ground personnel should communicate with the flightcrew to determine the start time of the final fluid application procedure and therefore the start of the HOT. The particular HOT the flightcrew uses is extremely critical. Because many deicers service multiple carriers, the FAA recommends that all operators include the following flow sequence and information to provide standardization:

1. Before commencing deicing/anti-icing operations, ground personnel and the flightcrew should review the following (as applicable):

i. Deicing/anti-icing prior to crew arrival.

ii. Gate or remote deicing/anti-icing procedures.

iii. Aircraft-specific procedures.

iv. Communications between ground personnel and the flightcrew.

2. Just before commencing the application of deicing/anti-icing fluid, ground personnel should confirm with the flightcrew that the aircraft is properly configured for deicing, as the following example states: “N90FAA, is your aircraft ready for deicing/anti-icing?” Response from N90FAA, “Learjet N90FAA, parking brake is set, engines are running, APU is off, aircraft is configured for deicing, and anti-icing with Type IV fluid.” Response from deicing crew, “Roger N90FAA commencing deicing.”

3. Upon completion of deicing/anti-icing, the flightcrew must be provided the following elements:

i. Fluid type (e.g., Type I, Type II, Type III or Type IV), the fluid product name is optional for each type of fluid if the fluid meets product on-wing viscosity requirements.

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ii. Fluid/water mix ratio by volume of Types II, III, and IV. (Reporting the concentration of Type I fluid is not required.)

iii. Specify, in local time (hours and minutes) the beginning of the final fluid application (e.g., 1330).

iv. Post application check accomplished. Specify date (day, written month, year).

NOTE: The element listed in subparagraph 3d is required for recordkeeping; it is optional for crew notification.

NOTE: Transmission of elements listed in subparagraphs a through c, to the flightcrew, confirms that a post deicing/anti-icing check was completed and the aircraft is clean.

4. Below are two examples of the ground/flightcrew communication sequence.

i. One Step Process with Type I or other approved deicing fluid: "N90FAA are you ready for your deicing report?" "N90FAA is ready to copy deicing report." "N90FAA your aircraft has been deiced with Type I fluid. Your fluid application began at 1430."

ii. Two Step Process with Types II, III, or IV: "N90FAA are you ready for your deicing report?" "N90FAA is ready to copy deicing report." "N90FAA your aircraft has been deiced with Type I fluid and anti-iced with Type IV. An anti-ice fluid mixture of 75/25 was used. Your anti-ice fluid application began at 1645."

2) Training Requirements Required for the Authorization of the Alternate Procedures Allowing the Use of HOT as Limiting Values. Training for flight followers is only required if that person plays a role in the planning, execution, or recording of aircraft ground de/anti-icing. Training for ground deicing personnel is only required if each de/anti-icing fluid application is not to be supervised by flightcrew personnel.

a) Initial/Recurrent Ground Training and Qualification. Only trained and qualified personnel may carry out deicing/anti-icing procedures. A flightcrew member trained on fluid application procedures for the applicable aircraft and operator may, in person, supervise the de/anti-icing of the aircraft in lieu of the fluid application personnel being trained on the specific aircraft, provided the application personnel have been appropriately trained and currently qualified under a § 121.629 approved program and the application personnel are provided pictorial diagrams indicating the critical and sensitive areas of the aircraft, and areas to be inspected as part of the post deicing and post anti-icing inspection, and instructed on the proper methods for treatment of the critical and sensitive areas.

1. Each certificate holder's approved program must consist of the following:

i. Certificate holders must conduct initial and annual recurrent training for flightcrews, and, as applicable, flight followers, and ground personnel and must ensure that

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all such crews obtain and retain a thorough knowledge of aircraft ground deicing/anti-icing policies and procedures, including required procedures and lessons learned.

ii. Flightcrew, and, as applicable, flight follower, and ground personnel training programs must include a detailed description of initial and annual recurrent ground training and qualification concerning the specific requirements of the alternate plan and the duties, responsibilities, and functions detailed in the plan.

iii. Flightcrew, and, as applicable, flight follower, and ground personnel training programs must have a Quality Assurance Program to monitor and maintain a high level of competence. An ongoing review plan is advisable to evaluate the effectiveness of the deicing/anti-icing training received.

iv. The program must have a tracking system that records all required personnel have been satisfactorily trained. Certificate holders must maintain records of personnel training and qualification for proof of qualification.

v. Personnel must be able to adequately read, speak, and understand English in order to follow written and oral procedures applicable to the deicing/anti-icing program.

2. Certificate holders must train and qualify flightcrew, and as applicable flight followers, and ground personnel on at least the following subjects, identified as All personnel (no identification) Flightcrew (F), Flight Followers (FF) (persons charged with pre-arranging of ground deicing services), if applicable to the operators operation, or Ground Personnel (G) if applicable, all pilots that supervise the application of de/anti-icing fluids need to be trained on the subjects for Ground personnel (G) except for hands on training of fluid application techniques:

i. Effects of Frozen Contaminants on Aircraft Surfaces. Provide an understanding of the critical effect the presence of minute amounts of frost, ice, or snow has on flight surfaces. This discussion should include, but is not limited to:

- Loss of lift (F),
- Increased drag and weight (F),
- Decreased control (F),
- Tendency for rapid pitch-up and roll-off during rotation (F),
- Stall occurs at lower-than-normal angle of attack (F),
- Buffet or stall occurs before activation of stall warning (F),
- Aircraft specific areas: (F/G),
- Engine foreign object damage potential,
- Ram air intakes,
- Instrument pickup points,
- Leading edge device (LED) aircraft (aircraft that have slats or leading edge flaps) and non-LED aircraft,
- Airworthiness Directives (AD)/specific inspections, and
- Winglets.

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ii. Aircraft Ground Icing Conditions. Describe conditions that cause implementation of deicing/anti-icing procedures (F).

- In-Flight Ice Accumulation. Certificate holders should have procedures for flightcrews on arriving flights to report occurrences of in-flight icing to the personnel responsible for executing the certificate holder's deicing/anti-icing program. In-flight ice accumulation could result in a ground-deicing situation when flights are scheduled for short turnaround times (e.g., for 30 minutes or less and when ambient temperatures on the ground are at or below freezing).
- Frost, including hoarfrost (F).
- Freezing precipitation (snow, freezing rain, freezing drizzle, or hail, which could adhere to aircraft surfaces) (F).
- Freezing fog (F).
- Rain or high humidity on cold soaked wing (F).
- Rain or high humidity on cold soaked wing fuel tanks (F).
- Under-wing frost (may not require deicing/anti-icing within certain limits) (F/G).
- Fluid failure identification (F/G).

iii. Location specific deicing/anti-icing procedures (F/G, as appropriate).

iv. Communications procedures between the flightcrew, ground personnel, ATC, and company station personnel (F/FF/G).

NOTE: Communication procedures must include ground crew confirmation to the flightcrew after the deicing and anti-icing process is completed that all personnel and equipment are clear before reconfiguring or moving the aircraft.

v. Means for obtaining most current weather information (F/FF).

vi. Characteristics and capabilities of fluids used (F/D/G).

- General fluid descriptions (F/G),
- Composition and appearance (F/G),
- Differences between Type I and Type II/IV deicing/anti-icing fluids(F/G),
- Purpose for each type (F/G),
- Deicing fluids (F/G),
- Anti-icing fluids (F/G),
- De/anti-icing fluids capabilities (F/G),
- Approved deicing/anti-icing fluids for use (SAE, ISO, etc.) (F/G),
- Fluid-specific information provided by fluid or aircraft manufacturer (F/G),
- Fluid temperature requirements (hot vs. cold) (F/G),

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- Properties associated with infrared deicing/anti-icing (F/G),
- Health, safety, and first aid (F/G),
- Environmental considerations (G),
- Fluid selection (F/G), and
- Unusual flying qualities, such as the need for additional takeoff rotation stick-force (F).

vii. Methods/Procedures (F/G).

- Inspection of critical surfaces,
- Clear ice precautions,
- Flightcrew/groundcrew preflight check requirement,
- Deicing/anti-ice determination,
- Deicing/anti-ice location,
- Communication before deicing/anti-icing,
- General deicing/anti-ice precautions,
- Aircraft specific requirements,
- Deicing:
- Requirements,
- Effective removal of frost, snow, and ice.
- Anti-icing:
- Requirements
- Preventative anti-icing,
- Application,
- Deicing/anti-icing:
- One step,
- Two step,
- Guidelines for the application of deicing/anti-icing fluids,
- Post deicing/anti-icing checks requirement,
- Flight control check, and
- Communications after deicing/anti-icing.

viii. Use of HOTs (F/G).

- Definition of HOT;
- When HOT begins and ends;
- Limitations and cautions associated with the use of HOTs;
- Source of HOT data;
- Relationship of HOT to particular fluid concentrations and for different types of fluids;
- Precipitation category (e.g., fog, drizzle, rain, or snow);
- Precipitation intensity;
- How to determine a specific HOT from the HOT range that accounts for moderate or light weather conditions; and
- Adjusting HOT for changing weather conditions.

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ix. Pretakeoff Check Requirement (F/G). Identification of representative surfaces.

x. Pretakeoff Contamination Check Requirement (F/G). Communications.

xi. Aircraft Surface Contamination Recognition (F/G).

3) Confirmation of Service Provider Qualification. The operator must have procedures for the flightcrew to determine that ground de/anti-icing service providers are providing their service under a current approved § 121.629 aircraft ground deicing program. These procedures must include a regular check, by the operator, to ensure the currency of the service providers continued approval status under § 121.629. The flightcrew instructions must be clear that if the service provider's approval under § 121.629 cannot be assured that the HOT tables revert to being advisory information only and a pretakeoff contamination check per the applicable procedures must be performed.

4) Recording Requirements. The operator's plan must include procedures for the recording of the location that de/anti-icing was performed, the name of the provider, the type of fluid and mixture used, the final fluid application start time, and the takeoff time. This record may be included as part of an existing record requirement (example: aircraft discrepancy log). This record must be retained and made available to the FAA upon request for a period of at least 12 calendar-months.

OPSPEC A042, TITLE 14 CFR PART 125/135 AIRPLANE OPERATIONS WITHOUT A DEICING/ANTI ICING PROCEDURE WHEN GROUND ICING CONDITIONS DO NOT EXIST. If a part 125 or 135 operator chooses to operate without a pre takeoff contamination check as required by part 125, § 125.221 and part 135, § 135.227, or without a part 121, § 121.629(c) program, then principal inspectors may only authorize them to operate when ground icing conditions do not exist by issuing OpSpec A042. See Volume 3, Chapter 27, Ground Deicing/Anti-Icing Programs, for guidance on approving a ground deicing/anti icing program.

MSPEC A043, AFFILIATE PROGRAM MANAGERS. MSpec A043 allows fractional owners to use program aircraft operated by the program manager's affiliate's program. The program manager certifies to the Administrator that the affiliate program manager listed in MSpec A043 meets the requirements of part 91 subpart K.

OPSPEC A044, (PART 133 DATABASE ONLY) CLASS D OPERATIONS INVOLVING CARRIAGE OF PERSONS. (TBD)

OPSPEC A045, SUBSTITUTE SCHEDULED SERVICE AS A SUPPLEMENTAL OPERATOR. (TBD)

OPSPEC A046, SINGLE-ENGINE IFR PASSENGER CARRYING OPERATIONS UNDER 14 CFR PART 135. A046 is issued to authorize single-engine instrument flight rules (SEIFR) passenger-carrying operations under part 135. Additional Maintenance Requirements OpSpec paragraphs D100–104, must be issued as applicable. The operator must meet the

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conditions part 135, § 135.163 and other appropriate sections, to be issued the authority to operate under IFR with passengers or a combination of passengers and cargo. A046 provides the operational limitations and provisions necessary to operate under IFR while carrying passengers in a single-engine aircraft. The principal operations inspector, principal maintenance inspector, and principal avionics inspector must coordinate the issuance of A046 and the applicable Part D paragraphs (by the authority of 119, § 119.51(b)). Once the operator has met the requirements to conduct SEIFR operations, all the applicable OpSpec paragraphs must be issued for SEIFR authorization.

OPSPEC/MSPEC A047, REPLACED BY OPSPEC A447.

OPSPEC A048, FLIGHT DECK ACCESS AUTHORIZATION PROCEDURES.

A. General. Operations specification (OpSpec) A048 is provided for a 14 CFR part 119 certificate holder that elects to have an approved program to allow persons eligible under part 121, § 121.547(a)(3) access to the flight deck using the Cockpit Access Security System (CASS) program and/or the Flight Standards Service (AFS) Flight Deck Access Restriction (FDAR) program in accordance with the limitations and provisions of the OpSpec. It is important to note that the Transportation Security Administration (TSA) may restrict flight deck access through the issuance of Security Directives (SD). The TSA also evaluates and approves (or denies) use of any system that is used to vet persons requesting flight deck access, such as CASS.

B. CASS Participation. CASS is a voluntary program. It is acceptable if an individual operator does not elect to participate. If they do decide to use the CASS, they must meet all of its criteria.

1) An airman certificate is not specifically required for CASS, as not all persons eligible for flight deck access need one (e.g., flight followers).

2) CASS is not an FAA program. However, it is available to air carriers for use in determining identification and eligibility of individuals seeking access to flight deck jump seats. CASS accommodates most positions that are eligible for flight deck access, such as flightcrew members and flight followers. An air carrier should contact ARINC's CASS representative directly with questions about program accommodation for specific position(s) that are eligible for flight deck access.

3) If the Director of Operations (DO) elects to delegate the task of auditing the database, the DO retains full responsibility for its accuracy, completeness, currency, etc.

C. Background. In the past, the TSA, industry, and FAA agreed upon the use of a valid passport when using this system.

1) Since that agreement, technology has advanced to the point that an individual's photograph is now a required element of that person's electronic record in the CASS system.

2) A passport is no longer specifically required for CASS participation.

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3) TSA has issued a SD that requires an air carrier to include digitized pictures of persons participating in CASS before that air carrier is approved for participation by the TSA.

4) Also, as the guidance states, TSA may impose further restrictions on flight deck access through issuance of SDs.

D. Table 3-6D, Operations Specification A048 Manual Procedures Checklist. The checklist in Table 3-6D should be used to ensure the part 119 certificate holder's manual procedures for the required verification and access procedures for accessing the flight deck jump seat meets requirements. The appropriate sections of this checklist should be completed by the operator and provided to that operator's FAA principal operations inspector (POI) along with their request for amendment of their OpSpecs to include OpSpec A048.

1) The certificate holder may elect to include procedures for one or both of the following verification programs in its manual procedures:

a) CASS.

b) FDAR.

2) The checklist should be completed using the following methodology:

a) Number (item and sub item number).

b) Item description (provide a description of the item).

c) Response (circle "Yes" or "No" to indicate whether or not the item is adequately addressed in the program).

d) Manual page reference (enter the manual page number where the item is addressed).

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Table 3-6D. Operations Specification A048 Manual Procedures Checklist

NO.	ITEM DESCRIPTION	RESPONSE	MANUAL PAGE REFERENCE
1.	Do the certificate holder's procedures include a requirement to obtain the requester's employer-issued photo identification card?	Yes/No	
2.	Does the certificate holder's procedures include a requirement to verify at the time of check-in the information obtained from the person requesting flight deck jump seat access using one of the following methods (the certificate holder may select one or more of the following methods):		
2.a.	CASS?	Yes/No	
2.b.	FDAR - Electronic Database?	Yes/No	
2.c.	FDAR - Telephone?	Yes/No	
2.c-i.	*If yes*, do the certificate holder's procedures contain a list of part 119 certificate holders with which flight deck jump seat agreements are in place and the respective contact numbers and/or email addresses for use in employee flight deck jump seat eligibility and employment status verification?	Yes/No	
2.d.	FDAR - Email?	Yes/No	
2.d-i.	*If yes*, do the certificate holder's procedures contain a list of part 119 certificate holders with which flight deck jump seat agreements are in place and the respective contact numbers and/or email addresses for use in employee flight deck jump seat eligibility and employment status verification?	Yes/No	
2.e.	FDAR - Facsimile?	Yes/No	
2.e-i.	If yes, do the certificate holder's procedures contain a list of part 119 certificate holders with which flight deck jump seat agreements are in place and the respective contact numbers and/or email addresses for use in employee flight deck jump seat eligibility and employment status verification?	Yes/No	

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NO.	ITEM DESCRIPTION	RESPONSE	MANUAL PAGE REFERENCE
3.	Does the certificate holder's procedures assign responsibility to the Director of Operations for:		
3.a.	Completion of an initial audit to confirm accuracy of employee records used under this operations specification authorization?	Yes/No	
3.b.	Completion of recurring audits to confirm accuracy of employee records used under this operations specification authorization at least once every 12 months?	Yes/No	
3.c.	Updating any and all employee status changes of the employee records used in accordance with this authorization within 12 hours of the time that the change(s) occurred?	Yes/No	
4.a.	Has the certificate holder satisfactorily demonstrated their software and procedures to the principal operations inspector?	Yes/No	N/A
4.b.	Did the demonstration reveal any instances where flight deck jump seat access was granted when it should have been denied?	Yes/No	N/A
5.	Did the initial audit (see item 3.a. above) reveal any records representing former employees as current employees?	Yes/No	N/A
6.	Is the certificate holder in receipt of an applicable TSA authorization to use a vetting system for persons requesting flight deck access (e.g., CASS)?	Yes/No	

OPSPEC/MSPEC A049, REPLACED BY OPSPEC/MSPEC A449.

LOA A049, LETTER OF AUTHORIZATION FOR COMMERCIAL AIR TOUR OPERATIONS AND ANTIDRUG AND ALCOHOL MISUSE PREVENTION PROGRAM REGISTRATION.

A. Applicability. LOA A049 applies to part 91 operators and part 119 certificate holders operating under part 121 or part 135 who conduct commercial air tour operations for compensation or hire under § 91.147.

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1) If a part 91 operator is not already identified in OPSS, general instructions for putting an operator into the OPSS, in order to issue the automated part 91 LOA A049 is associated with all OpSpec/MSpec A001 templates in the part 91 database of the OPSS. If you need further assistance, please contact Aviation Safety (AVS) Support Central at 405-954-7272.

a) Because of programmatic limitations, we are unable to provide any other title than POI, PMI, or PAI for the signature block in the OPSS for part 91 LOAs. Thus, the office manager or applicable supervisor who chooses to sign the part 91 authorizations will be identified as a POI, PMI, or PAI instead of manager or supervisor.

b) When issuing a part 91 authorization from the OPSS, at a minimum the A001, Issuance and Applicability; and A004, Summary of Special Authorizations and Limitations templates must be included in the operator's package.

2) Operators who are uncomfortable with the limitations in § 91.146 and wish to continue flights supporting charities, nonprofit organizations, and community events may also use § 91.147 and must be issued A049. Part 91 operators using § 91.147 also have the option of becoming certificated operators in order to conduct commercial air tour operations under part 135 or part 121.

B. Air Carriers Operating Under Section 91.147. Part 121 or 135 certificate holders that conduct commercial air tour operations under § 91.147 must be issued a separate LOA from the part 91 database and issued a separate four character identifier. Certificate holders must implement a second drug and alcohol testing program to conduct operations under § 91.147. Even though the same company may be conducting operations under part 135 or 121 and air tour operations under § 91.147, the FAA's regulations consider the two operations to be separate entities for drug and alcohol purposes.

C. Commercial Air Tours (defined in 14 CFR part 136, § 136.1). These operations are passenger-carrying flights conducted in accordance with § 91.147. As of September 11, 2007, all operators or certificate holders must have applied for and have been operating in accordance with LOA A049, issued by the FSDO nearest to its principal place of business. The seven items listed in § 91.147(c) represent the minimum amount of information required for the national database and the issuance of LOA A049 to the part 91 operators. Certificate holders comply with most of these requirements through the issuance of other applicable OpSpecs:

1) Name of operator, agent, and any DBA under which that operator does business (template/OpSpec A001);

2) Principal business address and mailing address (template/OpSpec A001);

3) Principal place of business (if different from business address) (template/OpSpec A001);

4) Name of person responsible for management of the business (LOA A049);

5) Name of person responsible for aircraft maintenance (LOA A049);

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6) Type of aircraft, registration numbers(s), and make/model/series (LOA A049); and

7) A copy of the Antidrug and Alcohol Misuse Prevention Program registration (LOA A049). This information will be used to populate Table 3 (Location of Records for Inspection) in LOA A049. The population of this table "activates/registers" the drug abatement program for future inspection by AAM-800.

NOTE: The operator must implement its drug and alcohol testing programs in accordance with part 121 appendices I and J.

D. Special Agreements. Some operators may have agreements with other parts of the FAA, such as air traffic, directly or through outside industry associations to conduct flights in a certain way or airspace. These special agreements need to be documented in the LOA A049. The documentation of these agreements in LOA A049 does not imply nor require that the agreements are approved by the Flight Standards PI.

NOTE: Section 136.3 now allows amendment and reconsideration of LOAs through § 119.51.

E. Hawaiian Air Tour Operators. The Hawaii air tour operators conducting these commercial air tour operations under § 91.147 must be issued LOA A049. The Hawaiian air tour operators may be issued a deviation (previously under SFAR 71) using LOA/OpSpec B048. The deviation authorizes the operator/certificate holder to conduct § 91.147 commercial air tour operations below an altitude of 1,500 feet above the surface in accordance with the appropriate requirements of part 136 and part 136 appendix A, and the limitations and provisions of B048.

F. Air Tour Operations Under § 91.147 and § 136.37. The requirements of § 91.147 and those of § 136.37 are two separate requirements. Some commercial air tour operators conduct overflights of national parks and fall under the exception in § 136.37. OpSpec/LOA B057 is required for national parks and is issued in addition to LOA A049. OpSpec/LOA B057 authorizes a certificate holder or operator to conduct commercial air tour operations over national park(s) and tribal lands within or abutting the national park in accordance with part 136. See OpSpec/LOA B057 for guidance regarding air tour operations under § 136.37.

G. The National Air Tour Safety Standards Final Rule (72 FR 6911). Final Rule 72 FR 6911 published on February 13, 2007, and effective March 15, 2007, set safety and oversight rules for a broad variety of sightseeing and commercial air tour flights with changes in parts 61, 91, 119, 121, 135, and 136. Intended effects of this rule are to identify the air tour operators in a national database, standardize requirements for commercial air tour operators, and consolidate air tour safety standards within part 136. The rule change responded to NTSB recommendations, Government Accountability Office (GAO) reports, and DOT General Reports that recommend better oversight of the sightseeing (commercial air tour) industry. The preamble and final rule are posted on the DOT Web site at URL: http://dms.dot.gov/search/document.cfm?documentid=452251&docketid=4521.

NOTE: Exemptions to this rule are outlined in § 91.146.

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OPSPEC A050, HELICOPTER NIGHT VISION GOGGLE OPERATIONS (HNVGO). (TBD).

OPSPEC A051. Reserved.

OPSPEC/MSPEC/LOA A052. Reserved.

OPSPEC A053. Reserved for Emergency Charter Operations. (TBD.)

OPSPEC A054, (PART 133 DATABASE ONLY) INSTRUMENT FLIGHT RULES OPERATIONS (FOR PART 133, EXTERNAL LOAD OPERATIONS ONLY). (Guidance is found in Volume 2, Chapter 7, Initial Certification/Renewal of a Part 133 Operator.)

OPSPEC A055, CARRIAGE OF HAZARDOUS MATERIALS.

A. Authorization. Operations specification (OpSpec) A055 is an optional authorization applicable to certificate holders conducting operations under 14 CFR parts 121 or 135 that choose to comply with the applicable regulations to carry hazardous materials (hazmat).

B. Regulatory Changes. With the publication of Federal Register (FR) 58796, Vol. 70, No. 194, Friday, October 7, 2005, a change to part 119, § 119.49(a)(13) was effective November 7, 2005, as follows:

1) Section 119.49(a)(13) requires all certificate holders conducting operations under parts 121 or 135 to indicate in their operations specification that they "will-carry" or "will-not-carry" hazmat. OpSpec A055 is issued for those that "will-carry" hazmat. OpSpec A004 must contain the statement in subparagraph b that the certificate holder "will-not-carry" hazmat.

2) This FR also required that after February 7, 2007, these certificate holders must comply with the manual requirements of parts 121 and 135, §§ 121.135(b)(23) or 135.23(p) and with the hazmat training program requirements of §§ 121.1003 through 121.1007 or §§ 135.503 through 135.507, as applicable.

3) These changes align U.S. implementation with International Civil Aviation Organization (ICAO) standards for the carriage of hazmat, which recommend initial and biennial recurrent training programs. Additionally, ICAO recommends the certificate holder be specifically authorized by its state of authority to carry hazmat.

C. Part 91 Subpart K (Part 91K) Program Managers and Part 125 Operators. There is no OpSpec A055 for part 125 operators or management specification (MSpec) A055 for part 91K. Section 91.1085 requires hazardous material (hazmat) recognition training. No program manager may use any person to perform any assigned duty/responsibility for handling or carriage of hazmat unless that person has received training in the recognitions of hazmat.

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1) Therefore, any program manager who delegates such an assignment would be a "hazmat employer" in accordance with Title 49 of the Code of Federal Regulations (49 CFR) part 172, § 172.702(d).

2) Any person so assigned, must be trained in accordance with § 172.704(a).

3) If the part 91K program manager makes a business decision not to accept hazmat and does not assign any person to perform a duty or responsibility to handle or carry hazmat, then recognition training is not required.

D. Certificate Holders That Choose to Carry Hazmat (Will-Carry).

1) A certificate holder conducting operations under part 121 or 135 that chooses to carry hazmat (and Company Materials (COMAT) identified as hazardous) must provide to its principal operations inspector (POI) a general outline of the aspects of the proposed training program as presented in Table 1, Operators That Transport Hazardous Material – Will-Carry Certificate Holders, of part 121, appendix O and the manual with the procedures and information to be used to assist the flightcrew members. The POI will forward this material to the appropriate regional hazmat branch manager's office (see Volume 2, Chapter 2, Section 6 for references). Generally, air carriers must only submit an outline sufficient to provide an overview of the training program in regard to the aspects and functions covered in Tables 1 and 2, Operators That Do Not Transport Hazardous Materials – Will-Not-Carry Certificate Holders, of part 121 appendix O. The hazmat branch manager will review the submission to determine that it includes the relevant training aspects for the cited job functions.

2) Provided the following conditions are met, the certificate holder may be authorized to accept, handle, and transport materials, including COMAT (regulated as hazmat in transport under 49 CFR parts 171 through 180 (part 175 in particular)).

a) Packages containing hazmat are properly offered and accepted in compliance with parts 171 through 180;

b) Packages containing hazmat are properly handled, stored, packaged, loaded, and carried onboard the certificate holder's aircraft in compliance with parts 171 through 180;

c) The requirements for the notification to the PIC (part 175, § 175.33) are complied with; and

d) Aircraft replacement parts, consumable materials or other items regulated by parts 171 through 180 are properly handled, packaged, and transported.

3) Additionally, for each crewmember and person performing or directly supervising the following job functions involving items for transport on an aircraft, the certificate holder's manual required by §§ 121.133 or 135.21 shall contain those procedures and information necessary to assist the crewmember or other person in identifying packages marked or labeled as containing hazmat or show signs of containing undeclared hazmat, including procedures and information on the following:

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- Acceptance.
- Rejection.
- Handling.
- Storage incidental to transport.
- Packaging of company material.
- Loading.

4) The manual required by §§ 121.133 or 135.21, as appropriate, shall contain the certificate holder's procedures for rejecting packages that do not conform to the Hazardous Materials Regulations (HMR) in parts 171 through 180, or that appear to contain undeclared hazmat.

5) The manual required by §§ 121.133 or 135.21, as appropriate, shall contain the certificate holder's procedures for complying with the hazmat incident reporting requirements of part 171, §§ 171.15 and 171.16 and discrepancy reporting requirements of § 175.31.

6) The certificate holder is responsible for maintaining the records in initial and recurrent hazmat training within the three preceding years of all direct employees, contractors, and subcontractors directly supervising or performing an applicable job function as described in part 121 subpart Z for or on behalf of the certificate holder. The training records may be electronic or paper and must be made available to the FAA upon request at the location the trained person performs or directly supervises the covered job function.

7) The following recordkeeping requirements are identical to those required by § 172.700, the International Air Transport Association (IATA), and the International Civil Aviation Organization (ICAO):

- Individual's name.
- Most recent training completion date.
- A description, copy, or reference to training material.
- Name and address of organization providing training.
- Copy of certification used to show test was satisfactorily completed.

E. Certificate Holders that Choose Not to Carry Hazmat (Will-Not-Carry).

1) OpSpec A004 will state that the certificate holder conducting operations under part 121 or 135 is not authorized and shall not carry hazmat, satisfying the OpSpec regulatory requirement for a "will-not-carry" certificate holder. The certificate holder is prohibited from accepting, handling, or transporting those materials, including hazardous COMAT, regulated as hazmat in transport under parts 171 through 180.

2) Consistent with this prohibition, for each crewmember and person performing or directly supervising the acceptance, handling, storage incidental to transport, or loading of items for transport on an aircraft, the certificate holder's manual required by §§ 121.133 or 135.21 (as appropriate) shall contain those procedures and information necessary to assist the crewmember or other person in identifying packages that are marked or labeled as containing hazmat or that show signs of containing undeclared hazmat.

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3) The manual required by §§ 121.133 or 135.21, as appropriate, shall contain the certificate holder's procedures for rejecting packages offered for transport that contain hazmat or that appear to contain undeclared hazmat.

F. Basic, Single PIC, and Single-Pilot Operators.

1) Operators issued OpSpecs A037 through A039 must have an approved hazmat program and should use the hazmat program currently accepted/approved by their respective regional hazardous material branch. These certificate holders conducting operations under part 135 will need to have OpSpec A055 issued if they are a "will-carry" certificate holder. These certificate holders may have to comply with the manual requirements for the carriage of hazmat if the hazardous material branch manager requires it.

2) Single-pilot operators issued OpSpec A040 may comply with the hazmat program by submitting a program for acceptance by the FAA if they are a "will-carry" certificate holder. They will be issued OpSpec A055 if they are a "will-carry" certificate holder. There is no manual requirement for a single-pilot operator issued OpSpec A040.

G. Reference.

- 70 FR 58796 (No. 194); October 7, 2005.

OPSPEC/MSPEC/LOA A056, DATA LINK COMMUNICATIONS.

A. General. Template A056 contains specific operational limitations and provisions for granting authorization to operators of aircraft under part 91, 121, 125, 135, or 91 subpart K to conduct data link communications using aircraft systems that are certificated for air–ground air traffic services (ATS).

1) Parts 91, 121, 125, and 135 operators, and part 91K program managers conducting flight operations in oceanic and remote airspace may use data link communications systems (i.e., Future Air Navigation System (FANS) (FANS-1/A or equivalent)). Operations using data link communications within domestic airspace require very-high frequency (VHF) radios called very-high frequency digital link Mode 2 (VDL-2), compatible with ATS.

2) Data link may be used as a supplement to voice communications with ATS. Voice communications must be continually monitored because aircraft still must be equipped with operating VHF voice and, when required, high frequency (HF) voice radios along the entire flight route.

3) All data link operations in domestic airspace are limited to the en route phase of flight where radar or an equivalent surveillance system such as Automatic Dependence Surveillance-Broadcast (ADS-B) is available for surveillance services.

4) All aircraft used to conduct data link operations in domestic airspace must be equipped with an FAA-certified collision avoidance system that is on and operating. (Reference part 91, § 91.221; part 121, § 121.356; part 125, § 125.224; part 129, § 129.18; and part 135, § 135.180.)

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5) An exception to the requirement for data link communication systems is the FANS-1/A system in oceanic or remote airspace. The FANS-1/A communications system can only be approved for data link operations in oceanic and remote area airspace. FANS-1/A systems are not interoperable with the VDL-2 infrastructure for domestic data link communications.

B. Data Link Training. Part 121 and 135 air carriers, and part 91K program managers must have an approved data link training program for their maintenance and flightcrew personnel, as outlined in FAA AC 120-70, Operational Authorization Process for use of Data Link Communication System, current edition.

C. Authorization for Data Link Use. For part 91, 121, 125, and 135 operators and part 91K program managers, the POI will coordinate with the principal avionics and PMIs on the following matters:

1) Equipment and systems certification, and airworthiness approval review;

2) The content of the OpSpec authorization;

3) The required communication performance;

4) The AFM;

5) Additional MEL requirements and relief; and

6) Other elements necessary for the safe and effective use of data link communications.

NOTE: POIs should be aware that there may be additional limitations and guidance for specific airplanes in Flight Standardization Board (FSB) reports.

D. Contents of Operator Application for Operational Authorization to Use Data Link. The operator's application to obtain authorization to use data link must address and contain the following subjects:

1) List of source documents used:

a) For generic data link operations (e.g., aircraft/avionics manufacturer documents).

b) For area of operations specific policy/procedures. (See item 3 below.)

2) Description of aircraft data link systems including certification documents and current configuration (e.g., current avionics load).

3) Data link system make/model/series. All STC and AFM limitations and procedures.

4) General information.

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5) Areas of operation/routes where operator intends to use data link.

a) List of areas and/or routes where operator intends to conduct data link operations.

b) List of air traffic centers/service providers with which the operator intends to communicate via data link.

c) List of policy and procedures source documents applicable to each area(s) of operations, such as:

1. Operations manuals for specific areas of operations (e.g., FANS-1/A Operations Manual (FOM) for operation in Asia–Pacific flight information regions (FIR)).

2. State Aeronautical Information Publications (AIP).

3. State Notices to Airmen.

4. FAA chart supplements (e.g., Pacific and Alaska chart supplement).

6) Flightcrew qualification programs.

7) Manuals and other publications.

8) MMEL/MEL.

9) Issues unique to a particular operator.

10) Maintenance programs.

E. Contents of Flightcrew Qualification Programs.

1) Academic Training Subjects. A basic source document for data link procedures in oceanic areas is the FOM, part 5. Policy and procedures applicable to specific FIRs are in state AIPs and NOTAMs. Address the following areas:

- Acronym Source: FOM part 2,
- General concepts of digital and analog communications,
- Expected flightcrew response,
- ATS coordination,
- Aircraft digital or analog communication equipment components, displays, alerts. (Sources: aircraft manufacturer documents.),
- Interface with other aircraft systems,
- AFM information MEL provisions,
- Data link events reports,
- Data link malfunction or irregularity reports, and
- Human factors—lessons learned.

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2) Operational Use Training.

- General requirement,
- Simulators,
- Computer-based instruction,
- Policy on initial pilot evaluation, and
- Recurrent training and evaluation.

3) Currency (recent experience).

4) Line Checks and Route Checks (if applicable).

5) Line-Oriented Flight Training (if applicable).

F. Operational Authorization Documents. This issuance of paragraph A056 grants approval to use data link communications in operations. Either the certificate management office or Flight Standards District Office should coordinate the approval with AFS-400.

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Table 3-23. Communications Systems and Operating Environments

This table lists the systems and their operating environment including the applicable criteria with references.

Row	Aircraft Data Link System	Operating Environment			Applicable Standards
		Type of Airspace	ATS Unit System	Capabilities and Uses	
1	ATN B1	Domestic (Continental)	ATN B1	Supplemental ATC communications: Communication application supports data link initiation capability (DLIC) data link service. Controller Pilot Data Link Communications (CPDLC) application supports ACM, ACL, and AMC data link services. Note 1: departure clearance (DCL), downstream clearance (DSC), (Digital-Automatic Terminal Information Service (D-ATIS), and Flight Plan Consistency (FLIPCY) data link services are not supported.	a. DO-290/ED-120, Chg 1 and Chg 2, Continental Safety and Performance (SPR) Standard. b. DO-280B/ED-110B air traffic management (ATM) B1 INTEROP Standard.
2	FANS 1/A+	Domestic (Continental)	ATN B1 FANS-1/A	Same as row 1 except: Uses Aeronautical Telecommunications Network (ATN) ATC Facilities Notification	Same as row 1 plus: a. DO-305/ED-154, FANS 1/A-ATN INTEROP Standard (Applies only to ATS Unit

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Row	Aircraft Data Link System	Operating Environment			Applicable Standards
		Type of Airspace	ATS Unit System	Capabilities and Uses	
				(AFN) application for DLIC data link service. For CPDLC application, UM 215, TURN (direction) (degrees) is not supported. Note 2: FANS 1/A aircraft will require use of DM67 (free text) to mimic certain message elements per DO-290/ED-120 Chg 1 and Chg 2. See DO-305/ED-154 paragraph 4.2.13.2. Note 3: In accordance with DO-290/ED-120, Chg 1 and Chg 2, FANS 1/A aircraft will require use of a message latency timer per DO-258A/ED-100A, paragraph 4.6.6.9 and is denoted by a "+" appended to the "FANS 1/A" label. Note 4: Only via VHF data link subnetwork.	except see note 2). b. DO-258A/ED-100A, FANS 1/A INTEROP Standard (Applies only to aircraft).
3	FANS 1/A+ or FANS 1/A	Oceanic and remote	FANS-1/A	Normal means of ATC communication uses AFN and CPDLC applications for direct controller-pilot communications	a. DO-306/ED-122, Oceanic SPR Standard. b. DO-258A/ED-100A (or earlier versions) FANS 1/A

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Row	Aircraft Data Link System	Operating Environment			Applicable Standards
		Type of Airspace	ATS Unit System	Capabilities and Uses	
				(DCPC). Eligible for: Required Communication Performance (RCP) 240 operations via VHF, SATCOM Iridium and SATCOM Inmarsat subnetworks. RCP 400 operations via HF data link subnetwork. No RCP operations. Note 4: Aircraft capability that supports multiple RCP type operations needs to include appropriate indications and/or alerts to enable the flightcrew to notify ATC when aircraft equipment failures result in the aircraft's ability to no longer meet its criteria for any of the RCP types, per DO-306/ED-122, paragraph 5.2.6.a) and 5.2.6.b). Uses ADS-C application for automatic position reporting.	INTEROP Standard.
4	FANS 1/A+	Oceanic and	CADS	No CPDLC application.	a. DO-306/ED-122 Oceanic

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Row	Aircraft Data Link System	Operating Environment			Applicable Standards
		Type of Airspace	ATS Unit System	Capabilities and Uses	
	or FANS 1/A	Remote		Uses ADS-C application for automatic position reporting.	SPR Standard. b. DO-258A/ED-100A (or earlier version), FANS 1/A INTEROP Standard (Applies only to aircraft) c. Centralized ADS (CADS) Common Specification, Version 2.0, approved ICAO NAT FIG/10, Paris, March 29–April 2, 2004 (Applies only to ATS unit)
5	Flight management system waypoint position reporting (FMS WPR)	Oceanic and Remote	CFRS	Same as row 4	a. DO-306/ED-122, Oceanic SPR Standard b. ARINC 702A, Advanced Flight Management Computer System (Applies only to aircraft) c. Central Flight Management Computer Waypoint Reporting System (CFRS) Common Specification, Version 2.0, approved International Civil Aviation Organization (ICAO) North Atlantic (NAT) FIG/10, Paris, March 29–April 2, 2004 (Applies only to ATS unit when

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Row	Aircraft Data Link System	Operating Environment			Applicable Standards
		Type of Airspace	ATS Unit System	Capabilities and Uses	
					ATS unit is CADS)
6	FANS 1/A ADS-C	Oceanic and Remote	FANS-1/A or CADS	Same as row 4	a. DO-306/ED-122 Oceanic SPR Standard b. DO-258A-ED-100A (or earlier version) FANS 1/A INTEROP Standard (If ATS unit is CADS, applies only to aircraft) c. CADS Common Specification, Version 2.0, approved ICAO NAT FIG/10, Paris, March 29–April 2, 2004 (Applies only to ATS unit when ATS unit is CADS

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MSPEC A058, SINGLE PILOT PROGRAM FLIGHTS. The program manager may be authorized to use certain program aircraft with approved autopilot systems in single pilot program flights provided the limitations and provisions of MSpec A058 are met.

MSPEC A059, USE OF ALTERNATE MANUALS, PROGRAMS, OR SYSTEMS. The program manager may be authorized to use specific alternate manuals, programs, or systems (except for flight, duty, and rest provisions) in accordance with the limitations and provisions of MSpec A059.

OPSPEC A060, EUROPEAN AVIATION SAFETY AGENCY RATINGS FOR REPAIR STATIONS LOCATED OUTSIDE THE UNITED STATES. This paragraph authorizes work performed under European Aviation Safety Agency (EASA)-rated repair stations if the appropriate form (EASA Form 3) authorizes the scope of the work.

OPSPEC/MSPEC/LOA A061, USE OF ELECTRONIC FLIGHT BAG.

A. Applicability. Paragraph A061 is an optional authorization available to all operators conducting airplane operations under 14 CFR parts 91 subpart K (part 91K), 121, 125 (the Letter of Deviation Authority (LODA) 125 operators), and 135. Paragraph A061 authorizes the use of Class 1, Class 2, and/or Class 3 Electronic Flight Bags (EFB), and describes the conditions and limitations for EFB use.

NOTE: Questions regarding the issuance of OpSpec/MSpec/LOA A061 should be directed to the Flight Technologies and Procedures Division (AFS-400) at 202-385-4743, the Air Transportation Division (AFS-200) at 202-267-8166, or the General Aviation and Commercial Division (AFS-800) at 202-267-8212.

B. General. Aviation safety inspectors (ASI) and Aircraft Evaluation Groups (AEG) will no longer approve Class 1 and 2 EFB hardware and associated Type A and B application software. Instead, ASIs may authorize the use of Class 1 or 2 EFB devices, including those Class 2 EFBs containing Type C application software meeting requirements of the current edition of Technical Standard Order (TSO) C165, Electronic Map Display Equipment for Graphical Depiction of Aircraft Position, for display of "own-ship" position on airport moving map displays. Installation requirements and airworthiness approval remain unchanged.

1) Class 3 hardware and Type C software will be FAA-approved by the normal type certification processes (type certificate (TC)/Supplemental Type Certificate (STC)). For operations conducted under parts 91K, 121, 125 (including deviation holders), and 135, all EFBs will be authorized for use by OpSpec/MSpec/LOA. AEG evaluation of Class 3 and/or Type C will be published in the applicable Flight Standardization Board (FSB) report.

2) Class 1 or 2 hardware (with Type A and/or B software applications) must be demonstrated to reliably meet intended EFB functions. It is the responsibility of the applicant and/or the EFB hardware/software vendor to ensure that its EFB system and Type A and B software applications can accurately perform intended functions. AEG evaluation of a Class 1 or 2 EFB (with Type B applications) will be at the AEG's discretion and published in an Operational Suitability Report (OSR) for the particular EFB.

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C. Background. Advisory Circular (AC) 120-76, Guidelines for the Certification, Airworthiness, and Operational Approval of Electronic Flight Bag Computing Devices, current edition, and expired Notice N 8200.98, Electronic Flight Bag Job Aid, reference several instances of FAA inspector and AEG approval requirements for Class 1 and 2 EFB hardware and associated Type A and B application software (whether that software is sold separately or embedded in an EFB device). The guidance in this section replaces procedures and advisory material in FAA orders and ACs requiring an FAA inspector or the AEG to approve Class 1 and 2 EFB hardware and associated Type A and B software applications. The guidance in this section is not intended to stop or restrict the operational use of these devices and software. This section also replaces the cancelled Notice N 8000.353, Revised Guidance for Authorizing the Use of Electronic Flight Bags, Issuance of A061, Electronic Flight Bag, and Revision to A025.

1) In AC 120-76, the words "approved" and "approval" are used in many instances when referring to actions that may be accomplished by Flight Standards Service (AFS) ASIs. The uses of these words are intended to reflect the general process for approval or acceptance. The general process of approval or acceptance of certain operations, programs, documents, procedures, methods, or systems is an orderly method used by AFS inspectors to ensure that such items meet regulatory standards and provide for safe operating practices. It is a modular, generic process that can be applied to many types of approval or acceptance tasks. It is important for inspectors to understand that this process is a tool to be used with good judgment.

2) The application of the approval process described in ASI handbooks, coupled with the plain English definitions of approved and approval, has led to some confusion in the aviation community. AFS ASIs have no authority to approve EFB hardware or EFB application software. The guidance in this section is not intended to stop or restrict the operational use of these devices and software, but to clarify the role of AFS ASIs with regard to EFBs.

D. Guidance.

1) The authorization to use an EFB is optional and applicable to operators conducting operations under parts 91K, 121, 125 (including LODA holders), and 135. ASIs may authorize the use of Class 1, 2, and 3 EFB devices. (OpSpec/MSpec/LOA A025 is no longer used for the EFB authorization.)

2) Use A061 Table 1 for authorizing the use of a Class 1 EFB with Type "B" software installed or any Class 2 or 3 EFB. OpSpec/MSpec/LOA A061 will be used to document the aircraft make, model, and series (M/M/S), the EFB hardware class, manufacturer, model, software type, source, and revision number. Compliance with the requirements of OpSpec/MSpec/LOA A061 should be validated during routine inspections of the operator before it is issued.

3) ASIs and AEGs are not responsible for approving Class 1 and 2 EFB hardware and associated Type A and B application software.

a) Installation requirements and airworthiness approvals remain unchanged as specified in AC 120-76.

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b) The appropriate AEG, at their discretion, may evaluate the EFB device installations that present new or novel functions and provide a report of operational suitability and/or adverse findings to the responsible aircraft certification or airworthiness entity having approval authority for the initial installation. OSRs are available at http://fsims.avs.faa.gov under "Publications," "MMEL & AEG Guidance Documents," "Flight Standardization Board (FSB) Reports." ASIs should ensure that an operator complies with these reports when they are available for a particular EFB.

4) Class 1 and 2 EFB devices. A061 provides standardized text for the use of Class 1 and 2 EFB devices. The following is applicable for authorizing the use of Class 1 and 2 EFB devices:

a) Class 1 and/or 2 devices with Type A and/or B application software may be authorized for use in accordance with the technical guidance specified in AC 120-76. Class 1 devices with Type A or B application software and/or Class 2 devices with Type A or B application software and/or software approved under TSO-C165 (Type C) may be used.

NOTE: Technical guidance on Class 2 EFBs with Type C application software providing "own-ship" position is found in the current edition of AC 20-159, Obtaining Design and Production Approval of Airport Moving Map Display Applications Intended for Electronic Flight Bag Systems.

b) The maintenance and avionics inspectors must ensure that the aircraft and equipment have the proper airworthiness approvals for any power, databus connections, or mounting.

c) Training for the use and/or maintenance of the EFB by the certificate holder/program manager must be documented and included in the operator's approved training program and applicable maintenance program.

d) The certificate holder/program manager will specify the procedures for updating and maintaining any databases necessary to perform the intended functions of the EFB in its manual.

e) The principal inspector (PI) is responsible for conducting a review of the system performance to ensure its acceptability prior to granting authorization to use. The PI should review the system performance using the EFB system user's manual/pilot's guide. The PI is responsible for evaluating the operators use of the EFB in normal and emergency operations, but not a review of the actual hardware or software.

f) The AEG is available to assist with questions and guidance regarding EFB operational evaluations. The PI should contact the AEG when an operator submits a request for authorization to use an EFB that includes a new or novel function. The AEG may evaluate Class 1 or 2 hardware or Type B software applications as necessary to address progression in available EFB equipment and functions in the aviation industry.

g) If a Class 1 or 2 EFB device is authorized for use, the ASI must enter the appropriate EFB information into the cells of the table. All other information in regard to the

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authorization for the use of an EFB should be documented in the operator's manual and not written into A061.

5) Aircraft Certification Service (AIR) must provide design, installation, and airworthiness approval for Class 3 EFB hardware that is permanently installed on an aircraft. This will be accomplished by incorporating the EFB into the aircraft type design or STC, not by field approvals. If a Class 3 EFB device is authorized to be used, the table in A061 should be appropriately filled out.

a) The Type C application software associated with Class 3 EFB device is also certified by AIR in reference to the current edition of RTCA/DO-178B, Software Considerations in Airborne Systems and Equipment Certification. Type A and B application software may be installed on these devices, but require no approval by the ASI as this software is protected from the Type C application software in the RTCA/DO-178 standard.

b) Operators should have procedures to control revisions to the EFB software in their manuals. Software version control is accomplished by using Table 1 in OpSpec/MSpec/LOA A061.

c) If Type A or B software is used in conjunction with Type C software in the Class 3 EFB, the name of the software must be documented in Table 1 of OpSpec/MSpec/LOA A061.

6) Simulator and/or in-flight validation tests may be needed to fully determine the suitability of the use of an EFB (see AC 120-76, paragraph 12(j), pages 21 and 22). Each operator's proposed EFB functionality and software will vary, and scenarios should be customized for the particular situation by the inspector and applicant. It is the operator's responsibility to demonstrate the function and reliability of the EFB.

a) Validation flight scenarios should be used to ensure that the EFB device's use has adequately transitioned into the operator's overall training and operations programs. In some cases, the task will be completed entirely with an EFB, while in other cases the EFB device may be used together with other sources of information, such as paper charts or documents, depending on the capabilities of the EFB device and its operational implementation.

b) The required EFB validation flight scenario differences could be affected by other factors, such as:

- Software: Type A, B, or C application;
- Hardware: Classes 1, 2, or 3, which include factors such as location in the flight deck and connectivity to other aircraft systems;
- Aircraft/Operations: Single pilot versus dual pilot, single EFB versus dual EFB; and
- Weather conditions: Visual versus instrument; very-low visibility.

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E. Inspector Action. ASIs will review this section and provide pertinent information to the affected operators. OpSpec/MSpec/LOA A025 would be a nonmandatory revision to remove any EFB authorization.

1) ASIs will provide technical advice and guidance to operators, when requested, to assist them in evaluating their selected EFB devices using the technical guidance found in AC 120-76 but will no longer issue FAA approvals for the hardware and software. Authorization for use will be issued in reference to subparagraph E3) below.

2) If the operator has OpSpec A025 issued for electronic recordkeeping systems without the use of an EFB, it is not necessary to reissue that operator's OpSpec A025. Electronic recordkeeping system functions may co-reside on an EFB device and, if so, OpSpec A025 as well as OpSpec A061 should be issued as instructed below.

3) ASIs will use the new OpSpec/MSpec/LOA A061 EFB to authorize the use of a Class 1, 2, or 3 EFB device. Compliance with the requirements of OpSpec/MSpec/LOA A061 should be validated prior to the initial authorization to use an EFB and during routine inspections of the operator. If an EFB is authorized to be used, the table in A061 should be appropriately filled out. All other information in regard to the authorization should be documented in the operator's manual and not written into A061.

OPSPEC/MSPEC A096, ACTUAL PASSENGER AND BAGGAGE WEIGHT PROGRAM FOR ALL AIRCRAFT. Passenger and cargo only operations conducted under 14 CFR parts 91K, 121, 125, and 135 that use actual weights, or asked/volunteered weights plus 10 pounds to account for the weight and balance of all company owned and operated aircraft, must be issued OpSpec A096. If OpSpec A096 is issued, OpSpecs A097, A098, and/or A099 may not be issued.

NOTE: Operators authorized to use average weight always retain the option to use actual weights.

OPSPEC/MSPEC A097, SMALL CABIN AIRCRAFT PASSENGER AND BAGGAGE WEIGHT PROGRAM. Operators of small-cabin aircraft (aircraft type certificated for 5 to 29 passenger seats) that wish to use any combination of standard average, survey derived average, segmented, and/or actual passenger and baggage weights must be issued OpSpec A097. (The classification of small-, medium-, and large-cabin aircraft is based on the maximum type certificated number of passenger seats authorized for an aircraft, not the seating configuration as operated) If an operator elects to use only actual passenger and baggage weights, only OpSpec A096 must be issued. Table 1 of OpSpec A097 approves and tracks the general weight and balance control program weights that may consist of any combination of average, survey derived average, segmented, and/or actual weights. Operators approved for survey derived average weights must specify the expiration date of such weights. The expiration date for survey derived average weights may not exceed 36 calendar-months, beginning the month the survey was completed to derive such average weights. Use Table 2 of OpSpec A097 to approve route specific program weights. The route specific program weights may be comprised of any combination of standard average, survey derived average, segmented, and/or actual passenger

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and baggage weights. Review AC 120-27, Aircraft Weight and Balance Control, current edition, before issuing OpSpec A097 to verify operator weight and balance control program compliance.

OPSPEC/MSPEC A098, MEDIUM CABIN AIRCRAFT PASSENGER AND BAGGAGE WEIGHT PROGRAM. Operators of medium-cabin aircraft (aircraft type certificated for 30 to 70 passenger seats) that wish to use any combination of standard average, survey derived average, segmented, and/or actual passenger and baggage weights must be issued OpSpec A098. (The classification of small- , medium- , and large-cabin aircraft is based on the maximum type certificated number of passenger seats authorized for an aircraft, not the seating configuration as operated.) If an operator elects to use only actual passenger and baggage weights, OpSpec A096 must be issued. Table 1 of OpSpec A098 approves and tracks the general weight and balance program weights that may consist of any combination of average, survey derived average, segmented, and/or actual weights. Operators approved for survey derived average weights must specify the expiration date of such weights. The expiration date for survey derived average weights may not exceed 36 calendar-months, beginning the month the survey was completed to derive such average weights. Use Table 2 of OpSpec A098 to approve route specific program weights. The route specific program weights may be comprised of any combination of standard average, survey derived average, segmented, and/or actual passenger and baggage weights. Review AC 120-27, Aircraft Weight and Balance Control, current edition, before issuing OpSpec A098 to verify operator weight and balance control program compliance.

OPSPEC/MSPEC A099, LARGE CABIN AIRCRAFT PASSENGER AND BAGGAGE WEIGHT PROGRAM. Operators of large-cabin aircraft (aircraft type-certificated for 71 or more passenger seats) that wish to use any combination of standard average, survey derived average, segmented, and/or actual passenger and baggage weights must be issued OpSpec A099. (The classification of small-, medium-, and large-cabin aircraft is based on the maximum type-certificated number of passenger seats authorized for an aircraft, not the seating configuration as operated.) If an operator elects to use only actual passenger and baggage weights, OpSpec A096 needs to be issued. Table 1 of OpSpec A099 approves and tracks the general weight and balance program weights that may consist of any combination of average, survey derived average, segmented, and/or actual weights. Operators approved for survey derived average weights must specify the expiration date of such weights. The expiration date for survey derived average weights may not exceed 36 calendar-months, beginning the month the survey was completed to derive such average weights. Use Table 2 of OpSpec A099 to approve route specific program weights. The route specific program weights may be comprised of any combination of standard average, survey derived average, segmented, and/or actual passenger and baggage weights. Review AC 120-27, Aircraft Weight and Balance Control, current edition, before issuing template A099 to verify operator weight and balance control program compliance.

OPSPEC A101, ADDITIONAL FIXED LOCATIONS. This paragraph identifies additional locations (facilities) within the FSDO that collectively form a certificated part 145 repair station's operational base 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

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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 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 in a country with which the United States has signed a BA that includes provisions for maintenance of aircraft, engines, and appliances for installation on U.S.-registered aircraft, the repair station may operate in multiple facilities under one FAA air agency certificate within that country. The authorization requires the cooperation of the local national aviation authority.

NOTE: The repair station's additional locations may only be within the geographic boundaries of the BA country.

OPSPEC A317, ACCEPTANCE OF A FATIGUE RISK MANAGEMENT PLAN (FRMP).

A. General. On August 1, 2010, the President signed Public Law (PL) 111-216, referred to as the Airline Safety and Federal Aviation Administration (FAA) Extension Act of 2010, which focuses on improving aviation safety. Section 212(b) of the Act requires each air carrier conducting operations under Title 14 of the Code of Federal Regulations (14 CFR) part 121 to develop, implement, and maintain a Fatigue Risk Management Plan (FRMP). The FRMP is an active plan specific to the air carrier's type of operations that describes, through its policies and procedures, methods for managing and mitigating fatigue to improve flightcrew alertness and reduce performance errors. An FRMP is a management plan for addressing the potential effects of day-to-day flightcrew member fatigue associated with the air carrier's specific type of operations. The air carrier's FRMP should reflect its appropriate fatigue mitigation strategies applicable to its operations. For specific information on a FRMP, see Volume 3, Chapter 58, Section 1.

B. Review and Acceptance Process. The Air Transportation Division, AFS-200, is responsible for reviewing and either accepting or rejecting the air carrier's FRMP. For specific procedures on the FRMP review and acceptance process, refer to Volume 3, Chapter 58, Section 1.

C. OpSpec Issuance. The issuance of OpSpec A317 requires headquarters (HQ) approval.

1) The FAA will issue OpSpec A317 to each part 121 air carrier signifying its FRMP has been reviewed and has been determined to be acceptable. The maximum duration of the OpSpec is 24 calendar-months from the date of issuance and will be reflected on the air carrier's OpSpec A317. Therefore, at a minimum, each part 121 air carrier must submit an amended draft FRMP for review every 24 calendar-months.

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2) The POI will be responsible for issuing OpSpec A317 upon receiving approval from AFS-200, and will incorporate the applicable text into the OpSpec as specified in the approval memo issued by AFS-200. For specific guidance on issuing OpSpec A317, refer to Volume 3, Chapter 58, Section 1.

OPSPEC/MSPEC/LOA A353, AUTOMATIC DEPENDENT SURVEILLANCE-BROADCAST (ADS-B) OPERATIONS OUTSIDE OF U.S.-DESIGNATED AIRSPACE: 14 CFR PARTS 91, 91K, 121, 125, 125M, AND 135 CERTIFICATE HOLDERS/OPERATORS. Automatic Dependent Surveillance-Broadcast (ADS-B) is a new system for air traffic surveillance within those areas where the ground infrastructure (ADS-B ground station and air traffic communications network) is in place and available. ADS-B is expected to play an increasing role in the National Airspace System (NAS) as its capabilities evolve, and is expected to be a key element in improving the use of airspace, improving airport surface surveillance, and enhancing safety. ADS-B Out is the capability to send a formatted message that includes elements such as position, altitude, velocity, direction, etc., for use by air traffic in providing air traffic separation services.

A. General Guidance.

1) ADS-B System Description.

a) ADS-B is:

1. Automatic and periodically transmits position, velocity, and other information with no pilot or controller action required for the information to be transmitted;

2. Dependent on the aircraft position source (e.g., Global Navigation Satellite System (GNSS)/Global Positioning System (GPS);

3. Used for surveillance services, much like traditional radar; and

4. Used to broadcast aircraft position and other data to any aircraft or ground station equipped to receive ADS-B.

b) 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 International Civil Aviation Organization (ICAO) 24-bit address.
- Flight ID.
- Special Position Indicator (SPI).
- Emergency status.

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NOTE: Flight ID, SPI, and the emergency status are the only message elements that can be modified by the flightcrew.

2. Navigation Source. Position data is typically derived from GNSS/GPS to determine an aircraft's position.

3. Ground 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 air traffic control (ATC) surveillance and separation services.

2) Application Process.

a) The FAA Flight Standards Service (AFS) local field office receiving a certificate holder/operator request to conduct ADS-B operations should inform the applicant of the application process as shown in Figure 3-67E, Automatic Dependent Surveillance-Broadcast Application Submittal Process Flowchart.

b) For operations outside of U.S.-designated airspace (ADS-B Out), the nonstandard request process should be used (see subparagraph C):

NOTE: To obtain the nonstandard authorization A353, the certificate holder/operator and the responsible principal inspector (PI) are required to use the nonstandard request process. See Volume 3, Chapter 18, Section 2, paragraphs 3-712 and 3-713 for the nonstandard request process.

c) The local AFS field office will conduct a review of the applicant's submitted proposal using applicable guidance contained in subparagraph C and the checklist(s) referenced in subparagraph D. When compliance with all applicable requirements has been demonstrated, the PI will forward the proposal to their regional AFS Next Generation (NextGen) branch for review, as outlined in Figure 3-67E, along with a memorandum requesting AFS headquarters (HQ) concurrence to issue A353.

d) The regional AFS NextGen branch reviews the proposal and coordinates resolution of any discrepancies with the submitting PI. Once this coordination is complete, the regional AFS NextGen branch will forward the proposal to the Flight Technologies and Procedures Division (AFS-400) for coordination with the appropriate AFS HQ policy division(s).

e) Once AFS HQ determines that the proposal demonstrates compliance to all applicable requirements, the appropriate AFS HQ division will forward a letter of concurrence with the PI's request for issuance of the authorization to the submitting regional AFS NextGen branch. The regional AFS NextGen branch will send the AFS HQ concurrence to the requesting PI.

f) Prior to issuance of the A353 authorization by the PI, the certificate holder/operator must comply with any provisions and limitations provided with the AFS HQ concurrence.

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NOTE: To expedite issuance of the authorization, an advanced copy of the letter of concurrence may be sent by the appropriate AFS HQ division via e-mail to the regional AFS NextGen branch in advance of the official hardcopy.

3) Applicability. OpSpec/MSpec/LOA A353 is an optional authorization applicable to all certificate holders/operators conducting ADS-B operations under 14 CFR parts 91, 91 subpart K (part 91K), 121, 125 (including the Letters of Deviation Authority (LODA)), 125 subpart M (part 125M), and 135.

NOTE: Authorization to conduct ADS-B Out operations in the airspace defined in § 91.225(c) is not required. Additionally, authorization is not required to use Flight Information Service-Broadcast (FIS-B) or Traffic Information Service-Broadcast (TIS-B) services for situational awareness (SA) onboard the aircraft.

NOTE: The compliance date for the Automatic Dependent Surveillance-Broadcast (ADS-B) Out Performance Requirements to Support Air Traffic Control (ATC) Service final rule is January 1, 2020 (Registry Identification Number (RIN) 2120-AI92).

4) 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.

5) Position Source Dependency.

a) 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. This dependency can become complicated since the operator is not aware, at any moment, what accuracy is being provided to the avionics.

b) 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., Notice to Airmen (NOTAM)) to ensure that ADS-B performance is available.

6) Air Traffic Separation Services.

a) 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.

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b) 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.

7) 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.

C. 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 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 (horizontal and vertical position, horizontal and vertical velocity) 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 or surface vehicle 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.

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3) Extended Squitter (ES). A long message (e.g., format DF=17) that Mode S transponders transmit automatically, without needing to be interrogated by a 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.

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. 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 Traffic Alert and Collision Avoidance System (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 and an ADS-B service known as ES.

8) Position Source.

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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, the term Receiver Autonomous Integrity Monitoring (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.

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.

D. ADS-B Out Operations Outside of U.S.-Designated Airspace.

1) Applicability. See subparagraph A.

2) Background. ADS-B provides ATC with an alternate means of surveillance in regions where a radar-based system would be impractical (e.g., Gulf of Mexico (GOMEX), mountainous terrain, etc.) or economically viable. ADS-B allows application of reduced separation standards in these areas and improves the efficiency and safety of operations within the airspace. Currently, ADS-B provides surveillance coverage in several regions outside of U.S.-designated airspace, including portions of Australia, Canada, and in the Asia-Pacific region. Additional ICAO regions and Member States are expected to implement ADS-B in the future.

NOTE: As applicable, authorization under OpSpec A353 and a regional authorization (e.g., OpSpec B050) may be necessary to conduct ADS-B operations in areas outside of U.S.-designated airspace.

3) Airworthiness Considerations. The 1090ES message elements represent new or additional requirements for most certificate holders/operators, including identifying and performing regular specific maintenance actions to ensure the continued airworthiness of the ADS-B equipment with all other interrelated avionics dependencies addressed. Specific checks of all required message elements should be completed on a periodic basis, including the correct functioning of system fault detectors and transmission of the ICAO 24-bit address assigned to each specific aircraft. It is important for the principal maintenance inspector (PMI) and principal avionics inspector (PAI) to ensure that adequate and specific procedures are in place for these checks.

NOTE: ADS-B equipment installed in accordance with AC 20-165 will be considered to meet the equipment requirements of European Aviation Safety Agency (EASA) Acceptable Means of Compliance (AMC) 20-24, Certification Considerations for the Enhanced ATS in Non-Radar Areas using ADS-B

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Surveillance (ADS-B-NRA) Application via 1090 MHz Extended Squitter, dated February 5, 2008. See AMC 20-24 for any additional maintenance, operational, and training considerations.

a) Return to service (RTS) requirements will be incorporated into the instructions for continued airworthiness (ICA) for both the ADS-B system and all source systems.

b) Full system-level testing is required any time the following conditions are met:

1. The main ADS-B transponder is replaced.

2. A source system is disturbed and there is a dedicated input to ADS-B that cannot be verified by other means (source system test, flight deck display, etc.).

4) Canada-Specific Requirements. All U.S. operators wishing to operate in ADS-B-designated airspace within Canada must be in compliance with the following requirements (current editions):

a) EASA AMC 20-24, Certification Considerations for the Enhanced ATS in Non-Radar Areas using ADS-B Surveillance (ADS-B-NRA) Application via 1090 MHZ Extended Squitter;

b) Transport Canada AC 700-009, Automatic Dependent Surveillance-Broadcast (ADS-B), paragraph 6.2, Foreign Air Operators; and

c) NAV CANADA Aeronautical Information Circular (AIC) 21/09, Air Traffic Flow Management in the Vicinity of Hudson Bay as a Result of Automatic Dependent Surveillance Broadcast Out Implementation, for information related to ATC services supported by ADS-B.

NOTE: The certificate holder/operator must provide the appropriate Transport Canada Civil Aviation (TCCA) office or representative with a copy of the FAA-issued authorization (OpSpec/MSpec/LOA A353), as appropriate. The certificate holder/operator must also submit the unique ICAO 24-bit aircraft address to NAV CANADA for each aircraft approved for use in ADS-B-designated airspace within Canada.

NOTE: NAV CANADA may accept formats other than octal (i.e., hexadecimal or binary) for the aircraft ICAO 24-bit address. The certificate holder/operator should coordinate with NAV CANADA for acceptable ICAO 24-bit address formats.

NOTE: NAV CANADA maintains an aircraft eligibility list of all aircraft approved for ADS-B services in Canada. Only aircraft with an authorized registration and/or ICAO 24-bit address will be provided ADS-B services.

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5) Australia-Specific Requirements. All U.S. operators wishing to operate in designated ADS-B airspace within Australia must be in compliance with the following requirements (current editions):

a) EASA AMC 20-24, Certification Considerations for the Enhanced ATS in Non-Radar Areas using ADS-B Surveillance (ADS-B-NRA) Application via 1090 MHZ Extended Squitter; and

b) For General Aviation (GA) operators, Civil Aviation Safety Authority (CASA) Civil Aviation Order (CAO) 20.18, Aircraft Equipment—Basic Operational Requirements; or for certificated operators, CASA CAO 82.5, Condition on Air Operators' Certificates Authorising Regular Public Transport Operations in High Capacity Aircraft.

6) Asia-Pacific-Specific Requirements. All U.S. operators wishing to operate in ADS-B-designated airspace within the Asia-Pacific (outside areas specifically identified previously) must be in compliance with the following requirements (current editions):

a) Singapore: EASA AMC 20-24, Certification Considerations for the Enhanced ATS in ADS-B-NRA Application via 1090ES; and

b) Singapore: AIC 14/10, Introduction to Automatic Dependent Surveillance Broadcast (ADS-B) Out Service within Parts of the Singapore FIR.

NOTE: The Civil Aviation Authority of Singapore (CAAS) plans to implement ADS-B operations after 2013 within the Singapore flight information region (FIR). See AIC 14/10 for specific airways that will require ADS-B.

7) General ADS-B Requirements.

a) Aircraft Flight Manual (AFM) Requirements. The AFM, Aircraft Flight Manual Supplement (AFMS), Airplane Operations Manual (AOM), and/or pilot's operating handbook (POH), as applicable to the specific operator, must be carried in the airplane at all times when ADS-B Out equipment is installed in accordance with a type certificate (TC) or Supplemental Type Certificate (STC). The AFM/AFMS/AOM//POH, as applicable, of each aircraft type must contain a statement that the ADS-B system complies with EASA AMC 20-24 and if deviations are applicable. Deviations, as stated in AMC 20-24, may be included or referenced. If the installed ADS-B system is compliant with AC 20-165, the appropriate manuals should indicate that the installation meets the equipment requirements of § 91.227. This can be accomplished by adding the following statement to the "General" or "Normal Procedures" section of the flight manual: "The installed ADS-B Out system has been shown to meet the equipment requirements of 14 CFR § 91.227."

NOTE: Aircraft without an FAA-approved AFM/AFMS may use the certificate holder's POH to meet the requirements in subparagraph C7)a) following review and concurrence by the local AFS field office PI.

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b) Flight Operations Manual (FOM) or Equivalent Requirements. The certificate holder/operator (as applicable) must submit an FOM bulletin or equivalent to the flightcrews describing ADS-B to include:

- ADS-B system description,
- Cockpit setup,
- En route irregular/emergency procedures,
- Communications,
- Aircraft statement of compliance to EASA AMC 20-24, and
- Authorization (see subparagraph D1)).

c) Required Flightcrew/Dispatch/Flight Follower Training (as applicable). Before being authorized to use the ADS-B Out equipment, each member of the flightcrew (including part 91 operators) and the dispatcher/flight follower must have completed an approved training program that includes:

1. Use of ADS-B Out equipment,

2. Specific regional operating practices,

3. Normal procedures,

4. Flight planning,

5. Surveillance phraseology,

6. Emergency procedures,

7. Dispatch considerations (as applicable),

8. Minimum equipment list (MEL) considerations,

9. Human factors,

10. Safety considerations,

11. Equipment limitations, and

12. Contingency planning.

NOTE: If the certificate holder/operator outsources or contracts the ADS-B training to another entity, OpSpec A031 (if applicable) must be issued.

d) Training Verification. The PI must verify that the certificate holder's/operator's training is accomplished and that the AFM or supplements indicate compliance with EASA AMC 20-24 or AC 20-165.

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e) Designation of Aircraft. OpSpec/MSpec/LOA A353, as applicable, requires specific designation of the aircraft approved for operations outside of U.S.-designated airspace. Aircraft make, model, and series (M/M/S), aircraft registration number, and aircraft serial number will be automatically populated to reflect the ADS-B authorization once the PI has updated the respective operator data/aircraft in the Web-based Operations Safety System (WebOPSS) to reflect the ADS-B authorization (see subparagraph D). It is important to ensure that the aircraft M/M/S, registration number, and aircraft serial number for each aircraft is properly recorded.

f) ICAO Regions of Operation. ADS-B Out operations conducted by certificate holders are not authorized beyond the areas specified in OpSpec/MSpec B050 (an example of B050 with applicable notes is located in the WebOPSS under the A353 guidance button).

8) Certification Basis of the Aircraft Avionics. The PI must determine that the certificate holder/operator understands and complies with all limitations and conditions associated with applicable STC requirements, Parts Manufacturer Approvals (PMA), and appropriate AFMSs.

a) The PMI and PAI will ensure that the ADS-B system is installed in compliance with the applicable STC or other appropriate aircraft certification requirements and that the certificate holder's/operator's maintenance program includes continuing airworthiness and maintenance personnel training requirements.

b) The POI will review the certificate holder/operator procedures for deferral of inoperative equipment and will coordinate with the PMI and PAI during the evaluation and approval of the certificate holder/operator MEL. The POI will also provide the operator with guidance for revising the existing airplane MEL. The PMI may need to issue or amend OpSpec D095, as appropriate. ADS-B equipment may not be listed as "Administrative Control Items" in the MEL.

c) The PI must verify that the certificate holder/operator is able to conduct the proposed operations, and validate that the appropriate training manuals, operations manuals, checklists, and operating procedures address ADS-B operations.

d) The certificate holder/operator must provide a listing of the aircraft make and model, registration number, serial number, and the make and model of the approved ADS-B equipment. Once the PI receives concurrence from the appropriate HQ policy division to issue OpSpec/MSpec/LOA A353 (as applicable), the PI shall update the respective operator data/aircraft in WebOPSS to reflect the A353 ADS-B authorization (see subparagraph D1)).

9) Application Package. See subparagraph D1).

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E. ADS-B Information, Checklists, and Contact Information.

1) For ADS-B application package checklist(s), training checklist(s), the A353 Authorization WebOPSS job aid, and other reference documents located in the WebOPSS A353 guidance section, see Figure 3-67D, Sample Application Package Checklist.

2) To access the reference documents in Figure 3-67D, move paragraph A353 to the workspace in WebOPSS. Once paragraph A353 is in the workspace, highlight A353 and click on the "Guidance" button at the bottom of the screen.

NOTE: AFS field office ASIs should make the appropriate application checklists and reference documents available to certificate holders/operators who do not have access to WebOPSS. Inspectors should encourage industry to complete the appropriate application checklist(s) prior to submission. Completion of the application checklist by certificate holders/operators is optional but highly recommended to expedite the application review process.

3) For additional ADS-B information, please contact the following:

a) For general information on operation requirements and procedures, contact AFS-400 at 202-385-4597, or in Lotus Notes at 9-AWA-AVS-AFS-400-Flight-Technologies-Procedures-Division/AWA/FAA.

b) For parts 121 and 135 special authorizations (300-series OpSpecs/LOAs), contact the Air Transportation Division (AFS-200) at 202-267-8166.

c) For parts 91, 91K, 125, and 125M special authorizations (300-series OpSpecs/MSpecs/LOAs), contact the General Aviation and Commercial Division (AFS-800) at 202-267-8212.

d) For continued airworthiness of ADS-B systems, contact the Aircraft Maintenance Division (AFS-300) at 202-385-6402.

e) For certification of ADS-B systems, contact AIR-130 at 202-385-4630.

f) For technical questions concerning the Automatic Dependent Surveillance-Broadcast (ADS-B) Out Performance Requirements to Support Air Traffic Control (ATC) Service final rule, contact (by mail) the Surveillance and Broadcast Services Program Office, AJE-6, Air Traffic Organization, FAA, 800 Independence Avenue SW, Washington, DC 20591; or by telephone at 202-385-8637.

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Figure 3-67D. Sample Application Package Checklist

Category	Title	Description
Revision History	Revision History A353, 14 CFR Part 121	This provides a chronological history of changes to the operations specification (OpSpec) paragraph.
FAA Order	Order 8900.1, Volume 3, Chapter 18, Section 3, OpSpec/Management Specification (MSpec)/Letter of Authorization (LOA) A353	Guidance for OpSpec/MSpec/LOA A353, Automatic Dependent Surveillance-Broadcast (ADS-B) operations.
Civil Aviation Order	Australian Civil Aviation Safety Authority (CASA) CAO 20.18, Aircraft Equipment—Basic Operational Requirements	Australian CASA's ADS-B requirements.
Civil Aviation Order	Australian CASA CAO 82.5, Conditions on Air Operators' Certificates Authorising Regular Public Transport Operations in High Capacity Aircraft	Australian CASA's ADS-B requirements.
Advisory Circular	Transport Canada Advisory Circular (AC) 700-009, Automatic Dependent Surveillance-Broadcast (ADS-B)	Transport Canada AC on ADS-B.
Advisory Circular	AC 20-165, Airworthiness Approval of Automatic Dependent Surveillance (ADS-B) Out Equipment for Operation in the National Airspace System (NAS)	ADS-B equipment approval for the NAS.
Aeronautical Information Circular	Civil Aviation Authority of Singapore (CAAS) Aeronautical Information Circular (AIC) 14/10, Introduction of Automatic Dependent Surveillance Broadcast (ADS-B) Out Service within Parts of the Singapore FIR	CAAS's ADS-B requirements when operating within the Singapore Flight Information Region (FIR).
Aeronautical	NAV CANADA AIC 21/09,	

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Category	Title	Description
Information Circular	Air Traffic Flow Management in the Vicinity of Hudson Bay as a Result of Automatic Dependent Surveillance Broadcast Out Implementation	
OpSpec/Mspec/ LOA	A353 Authorization WebOPSS Job Aid	Job aid on how to create an A353 ADS-B authorization in WebOPSS.
Other	EASA Acceptable Means of Compliance (AMC) 20-24, Certification Considerations for the Enhanced ATS in ADS-B-NRA Application via 1090ES	
Other	Sample Application Package Checklist	Sample application package checklist to help FAA field inspectors review submitted ADS-B Out application packages.
Other	Sample Training Topics Checklist	Sample training topics checklist to help industry and FAA field inspectors develop respective ADS-B training program.
Other	NAV CANADA ADS-B Functional Compliance Survey Form	NAV CANADA ADS-B Functional Compliance Survey form to be completed by certificate holders/operators and remitted to NAV CANADA.
Other	Sample ADS-B Phraseology	Surveillance phraseology.
Other	ICAO Flight ID—FMC Quick Reference	When conducting ADS-B operations, ensure the ICAO Flight ID is correctly entered into the flight management computer (FMC).

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Figure 3-67E. Automatic Dependent Surveillance-Broadcast Application Submittal Process Flowchart

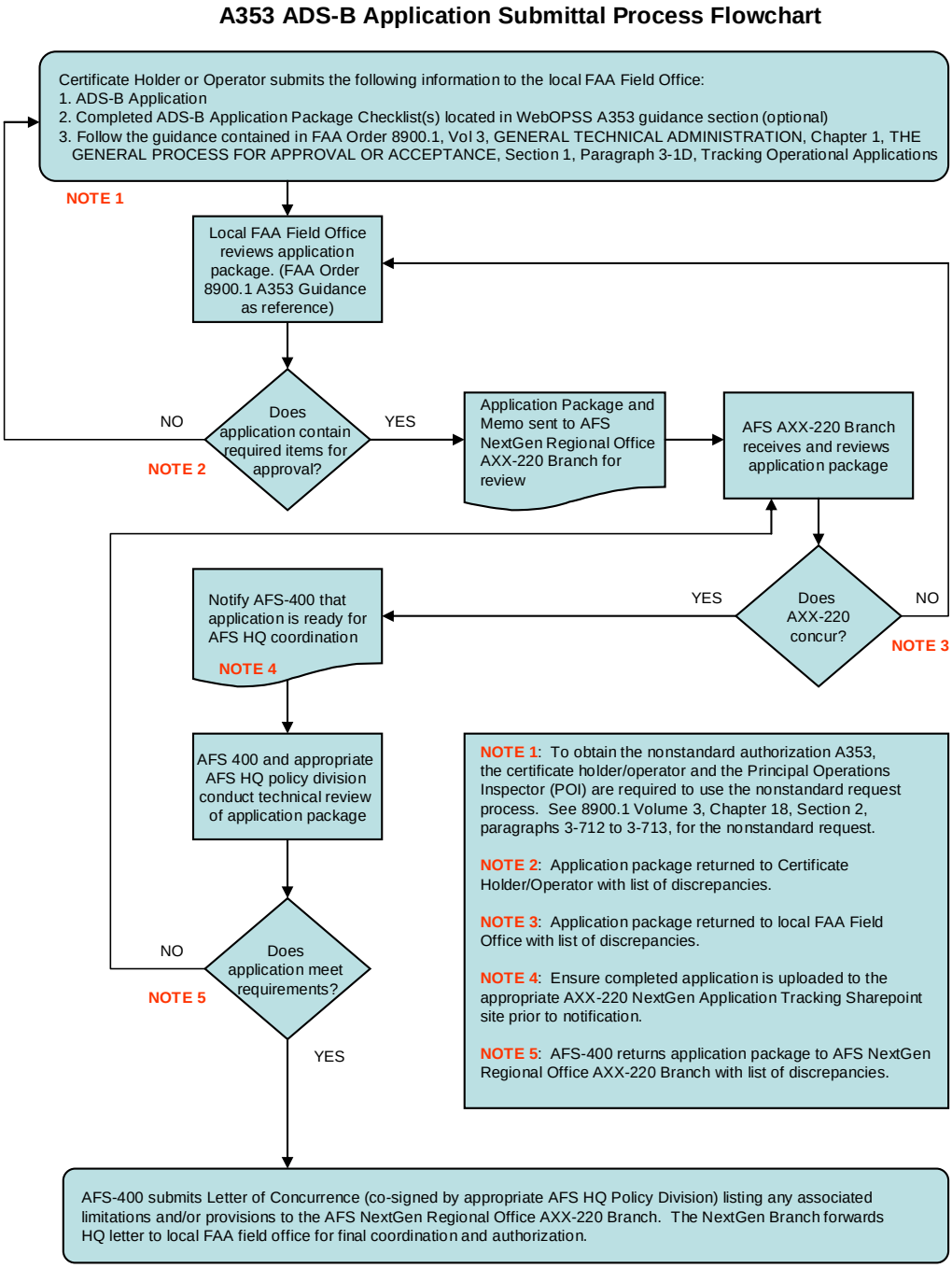

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Table 3-23B. Automatic Dependent Surveillance-Broadcast-Related Acronyms

1090ES	1090 MHz Extended Squitter
ADS-B	Automatic Dependent Surveillance-Broadcast
ADS-B-NRA	Automatic Dependent Surveillance-Broadcast-Non-Radar Area
AFM	Airplane Flight Manual
AFMS	Airplane Flight Manual Supplement
AIM	Aeronautical Information Manual
AMC	Acceptable Means of Compliance
ASSAP	Airborne Surveillance and Separation Assurance Processing
ATC	Air Traffic Control
ATS	Air Traffic Service
EASA	European Aviation Safety Agency
FIR	Flight Information Region
FOM	Flight Operations Manual
GNSS	Global Navigation Satellite System
GPS	Global Positioning System
ICAO	International Civil Aviation Organization
LOA	Letter of Authorization
LODA	Letter of Deviation Authority
MEL	Minimum Equipment List
MHz	Megahertz
M/M/S	Make, Model, and Series
NAS	National Airspace System
NextGen	Next Generation Air Transportation System
NM	Nautical Mile
NOTAM	Notice to Airmen
POH	Pilot’s Operating Handbook
RAIM	Receiver Autonomous Integrity Monitoring
RIN	Regulation Identifier Number
RNP	Required Navigation Performance
SSR	Secondary Surveillance Radar
STC	Supplemental Type Certificate
TCAS	Terrain Collision and Avoidance System
TCCA	Transport Canada Civil Aviation
TSO	Technical Standards Order

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OPSPEC/MSPEC/LOA A354, AUTOMATIC DEPENDENT SURVEILLANCE-BROADCAST (ADS-B) IN-TRAIL PROCEDURE (ITP) (14 CFR PARTS 91, 91K, 121, 125, A125, AND 135 CERTIFICATE HOLDERS/OPERATORS).

B. General. The In-Trail Procedure (ITP) is designed primarily for use in nonradar oceanic airspace to enable appropriately equipped Automatic Dependent Surveillance-Broadcast (ADS-B) In aircraft to perform flight level (FL) changes previously unavailable with procedural separation minima applied. The improved traffic information available to ADS-B In equipped aircraft allow ITP maneuvers to occur safely with application of reduced separation minima. ITP will enable FL changes to improve ride comfort, avoid weather, and obtain more favorable winds to improve fuel economy and arrival times.

NOTE: Refer to the current edition of AC 90-114, Automatic Dependent Surveillance-Broadcast (ADS-B) Operations, Appendix 2, Definitions for a more detailed description of the ITP.

C. Applicability. Paragraph A354 is an optional authorization available to operators conducting operations under 14 CFR parts 91, 91 subpart K (part 91K), 121, 125 (including A125 Letter of Deviation Authority (LODA) holders), and 135. Paragraph A354 authorizes the use of ADS-B In equipment for ITP.

NOTE: A part 125 LODA holder is an aircraft 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 the Web-based Operations Safety System (WebOPSS) database as 125M. The "M" designation is assigned in WebOPSS to identify part 125 LODA holders in the database.

D. General Guidance. For authorization to conduct ITP, the certificate holder/operator and their responsible principal inspector (PI) or Flight Standards District Office (FSDO) are required to use the nonstandard request process in Volume 3, Chapter 18, Section 2, paragraphs 3-712 and 3-713.

NOTE: PIs and FSDOs should refer to Figure 3-67C, A354 Automatic Dependent Surveillance-Broadcast (ADS-B) Application Submittal Process Flowchart and Volume 3, Chapter 1, Section 1 for general guidance on processing and tracking proposals submitted for authorization to conduct ITP.

E. Required Documentation for Submission of Formal Proposal. A separate proposal must be submitted by the operator for each aircraft type at initial and subsequent requests for authorization to conduct ITP. Subsequent requests to add additional aircraft of the same make, model, and series (M/M/S) to an existing authorization should include the aircraft and equipment documentation contained in AC 90-114, Appendix 2, Section 6, paragraphs 4, 5, and 6. ITP proposals must contain the following information to be found acceptable for formal submission and FAA evaluation:

1) Letter of request for authorization to conduct ITP;

2) Aircraft qualification documentation;

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3) ITP equipment description;

4) Proposed ITP operations area;

5) Proposed minimum equipment list (MEL) revisions;

6) Flight manual/pilot's operating handbook (POH) documentation;

7) Airworthiness documentation;

8) Dispatch/flight-following procedures (if applicable) or other persons with operational control; and

9) Pilot training.

F. ITP Proposal Evaluation Criteria. Specific evaluation criteria for ITP requirements can be found in AC 90-114, Appendix 2.

G. Related ADS-B Material and Contact Information.

1) Additional information and job aids related to ADS-B authorizations can be found in the applicable guidance section of each authorization in the WebOPSS.

NOTE: Flight Standards Service (AFS) Field Office (AFSFO) aviation safety inspectors (ASI) should make the appropriate application checklists and reference documents available to certificate holders/operators who do not have access to WebOPSS. Inspectors should encourage industry to complete the optional application checklist(s) prior to submission since it will expedite the review process.

2) For additional ADS-B information, please contact the following:

a) For general information on operation requirements and procedures, contact the Flight Technologies and Procedures Division (AFS-400) by phone at 202-385-4597, or in Lotus Notes at 9-AWA-AVS-AFS-400-Flight-Technologies-Procedures-Division/AWA/FAA.

b) For parts 121 and 135 special authorizations (300-series OpSpec/LOA), contact the Air Transportation Division (AFS-200) at 202-267-8166.

c) For parts 91, 91K, 125, and A125 special authorizations (300-series OpSpec/MSpec/LOA), contact the General Aviation and Commercial Division (AFS-800) at 202-385-9600/9601.

d) For continued airworthiness of ADS-B systems, contact the Aircraft Maintenance Division (AFS-300) at 202-385-6402.

e) For certification of ADS-B systems, contact the Avionics Systems Branch (AIR-130) at 202-385-4630.

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f) For technical questions concerning the ADS-B Out performance requirements to support air traffic control (ATC) service final rule, contact (by mail) the Surveillance and Broadcast Services Program Office (AJE-6), Air Traffic Organization, FAA, 800 Independence Avenue SW, Washington, DC 20591; or by telephone at 202-385-8637.

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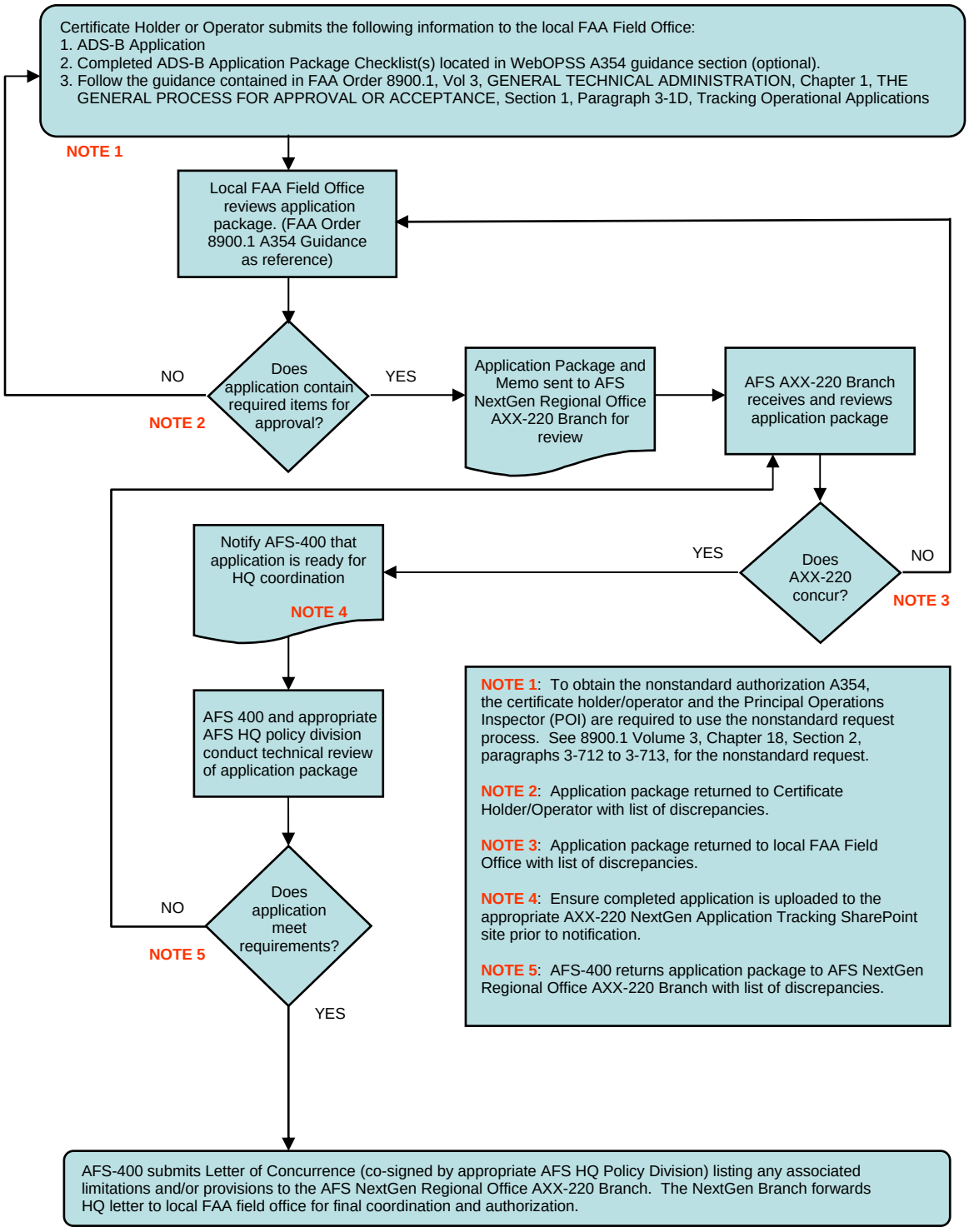
Figure 3-67C. A354 Automatic Dependent Surveillance-Broadcast (ADS-B) Application Submittal Process Flowchart



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OPSPEC/MSPEC A447, EMERGENCY AIRWORTHINESS DIRECTIVES (AD) NOTIFICATION INFORMATION.

A. General. OpSpec A447 is a permanent data collection OpSpec paragraph for certificate holders that conduct operations under 14 CFR parts 121, 125, and 135. The Emergency Airworthiness Directive (AD) Notification was originally put into OpSpec A047 and now is contained in A447 (see below for completion and issuance instructions for A447).

1) Essentially, the notification of emergency AD "receipt" is the responsibility of an operator's management personnel. Part A of the templates is for general operations and management responsibilities.

2) The principal operations inspector (POI), along with the principal maintenance inspector (PMI) and the principal avionics inspector (PAI), is responsible to see that a certificate holder complies with an AD, as applicable for the operations of any particular aircraft. All three PIs are responsible for all the templates in Part A.

3) If needed, the principal inspector (PI) should fill out the appropriate information for the certificate holder and "activate" the OpSpec paragraph. The certificate holder is not required to sign the paragraph in the same way as an OpSpec authorization. If the FAA signs and activates the paragraph, it is considered to be effective.

4) The FAA uses the 400-series of templates in the OPSS for data collection.

B. When to Issue an AD. ADs are substantive regulations issued by the FAA in accordance with 14 CFR part 39. ADs are issued when an unsafe condition has been found to exist in particular aircraft, engines, propellers, or appliances installed on aircraft. ADs are also issued when that unsafe condition is likely to exist or develop in other aircraft, engines, propellers, or appliances of the same type design. 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.

C. Emergency ADs Require Immediate Action. The FAA only distributes emergency ADs that affect transport category aircraft by facsimile. As such, all certificated operators are being required by an approved document to provide an AD point of contact (name, address, city, state, zip, telephone, and email) and a facsimile transmission telephone number for emergency AD notification. The owner or operator of an aircraft is responsible for maintaining that aircraft in an airworthy condition, as required by part 39 and part 91, § 91.403(a).

D. Notification of AD Issuance. Delegation and Airworthiness Programs Branch (AIR-140), will notify all affected operators of the issuance of the emergency ADs via the facsimile number(s) identified by the operator's method of notification in the template.

1) Parts 121 and 125 operators. AIR uses facsimiles for the official notification of the transport category emergency ADs to part 121 and 125 operators. AIR mails paper copies of ADs to all applicable registered owners (part 135 and others).

2) All other operators. Due to a large number of owners/operators (parts 91, 129, 135, etc.), AIR uses the FAA Aircraft Registry address database and the United States Postal

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Service for official notification of emergency ADs. AIR uses the information in template A447 to verify those addresses.

3) AIR no longer uses Société International de Télécommunications Aéronautiques (SITA), ARINC, or TELEX codes for electronic notification. AIR does not use email for official emergency AD notification or receipt acknowledgement.

E. Confirmation of AD Receipt. Upon receipt of an emergency AD, the certificate holder will immediately confirm receipt of the AD by signing the fax cover page and faxing it to AIR-140 at (405) 954-4104. This ensures the FAA that all operators affected by an emergency AD have been notified in time to comply with its requirements and avoid any undue safety risks.

F. Listing of Historical ADs. ADs from the 1940s to the present are now available in electronic format for full text searching on the FAA Web site at www.airweb.faa.gov/rgl. You can also find ADs from the FAA home page (www.faa.gov) by clicking on Airworthiness Directives. Direct questions to any of the following:

Automated Systems Branch (AFS-520) (202) 267-3522
Airworthiness Programs Branch (AFS-610) (405) 954-6896
AIR-520 (202) 267-3682

OPSPEC/MSPEC A449, ANTIDRUG AND ALCOHOL MISUSE PREVENTION PROGRAM. OpSpec/MSpec A449 is applicable for 14 CFR parts 121, 121/135, and 135 certificate holders; 14 CFR part 91 subpart K (part 91K) (fractional owners) program managers; and 14 CFR part 145 repair station certificate holders. Inspectors must use LOA A049 for part 91K operators conducting sightseeing operations under part 91, § 91.147.

- The certificate holders or program managers are responsible for providing the information required by 14 CFR part 120 to the principal operations inspectors (POI) for the issuance of OpSpec/MSpec A449, as applicable;
- OpSpec/MSpec A449 is a data collection template and should not be construed as a Flight Standards Service (AFS) authorization;
- Oversight of the actual implementation of the Antidrug and Alcohol Misuse Prevention Program is the function of the Office of Aerospace Medicine (AAM), Drug Abatement Division (AAM-800);
- When any changes occur, certificate holders/program managers are responsible for providing AFS with current information to update and amend A449;
- Even though the A449 OpSpec/MSpec template is for data collection purposes, it should be signed by the certificate holder because they are “certifying” that the information is accurate and that they will comply with the applicable requirements of part 120; and
- In the part 91K database, the program manager is certifying that the information is accurate for its Antidrug and Alcohol Misuse Prevention Program.

A. Applicability. The following must comply with the Antidrug and Alcohol Misuse Prevention Program regulations in accordance with part 120, and must have OpSpec/MSpec A449 issued by AFS:

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- All parts 121 and 135 certificate holders; and
- All part 91K program managers must have an Antidrug and Alcohol Misuse Prevention Program. MSpec A449 must be issued indicating where those records are kept.

B. Issuance. All parts 121 and 135 certificate holders must be issued OpSpec A449.

- Existing parts 121 and 135 certificate holders must provide the information to their POIs that is required by part 120 for the issuance of OpSpec A449;
- New parts 121 and 135 certificate holders must have an Antidrug and Alcohol Misuse Prevention Program and OpSpec A449 issued by their POI before beginning operations pursuant to the certificate;
- The Antidrug and Alcohol Misuse Prevention Program shall be implemented concurrently with the beginning of such operations;
- When a part 121 or 135 certificate holder surrenders its certificate or its certificate is terminated, revoked, or suspended, it must discontinue testing under its Antidrug and Alcohol Misuse Prevention Program. OpSpec A449 should be archived when the certificate is no longer in an active status;
- Part 135 certificate holders must declare whether they have 50 or more safety-sensitive employees or fewer than 50 safety-sensitive employees. Whenever the number changes from 50 or more to fewer than 50, or vice versa, the certificate holder must inform the POI and OpSpec A449 would need to be amended; and
- Certificate holders that operate under parts 121 and 121/135 are required to report testing data annually to AAM, regardless of the number of safety-sensitive employees in their company. Therefore, there is no requirement to declare when the number of their safety-sensitive employees crosses over or below 50.

C. Air Tour Operators Under Part 91K. Part 121 or 135 certificate holders that conduct commercial air tour operations under § 91.147 must be issued a separate LOA from the part 91 database and issued a separate four-character identifier. Certificate holders must implement a second drug and alcohol testing program to conduct operations under § 91.147. Even though the same company may be conducting operations under part 121 or 135 and air tour operations under § 91.147, the FAA's regulations consider the two operations to be separate entities for drug and alcohol purposes. Exemptions to this rule are outlined in § 91.146.

D. Restriction. No applicable certificate holder or operator shall use a contractor's employee to perform safety-sensitive functions who is not subject to its own or a certificate holder's or operator's Antidrug and Alcohol Misuse Prevention Program. All new applicable certificate holders and operators must ensure that their contract employees who perform safety-sensitive functions are subject to an Antidrug and Alcohol Misuse Prevention Program.

E. Responsibilities. All oversight of the Antidrug and Alcohol Misuse Prevention guidance, inspections, and enforcement activity will be conducted exclusively by AAM-800. Any and all enforcement actions to be taken for violations of part 120 and other sections of 14 CFR related to drug and alcohol testing by the aviation industry is the sole responsibility of AAM-800. Any indication of possible regulatory violations of these provisions must be referred

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to AAM-800. All questions regarding the Antidrug and Alcohol Misuse Prevention Program must be directed to AAM-800.

F. Part 145 Repair Stations. See Volume 3, Chapter 18, Section 11.

OPSPEC A501, LIABILITY INSURANCE SUSPENSION FOR SEASONAL OPERATIONS.

A. Liability Insurance Does Not Apply to Certificate Holders With Operating Certificates. Liability insurance coverage and the associated Department of Transportation (DOT) forms (Office of the Secretary of Transportation (OST) Form 6410, U.S. Air Carrier Certificate of Insurance) are an inclusive part of the economic authority required for parts 121 and 135 air carrier certificate holders. This is not applicable to those with operating certificates. 14 CFR part 205, § 205.4(b) states, in part, that "Aircraft shall not be listed in the carrier's operations specifications with the FAA and shall not be operated unless liability insurance coverage is in force."

B. Suspending Liability Insurance for Seasonal Operations. Title 14 CFR part 119, § 119.61(b)(4) provides for the issuance of OpSpec A501, Liability Insurance Suspension for Seasonal Operations, which effectively suspends the air carrier certificate holder's OpSpecs and requirement for liability insurance for the period of time established in Table 1 of OpSpec A051. The operator cannot use the aircraft during that period of time to conduct operations in air transportation. The POI and the PMI must coordinate this effort.

C. Circumstances Under Which to Issue OpSpec A501. OpSpec A501 may be issued in order to comply with the requirements of § 119.61, § 205.4(b) and, if the air carrier certificate holder:

- Does not want to surrender its certificate during nonoperational periods,
- Requests the issuance of OpSpec A501 in writing, specifying the date it chooses to cease operations and the date it will resume operations,
- Wants to cancel the liability insurance on all of its aircraft for a period of 60 days or more during the specific period of non-use, and
- Completely ceases operations for a period of 60 days or more during the specific period of non-use.

D. No Status Change to VIS or OPSS. The status of the air carrier certificate holder's certificate remains active even though the OpSpecs are in the "suspension" status. Make no status changes to the Enhanced Vital Information Database (eVID) or the OPSS.

E. Opting to Not Carry Liability Insurance. If the air carrier certificate holder does not want to cease all operations but wants only to reduce the number of aircraft operated for a period of time and not carry the liability insurance for those aircraft, it has two options:

1) Remove those aircraft completely from its OpSpecs, or

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2) Place those aircraft into long term maintenance or long term storage and issue OpSpec D106, Aircraft in Long Term Maintenance or Storage (reference Volume 3, Chapter 18, Section 6, Parts D and E—Maintenance MSpecs/OpSpecs.

F. Notification of Suspension of Insurance. The air carrier certificate holder or its insurance company will send notification of the suspension of liability insurance to the appropriate FAA or DOT office as required by part 205, § 205.7(a). (The FAA will record the notification and the red alert clause, "Insurance in a Non-Compliant State," will appear at the top of the "Maintain Operations Specifications" window in the OPSS for that certificate holder.) (Use the "Review Insurance Info" selection in the OPSS to view the details of the noncompliance.)

G. Separate Uses for OpSpecs A501 and D106. At no time will OpSpecs A501 and D106 be active at the same time. These paragraphs are developed as separate provisions for specific needs. (See Volume 3, Chapter 18, Section 6 for guidance on OpSpec D106.)

H. Start Up Procedures and Rescinding OpSpec A501.

1) Before the "Re-Start of Operation" date listed in Table 1 of OpSpec A501, the air carrier must reinstate the required liability insurance. OST Form 6410 must be filed with the appropriate FAA or OST office at least 5 days prior to the "Re-Start of Operation" date listed in Table 1 of the OpSpec.

2) PIs should verify with AFS-260 (for air taxi operators), AAL-230 (for Alaskan air carriers), and OST-X-56 (for DOT certificated and commuter carriers) that the air carrier has filed evidence of liability insurance coverage as required by 14 CFR part 205 and that it otherwise continues to hold the necessary economic authority to resume operations.

3) See Volume 6, Chapter 2, Section 38, Evaluate a Part 121/135.411(a)(2) Operator Aircraft Storage Program, paragraph 6-1048, OpSpec D106, Aircraft in Long Term Maintenance or Storage for additional guidance in regard to liability insurance.

4) OpSpec A501 must be rescinded and archived in the OPSS. Again, make no changes to the VIS or the OPSS for the certificate status. When the required liability insurance documentation is received by AFS-260, the red alert clause will be removed for that certificate holder. See Volume 3, Chapter 18, Section 2, Automated Operations Safety System (OPSS), paragraph 3-718, OPSS Liability Insurance Subsystem, for information regarding the alert clause.

5) The principal inspector must review the recency requirements of § 119.63 for the air carrier certificate holder and reexamine as necessary prior to the start of the seasonal operations.

OPSPEC A502, AIR CARRIER MERGER AND/OR ACQUISITION.

A. General. OpSpec A502 is a nonstandard, time-limited OpSpec that requires coordination with, and approval from, the appropriate headquarters (HQ) policy division. Upon receiving approval from HQ, principal inspectors (PI) will issue A502 to each certificate holder

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involved in a merger and/or acquisition as a means of authorizing the plans for transition during the merger or acquisition process. Certificate holders involved in a merger or acquisition will lay out their plan for the transition that will occur throughout the merger or acquisition process by entering information in the appropriate sections of A502. FAA approval of a merger and/or acquisition transition plan occurs at the regional Flight Standards division (RFSD) of the certificate-holding district office (CHDO) who will have oversight responsibility of the surviving certificate holder in the merger/acquisition. The surviving certificate number (certificate designator followed by four additional characters, e.g. TWRA118A) identifies the surviving certificate holder, regardless of the surviving name chosen. Typically, the RFSD will form a Joint Transition Team (JTT) to manage the merger/acquisition. The RFSD of the surviving certificate holder will contact the Air Transportation Division (AFS-200) as soon as practicable upon the knowledge of the pending merger or acquisition, and ultimate selection of the JTT. The RFSD will provide AFS-200 with a point of contact (POC) for the merger or acquisition at this time. Although the overall merger/acquisition transition plan is approved at the RFSD level, OpSpec A502 must be approved by AFS-200 in coordination with the Aircraft Maintenance Division (AFS-300). OpSpec A502 is dynamic and should be updated as significant events in the merger or acquisition process occur. Each update of A502 must also be approved by AFS-200, in coordination with AFS-300. It's important to note that each certificate holder involved in a merger or acquisition will be issued an A502. This means that A502 will be issued to the intended surviving certificate holder, as well as each intended merged or acquired certificate holder. Additional guidance regarding the merger and/or acquisition process is located in Volume 3, Chapter 34.

B. Entering Information into A502, Paragraph a. A502, paragraph a contains three fields in which a PI or certificate holder will enter the following information:

NOTE: The name of the certificate holder will be automatically populated into paragraph a of the A502 template by WebOPSS.

1) The PI will enter the name of the other certificate holder involved in the merger or acquisition in the first text box in paragraph a.

2) The PI will enter the date the merger or acquisition process will begin in the second text box in paragraph a. This date will indicate the commencement of the transition phase.

3) The PI will enter the description of the estimated time period within which the merger and/or acquisition will be accomplished and completed in the third text box of paragraph a (for example, 12 months). It is also acceptable if a PI or certificate holder wishes to enter an actual date as opposed to a time period (for example, 10/26/2011).

C. Entering Information into the Sections Provided in Paragraph b. A502, paragraph b contains specific sections that provide an outline of certain conditions that certificate holders must meet while operating during the merger and/or acquisition transition period. These sections are General, Operations, and Airworthiness. PIs responsible for the subject of each field must review and agree to all of the information contained therein if a field is

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populated by the certificate holder, otherwise the PI responsible for each field will enter the information.

1) The "General" Section. PIs of both specialties (Operations or Airworthiness) will use the "General" section to identify conditions that do not belong specifically to operations or airworthiness. Examples of key items that must be entered into the "General" section include, but are not limited to:

a) Estimated single operating certificate date. This is the date when the certificate holder operates as a single air carrier and has a singular system for operational control.

b) OpSpecs requiring HQ approval. List all OpSpecs that require HQ approval, (such as 300-series, nonstandard 500-series, and OpSpecs containing optional/nonstandard text ("text 99")). All HQ-approved OpSpecs and nonstandard text authorizations for each certificate holder must be reapproved by HQ for continued use by the surviving certificate holder. In other words, nonstandard OpSpecs and text authorizations for one certificate holder may not be applied to another without the express permission of the appropriate HQ policy division.

c) Pilot Record Information Act of 1996 (PRIA). A502 must contain a statement of how the surviving certificate holder intends to comply with PRIA.

d) Demonstration of Emergency Evacuation Procedures. A502 must contain a statement or plan of how the surviving certificate holder intends to meet the regulatory requirements 14 CFR part 121, § 121.291 for demonstration of emergency evacuation procedures. The plan must address demonstration of aircraft newly introduced to the surviving certificate holder, as well as a change in the number, location, or emergency evacuation duties or procedures of the certificate holder's Flight Attendants (F/A).

e) Training of Station Personnel. A502 must contain a statement as to how the surviving certificate holder intends to train station personnel to a single standard of operation.

f) The name of the surviving certificate holder and certificate designation.

g) Flight Call Signs. Each A502 must contain information regarding flight call signs and numbering, specific to each certificate holder involved in the merger or acquisition process. Call signs, especially with livery changes, must be coordinated with the appropriate Air Traffic Organization (ATO).

h) Hazardous Material (hazmat) Training. A502 must contain a statement of how the surviving certificate holder intends to comply with the hazmat training requirements of part 121, Appendix O, for employees acquired during the merger or acquisition.

i) Drug and Alcohol Testing. A502 must contain a statement of how the surviving certificate holder intends to comply with the drug and alcohol testing requirements of 14 CFR part 120, for employees acquired during the merger or acquisition..

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j) Recordkeeping. A502 must contain a statement of how the each certificate holder intents to comply with recordkeeping requirements such as those listed in part 121 subpart V.

2) The "Operations" Section. The principal operations inspector (POI) is responsible for the "Operations" section. The key areas that should be addressed in the "Operations" section include, but are not limited to:

a) Operational Control. Identify which air carrier will assume operational control responsibility over the merged or acquired operation and the date that transfer is planned to take place. This date should coincide with the "Estimated Single Operating Certificate" date entered into the "General" section of A502. If the changeover is to be phased in over a period of time, such as by fleet, enter appropriate milestones here. Milestones listed in this field must correlate with the same milestones in the transition plan.

b) Training and Qualification. Identify the planned dates that flightcrew member, aircraft dispatcher (14 CFR part 121 domestic and flag), and Flight Attendant (F/A) training and qualification will be completed. If two or more fleets will be phased in over different time periods, enter the fleet types and their associated training and qualification date milestones in the free text fields provided. Include training for flight following and operational control personnel in this section, as appropriate. Milestones listed in this field must correlate with the same milestones in the transition plan.

c) Proving Tests. Identify the requirements and the plan of action regarding the proving tests required to add a new type of aircraft, operation, and/or route (area of operation).

d) Operational Authorizations. Identify operational authorizations, such as Extended Operations (ETOPS), exemptions, deviations, etc., and list the plan of action for merging and/or acquiring each of the authorizations.

NOTE: POIs of certificate holders with large varied fleets must be aware that merging ETOPS authorizations may be a lengthy process.

e) Other. Identify any other operational milestones such as manual revisions, computer systems, and computer system support.

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3) The "Airworthiness" Section. The principal maintenance inspector (PMI) and principal avionics inspector (PAI) are responsible for the "Airworthiness" section. The key areas that must be addressed in the Airworthiness section include, but are not limited to:

a) Maintenance Program Manuals. List maintenance program manual milestones in this field.

b) Training and Qualification of Maintenance Personnel. Identify the training and qualification requirements of the mechanics and inspectors, and list the plan of action for accomplishing the necessary training.

c) Minimum Equipment List (MEL) Management Program and Maintenance Control System. Identify the transition plan for MEL management programs and the associated maintenance personnel and maintenance control systems.

d) Other. Identify any other appropriate maintenance milestones such as manual revisions, computer systems, and computer system support.

OPSPEC A570, ONE YEAR EXTENSION OF COMPLIANCE TIMES IN SECTIONS 121.1117(E) AND 129.117.

A. Applicability.

1) Except as provided in paragraph C below, OpSpec A570 can only be issued to part 121 certificate holders or part 129 foreign air carriers/foreign persons with U.S.-registered airplanes who notified their PI or CHDO of their intention to use the relief specified in §§ 121.1117(k) or 129.117(k) before March 29, 2009 and who then applied for OpSpec A570 before June 24, 2009. OpSpec A570 is time-limited and will expire on December 26, 2018.

2) OpSpec A570 applies to transport category turbine-powered airplanes with a 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 §§ 121.1117(m) and 129.117(k). Specifically, it applies to the airplanes listed in Table 3-23A.

Table 3-23A. 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	

3) OpSpec A570 is used to extend the compliance dates in §§ 121.1117(e) and 129.117(e) by one year. In order to be eligible for the extension, a certificate holder or foreign air carrier/ person must have notified their PI or CHDO before March 29, 2009, of its intention to use ground air conditioning systems on its applicable airplanes in accordance with

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§§ 121.1117(k)(2) and (3) and 129.117(k)(2) and (3), and the certificate holder or foreign air carrier/person must have applied for OpSpec A570 by June 24, 2009. With the issuance of this OpSpec, the compliance date specified in §§ 121.1117(e)(1) and 129.117(e)(1) is extended to December 26, 2015 and the final compliance date is extended to December 26, 2018.

B. Issuing OpSpec A570. OpSpec A570 is the joint responsibility of the POI and the PMI. Before issuing OpSpec A570. The office manager of all affected CHDOs, CMOs, IFOs, and IFUs should bring this guidance to the attention of the principal inspectors of any operator who has applied for this OpSpec and ensure that it is properly issued.

1) The PMI must ensure that the certificate holder's manual required by § 121.133 (for part 121) or maintenance program (for part 129) includes a listing, by N-registration number and fleet type, of those airplanes in the certificate holder's fleet that ground conditioned air systems applies to. That listing should be identical to the operator's Flammability Reduction Means (FRM)/Ignition Mitigation Means (IMM) retrofit listing that is provided to the CHDO. As airplanes are retrofitted they should be removed from the list.

2) The POI must ensure that the certificate holder's manual required by § 121.133 (for part 121) or equivalent manual for part 129 includes a requirement for the airplanes in this listing to use ground air conditioning systems for actual gate times of more than 30 minutes, when available at the gate and operational, whenever the ambient temperature exceeds 60 degrees Fahrenheit.

3) The office manager will determine which principal inspector will sign OpSpec A570 and ensure that it is issued.

C. Certificate Holders Certificated After December 26, 2008. A certificate holder or foreign air carrier/person for which an operating certificate is issued after December 26, 2008, and that has notified their PI or CHDO of its intention to use ground air conditioning systems on its applicable airplanes (see Table 3-23A above), the compliance date specified in § 121.1117(e) may be extended by one year, provided that the certificate holder meets the requirements of §§ 121.1117(k)(2) or 129.117(k)(2) when its initial OpSpecs are issued and, thereafter, uses ground air conditioning systems as described in § 129.117(k)(2) on each airplane subject to the extension. OpSpec A570 must be approved by the PMI, using the guidance above, concurrent with the initial OpSpecs.

TEMPLATE A999, AIR OPERATOR CERTIFICATE (AOC) IN THE INTERNATIONAL CIVIL AVIATION ORGANIZATION (ICAO) FORMAT.

A. Annex 6 Requirements. Annex 6 to the Chicago Convention requires air operators to carry onboard their aircraft a standardized, certified true copy of their AOCs when operating internationally. See the following ICAO Web site for more information: http://www.icao.int/fsix/_Library/Annex%206-Part%20I%20-%20AOC%20Template%20en.pdf . Template A999 is applicable to part 121 and 135 air carriers.

B. Federal Aviation Administration (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 Safety System (WebOPSS). (See Figure 2-9A in Volume 2,

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Chapter 1, Section 4 for a sample of Template A999.) Much of the data contained in the AOC will be preloaded from WebOPSS. The principal operations inspector (POI) or the certificate holder must enter some of the data. This standardized ICAO AOC is in addition to the FAA Operating Certificate or Air Carrier Certificate. For compliance with Annex 6, certificate holders must carry this ICAO AOC onboard their aircraft when operating internationally.

C. Specific Guidance for Issuing Template A999. For specific guidance on issuing Template A999, see Volume 2, Chapter 1, Section 4, Preparation of Federal Aviation Administration Operating Certificates, paragraph 2-74.

RESERVED. Paragraphs 3-738 through 3-751.

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CHAPTER 18 OPERATIONS SPECIFICATIONS

Section 10 Reserved

RESERVED. Paragraphs 3-1058 through 3-1069.

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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 2 Approval and Acceptance of Manuals and Checklists

3-3151 GENERAL. This section contains direction and guidance for principal operations inspectors (POI) when approving or accepting an operator's manuals and checklists. This process is based on the general process for approval or acceptance described in chapter Chapter 1, Section 1, of this volume.

A. The Approval Process. The approval process for a Title 14 of the Code of Federal Regulations (14 CFR) part 121 operator's checklist normally consists of phases one, two, three, and five of the general process. It may be necessary, however, for a POI to require that phase four (the demonstration phase) be included in the approval process.

B. The Acceptance Process. The acceptance process for a manual, manual section, or a 14 CFR part 135 operator's checklist normally consists of phases one, two, and three of the general process. The operator must submit current copies of required manuals to the POI, and in the case of part 135 operators, the operator must also submit aircraft checklists for Federal Aviation Administration (FAA) review. An operator's entire manual system must be reviewed during the document compliance phase of initial certification (see Volume 2, Chapter 4, Section 3, Phase 3—Document Compliance, of this order). Once an operator is certified, the operator may revise, distribute, and use accepted material even though the POI has not completed a review of it. If, after a thorough review, the POI determines that portions of the manuals or checklists are unacceptable, the operator must revise the unacceptable portions.

NOTE: Each phase of the general process for approval or acceptance is discussed as if it is separate and distinct; however, at times the phases may overlap.

C. Evaluation of Manuals for FAA Acceptance or Approval. An operator may develop and publish in its manual any policy, method, procedure, or checklist that the operator finds necessary for the type of operations conducted. These policies, methods, procedures, and checklists, however, must comply with 14 CFR and be consistent with safe operating practices. POIs should encourage operators to be innovative and progressive in developing such policies, methods, procedures, and checklists. The POI's role in the review process is to provide an independent and objective evaluation of the operator's manual material. The POI must ensure that the operator's material complies with 14 CFR, is consistent with safe operating practices, and is based on sound rationale or demonstrated effectiveness.

D. Discrepancies. When a POI finds a discrepancy in an operator's existing manual material, the POI shall take action to have that discrepancy resolved. Usually such discrepancies can be resolved through informal discussions. When an informal discussion cannot resolve the discrepancy, however, the POI is required to formally withdraw FAA approval or acceptance

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from the operator (see paragraph 3-3157 of this section for guidance on the formal actions that may be taken).

3-3152 PHASE ONE: ESTABLISHING A FRAMEWORK FOR REVIEW. The first phase of the approval or acceptance process begins with communication between the FAA and the operator (either a current certificate holder or an applicant for a certificate). There are three occasions when approval or acceptance of manuals and checklists is required, as follows:

- When an applicant applies for a certificate,
- When an existing operator determines if a change is necessary, or
- When, as the result of an investigation or normal surveillance, the POI determines if a manual, a manual section, or a checklist is inadequate or deficient.

A. Determining Basic Requirements Applicable to the Operator. The primary task of the POI during phase one is to determine the basic requirements that the operator must meet to obtain acceptance or approval of a manual or checklist. The POI must communicate these requirements to the operator. To do this, the POI should review the appropriate sections of this handbook (particularly Volume 2, Chapter 2, Section 1) and any advisory circulars (AC), air carrier operating bulletins (ACOB), exemptions the operator may hold or is applying for, operations specifications (OpSpecs), and any deviations applicable to subjects the operator must address in its manual or checklist. Both the POI and the operator must clearly understand the topics and level of detail the operator is required to have in the material to be submitted during phase two of the process. During phase one, the POI should make the following determinations and communicate them to the operator:

- Whether the submission will involve approval or acceptance,
- Whether there is a need for validation tests or other demonstrations, or
- Whether there is a need for supplementary documentation, analysis, or other data to support the submission.

B. Methods for Manual or Checklist Organization. During phase one, the POI should inform the operator that there are various methods that can be used to organize and format those manuals, manual sections, and checklists requiring FAA approval/acceptance. The POI may inform the operator of the content of the following subparagraphs, which describe at least four possible methods that an operator may use:

1) Limited Content. An operator may choose to limit the content of the manual solely to approved material. When this method is used, the entire manual must be accepted and the operator may not revise the manual without additional review by the POI. While this method facilitates FAA review and acceptance, the manual may be difficult to use because the intended user may have to frequently switch back and forth between the approved checklists and other manuals containing accepted material. When the operator chooses this method, POIs must ensure that a header or footer is on each page indicating that the material is FAA-approved.

2) Grouping Material. An operator may choose to group the FAA-approved material in specified sections of the manual and place accepted material in the remaining sections. With this method, the POI must ensure that a header or footer is on each page of the

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approved sections indicating that the material on that page is FAA approved. The operator may submit the approved and accepted sections to the POI as separate packages.

3) Interspersed Material. An operator may choose to intersperse FAA-approved material and accepted material throughout the manual. When an operator chooses this method, the POI must ensure that the operator has clearly identified approved material each time it appears in the manual. This method of organization allows for efficient manual use, but makes the operator's publication process and the approval process difficult.

4) "Approval Document." The operator may choose to place material in an "approval document" solely for the purpose of obtaining FAA approval of that material. An approval document is a document and therefore may not be used as a manual. After the document has been approved, the operator must develop user manuals that incorporate the approved information from the document along with detailed guidance and supplementary information. When this method is used, the user manuals are treated as "accepted" material and do not have to be individually approved. The POI must, however, review the user manuals to ensure that the information in them is consistent with the approval document. When using this method, the operator may revise the information in user manuals without prior FAA approval, provided the revision is consistent with, and does not conflict with, the information in the approval document. If the operator or the POI finds it necessary for the approval document to be revised, the operator must submit the proposed revision for review and approval. A revision to an approval document must be approved before the operator can incorporate the changed information into the user manuals. When an operator uses this method for submitting manual or checklist material for FAA approval, POIs must ensure that the operator has stated on the first page of the user manuals that the manual contains FAA-approved material. The manuals or checklists provided to the user, however, do not have to be specifically identified as being FAA-approved ones.

C. Submission of Material. During phase one, the POI should advise the operator on how to submit the documents, manuals, checklists, and subsequent revisions for approval or acceptance.

1) FAA Approval Submission. For material that requires FAA approval, the POI should advise the operator to submit the following:

- Two copies of the document, manual, manual section, checklist, or revision to be approved; one copy of the printed version of the electronic checklist (as applicable); one copy of a report indicating differences between the proposed and current versions of the electronic checklist (as applicable).
- One copy of the document, manual, manual section, checklist, or revision, and two copies of the page control sheets for the material (The page control sheets must show an appropriate revision number or original page number for each page and the effective date of each page).
- A copy of any supporting documentation or analysis.

2) FAA Acceptance Submission. For material that is to be evaluated for acceptance by the FAA, the POI should advise the operator to submit the following:

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- A copy of the manual, manual section, checklist, or revision to be reviewed.
- A copy of the page control sheets for the material to be reviewed, when appropriate.

D. Coordination of Submitted Documents. POIs should encourage operators to coordinate drafts of manuals and checklists and revisions before making a formal submission. Mutual agreement on major points should be reached between the operator and the POI before the material is put in final form. Operators should be advised by the POIs not to publish or distribute material requiring FAA approval until after they have received written notification that the material has been approved. An operator who prepares and distributes such material before receiving approval may have to make costly changes. The POI should encourage the operator to establish methods that streamline and simplify the process for both the operator and the POI.

3-3153 PHASE TWO: PRELIMINARY REVIEW. Phase two consists of the POI or a qualified inspector conducting a preliminary review (as opposed to a detailed analysis) of the operator's submission. This preliminary review is intended to ensure that the operator's submission is clear and contains all required documentation. The phase two review should be conducted promptly after receipt of the operator's submission. If, after preliminary review, the submission appears to be complete and of acceptable quality, or if the deficiencies are immediately brought to the operator's attention and can be quickly resolved, the POI may begin the phase three in-depth review (see paragraph 3-3154 of this section). If the submission is incomplete or obviously unapprovable or unacceptable, the process is terminated and the POI must immediately return the submission (preferably within 5 working days) with an explanation of the deficiencies. POIs should return the submission to the operator promptly so that the operator will not erroneously assume that the POI is continuing the process to the next phase.

3-3154 PHASE THREE: IN-DEPTH REVIEW. Phase three is a detailed analysis of the operator's submission. During this phase, a qualified inspector must review the operator's submission in detail to determine that the submission is complete and technically correct. The time to complete phase three depends on the scope and complexity of the submission. During the phase two preliminary review, the POI should determine whether the review can be completed within 10 working days. If any part of the submission requires FAA approval, and the POI determines that it will take longer than 10 working days to complete the review and approval process, the POI shall give the operator an estimate of the time it should take to complete the process.

A. The phase three review and analysis should confirm that the operator's submission conforms to, or is consistent with, the following:

- Title 14 CFR,
- Criteria and guidance in this handbook,
- The operator's OpSpecs,
- Criteria and guidance in ACs,
- Applicable Aircraft Flight Manuals (AFM), manufacturer's operating bulletins, and Airworthiness Directives (AD),
- Safe operating procedures,

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- The operator's cockpit resource management policies, and
- Flight Standardization Board (FSB) and Flight Operations Evaluations Board (FOEB) training recommendations.

NOTE: The direction and guidance in this chapter for reviewing procedures and checklists have been developed after consultation with knowledgeable and experienced personnel in the air transportation industry, aircraft manufacturers, and the FAA. The information presented is considered to be the best guidance currently available on the topic. POIs should realize, however, that circumstances vary widely. The best set of procedures for one circumstance may not work well in another circumstance. Two recommendations may be in conflict. In such cases, the appropriate resolution must be achieved through compromise. For example, it may be more important for an operator's checklist and procedures design policies to be internally consistent than for an individual procedure to be designed in a specific way.

B. The POI should thoroughly consider the operator's experience and history when evaluating procedures and checklists. When an operator has a history of successful operations, the POI should normally approve submissions consistent with the operator's existing procedures. When an operator has an incident or accident attributable to crew error, the POI must thoroughly examine the basic assumptions and policies in the design of the operator's checklists and operating procedures.

C. Review of electronic checklist modifications in applications with the ability to automatically detect the completion of an action shall include verification that this detection is based on monitored conditions that are consistent with the objective of the action (for example, a checklist action item for LANDING GEAR . . . DOWN would show complete on the sensing of the gear handle being down and the gear indication being down). The review and verification should be accomplished using a paper copy of the electronic checklist annotated with the monitored condition for each action whose completion is automatically detected.

3-3155 PHASE FOUR: VALIDATION TESTS. Operators should be encouraged by POIs to conduct validation tests of operating procedures and checklists during the development process. These validation tests should be conducted before the operator submits the proposed procedures and checklists for FAA review and approval. Whenever possible, the POI or a qualified inspector should observe these tests. Under certain circumstances, a validation test may have to be conducted after the phase three in-depth review. In other circumstances, especially for minor types of revisions or simple procedures or checklists, validation tests may not be warranted or appropriate. Before approving operating procedures and checklists, POIs should consider the following guidance concerning validation tests.

A. Aircraft operating procedures and checklists should be tested in realistic real-time scenarios, with a full crew complement.

B. Validation tests of normal procedures may be conducted in a flight simulator, in a flight training device, on training flights, or in conjunction with proving tests.

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C. Validation tests of nonnormal, abnormal, and emergency procedures or checklists should be conducted in a flight simulator or training device. Tests of nonnormal and emergency procedures and checklists may be conducted in an aircraft; however, the operator must ensure that the test can be conducted safely. Testing of nonnormal and emergency procedures and checklists shall not be conducted during revenue service.

D. Operators may submit evidence that a qualified party (such as the manufacturer or another operator) has already conducted a validation test of a procedure or checklist. When such evidence is available, the POI should not require a validation test unless the operator's circumstances are significantly different from those in which the original tests were conducted.

E. Changes in the wording of a procedure may not actually change the procedure. In such cases, validation tests are not necessary.

F. POIs shall require that operators validate the safety and effectiveness of any addition, deletion, or change of sequence in the steps of a non-normal or emergency checklist, through validation testing.

G. For those operators who intend to convert immediate action items to or from challenge-do-verify items on an emergency checklist, POIs shall require that they test the modified procedure to ensure that it is safe, effective, and has no adverse effects. POIs shall consult with the appropriate Aircraft Evaluation Group (AEG) before approving such changes.

H. The addition or deletion of individual items to a normal phase checklist does not usually need to be validated by a test. If the POI is of the opinion that the change significantly alters crewmember assignments or workload distribution, the POI shall require a validation test.

I. While electronic checklists must comply with the same guidelines discussed here, modification to an existing electronic checklist does not in itself require a validation test if the POI deems the modification to be minor.

3-3156 PHASE FIVE: GRANTING FAA APPROVAL. Phase five consists of the POI granting FAA approval to manuals, manual sections, and checklists. During this phase the POI must formally notify the operator of the approval and also complete a specific record of the approval. For manuals, manual sections, and part 135 aircraft operating checklists, which are not required to have FAA approval, written notification of acceptance is optional, but not required. See Volume 3, Chapter 1, Section 1, subparagraph 3-6C.

A. Notification of Approval. When the POI decides to approve a document, manual, manual section, or checklist, the following procedures apply:

1) For a document, manual, or checklist that contains page control sheets, the POI shall annotate both copies of the page control sheets with the phrase "FAA-Approved." Under the words "FAA-Approved," POIs shall enter the effective date of approval and sign both copies. The operator may preprint the words "FAA-Approved" and blank lines for the date and signature on the page control sheets, or the POI may use a stamp to add the approval annotation on each sheet.

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2) For manuals, manual sections, or checklists that do not contain page control sheets, the approval annotation must be placed by the POI on each page of the material. In this case the approval annotation must be made on two copies of the material. The annotation shall be the same as discussed in subparagraph A1 above. This procedure should be used only for very short manuals, manual sections, or checklists (usually fewer than five pages) or when the use of page control sheets is not practical or serves little purpose.

3) When page control sheets are used, the POI shall return one copy of the annotated page control sheets to the operator. In the remaining cases, one copy of the approved material must be returned to the operator with a notification letter that states that the material is approved. This letter should also contain a statement advising the operator to maintain for its records the signed page control sheets or the material with the approval annotation. The POI shall retain the second copy of the signed page control sheets or the annotated material in the district office files.

4) When electronic checklists are submitted for approval, the operator will prepare a release/cover sheet for the printed version of the electronic checklist. The release/cover sheet will contain the preprinted words and lines as discussed in subparagraph A1 above. The POI's annotation shall be the same as discussed in subparagraph A1.

B. Notification of Disapproval. The coordination, revision, and editing activities that take place throughout all phases of the process should eventually result in approved products. Under certain circumstances, however, it may be appropriate for the POI to terminate the process. For example, the operator may not take any action on the material for 30 days. To terminate the approval process, the POI shall return the entire submission to the operator with a letter stating that the FAA is unable to grant approval, along with the reasons why it cannot be granted.

C. District Office Records. The POI shall maintain a record of approval for each operator-submitted document, manual, manual section, and checklist. Records of approval to revisions of this material must also be maintained. The records should consist of page control sheets (or approved material if page control sheets are not used), notification letters, and any other related correspondence. While superseded portions of documents, manuals, or checklists do not have to be retained, POIs may retain this type of material if they determine that it is appropriate. The POI should include with the material in the operator's file a brief memorandum containing the reasons for retaining the material.

3-3157 NOTIFICATION OF DEFICIENCIES. When any portion of approved material that is currently in use is found to be deficient, the POI shall notify the operator and request prompt action to resolve the deficiency. Deficiencies can usually be resolved through an informal process; however, when this cannot be done, the POI must formally notify the operator by letter that the deficiency must be corrected.

A. Deficiency Involves FAA-Approved Material. If the deficiency involves FAA-approved material, the letter must contain a clear statement that FAA approval of the material will be withdrawn as of a specific date if corrective action is not taken. The letter should also contain a statement that the material does require FAA approval and that after the specified date, any operations without that approval will be in violation of 14 CFR.

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B. Deficiency Involves Operator-Developed Material. If the deficiency involves operator-developed material that is accepted by the FAA, the letter should clearly indicate the material that is deficient and the reasons why it is deficient. If, after such notification, the operator still fails to take appropriate corrective action, the POI should attempt to negotiate a reasonable solution. When these attempts fail, the POI may, with regional Flight Standards division (RFSD) approval, amend the operator's OpSpecs to withdraw the authorization for conducting the operations affected by the deficiency.

3-3158 EMERGENCY REVISIONS. For safety reasons, an operator may sometimes find it necessary to immediately revise FAA-approved material before there is an opportunity to coordinate the revision with the POI. In such cases, the operator should take action as necessary to make the revision effective (such as alert bulletins and dispatch messages). For example, an operator may become aware of a deficiency after business hours, on a weekend, or on a holiday. In such cases, the operator should take immediate action. When emergency revisions to FAA-approved material are made, the operator shall notify the POI of the revision at the earliest practical opportunity (preferably the first working day after the action). Since there is a wide variety of reasons for requiring emergency revision action, the POI must determine the best course of action to be taken after being notified of the emergency revision. POIs shall make assigned operators aware of this guidance.

RESERVED. Paragraphs 3-3159 through 3-3175.

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VOLUME 3 GENERAL TECHNICAL ADMINISTRATION

CHAPTER 42 EVALUATE PART 121/135 (10 OR MORE) CONTRACT MAINTENANCE PROGRAM, CONTRACT AGREEMENTS, AND CONTRACTED WORK

Section 1 Initial and Continual Oversight and Evaluation of Essential Maintenance and other Contract Maintenance Provider Programs and Contractual Agreements

3-3841 PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES/AIR TRANSPORTATION OVERSIGHT SYSTEM (ATOS) DOCUMENTATION (SAFETY ATTRIBUTE INSPECTION (SAI)/ELEMENT PERFORMANCE INSPECTION (EPI)).

A. Maintenance. Title 14 of the Code of Federal Regulations (14 CFR) part 135 (10 or more): 3304, 3339, and 3383.

B. Avionics. Part 135 (10 or more): 5339 and 5383.

C. ATOS.

1) EPI 1.2.1, Airworthiness Release/Maintenance Log Recording Requirements.

2) SAI 1.3.7, Maintenance Providers.

3) EPI 1.3.7, Maintenance Providers.

3-3842 OBJECTIVE. This chapter provides vital information for aviation safety inspectors (ASI) and will aid air carrier management in developing and verifying the adequacy of the contract maintenance programs required for ample oversight of the performance of maintenance and the required inspection program contracted to others.

3-3843 GENERAL. Air carriers must ensure that contract maintenance providers are complying with their Continuous Airworthiness Maintenance Program (CAMP) and other provided instructions when maintaining the aircraft, airframes, engines, propellers, appliances, emergency equipment, and components thereof and ensure that they are in accordance with the documented policies, procedures, and instructions in the air carrier's manual and the applicable 14 CFR regulations.

3-3844 EXPLANATION OF TERMS AND DEFINITIONS. In present policy, outsource maintenance, outsource contract maintenance, outsource maintenance provider (OMP), and substantial maintenance are used to describe the same processes used by air carriers for the performance of maintenance by other persons. This chapter has been developed to bring clarity and standardization to this process. This new policy establishes new terms to be used from this point forward.

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A. Air Carrier Maintenance Provider. The term "air carrier maintenance provider" or "maintenance provider" is used for any person with whom the air carrier has made arrangements for the accomplishment of any of its maintenance, preventive maintenance, or alterations.

B. Contract Maintenance. The term "contract maintenance" means any maintenance, preventive maintenance, or alterations accomplished by an air carrier maintenance provider. However, the air carrier always retains primary responsibility for any contract maintenance accomplished by an air carrier maintenance provider.

C. Maintenance Definitions.

1) Many nonregulatory words and terms are used in the aviation industry to describe a person who performs maintenance, preventive maintenance, and alterations for a certificate holder under the provisions of 14 CFR part 121, § 121.379(a) and part 135, § 135.437, such as outsource, contract, emergency, vendor, and oncall. It is important that the ASI understand and use these words appropriately to prevent unintended changes to the regulatory meaning of the word maintenance. Other persons who perform maintenance for a certificate holder under the provisions of §§ 121.379(a) and 135.437 can be a certificated repair station (CRS), a noncertificated organization or company, or a certificated mechanic at an airport. Other persons can perform maintenance in locations such as in a hangar, on the line, or in a shop.

2) Regardless of who performs maintenance for part 121 or 135 certificate holders and the word used to describe the person, location, and facilities used by another person, all maintenance must be performed in accordance with parts 121 and 135, the certificate holder's CAMP, and the certificate holder's manual. There should be no differences between maintenance performed by the certificate holder and maintenance performed for the certificate holder by another person.

D. Essential Maintenance. Continuous improvement, maturity, and evolution have made it necessary for the Federal Aviation Administration (FAA) to update its contract maintenance surveillance, oversight, and terminology. The term substantial maintenance and the program it represented have been discontinued. A new idiom and a new program have been developed and set in place. This chapter will provide insight into the essential maintenance program.

1) The Essential Maintenance Provider (EMP) is any person who is used by the air carrier to accomplish designated Required Inspection Items (RII).

NOTE: Essential maintenance is for the RII of on-wing maintenance. On-wing maintenance is to mean the entire aircraft.

2) Splitting an engine case is not essential maintenance unless the air carrier has designated that item of maintenance as an item that must be inspected (requiring inspection) when the engine is still installed on the airplane only.

3) Essential maintenance encompasses any on-wing RII accomplished after any maintenance or alteration. Essential maintenance is maintenance that, if done improperly or if

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improper parts or materials were used, would result in a failure effect that would endanger the continued safe flight and landing of the airplane. Essential maintenance is the accomplishment of the air carrier-designated on-wing inspection item. Essential maintenance does not encompass any off-wing maintenance. It is understood that this statement may be redundant; in this chapter, however, it is most important that all inspectors and operators use this as the explanation and definition of essential maintenance.

4) The terms "other persons" and "certificate holder" are used in this section wherever appropriate because they are consistent with the regulatory language used in part 121 subpart L. The intended meaning of the word "person" is, as stated in 14 CFR part 1, an individual, firm, partnership, corporation, company, association, joint-stock association, or governmental entity.

3-3845 CONTRACT REQUIREMENTS.

A. Air Carrier Maintenance Responsibility. Throughout the process of evaluating the contracting of maintenance, it is important to remember that the air carrier has the responsibility for the performance and quality of the maintenance (§§ 121.363 and 135.413). The air carrier cannot delegate this responsibility. The maintenance provider's organization becomes, in effect, an extension of the air carrier's maintenance organization. The air carrier must have the responsibility and the authority to decide what to do, when to do it, and how to do it.

B. Performance of Maintenance. Sections 121.367(a) and 135.425(a) require that all maintenance, preventive maintenance, or alterations performed by other persons be performed in accordance with the air carrier's manual. Air carriers detail in their manuals the policies, procedures, instructions, and methods for all maintenance personnel to follow to ensure the airworthiness of its aircraft, airframe, engines, propellers, appliances, emergency equipment, and parts thereof. Since the regulations only require a maintenance provider to comply with the portions of the air carrier's manual that pertain to the performance of maintenance, it is not expected for every contract provider to comply with every aspect of an air carrier's CAMP; therefore, the air carrier must have detailed policies and procedures in its manual and must provide instructions that describe exactly how the maintenance providers will perform maintenance.

C. Maintenance Scope. The performance of maintenance language includes all facets of performing maintenance on air carrier's aircraft or components thereof and includes, but is not necessarily limited to, the following areas of the air carrier CAMP:

1) Maintenance personnel training (including inspection personnel and RII-authorized personnel);

2) Instructions for the accomplishment of maintenance and inspections (including the use of maintenance manuals, work cards, engineering orders, etc.);

3) Duty time;

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4) Maintenance documentation and that documentation's control (including documenting scheduled and non-routine maintenance and the use of documents to control work packages);

5) Maintenance records (including record retention and the transfer of maintenance records);

6) Parts handling, storage, and identification (including receiving, inspection, and the use of parts tags); and

7) Calibrated tools and test equipment.

D. Maintenance Procedures. These procedures must cover all aspects of contract maintenance, from contracting heavy maintenance visits to component repair to oncall line maintenance. The air carrier must establish in its manual the policies and procedures to administer, control, direct, and ensure the proper performance of the work conducted by maintenance providers. The air carrier must specifically explain how the contract provider will be provided the appropriate instructions for the accomplishment of the maintenance and must document the methods for identifying and disseminating those portions of the air carrier's manual that a maintenance provider must follow. It is only when the air carrier has implemented these requirements that the regulatory requirements can be satisfied.

E. EMP and other Contract Maintenance Providers Listing Within the Air Carrier's Manual or Manual System. An air carrier must keep the EMP's and other contract maintenance providers' listings within its manual or manual system. Most air carriers have a large number of individual manuals that comprise the air carrier manual system. It is expected that the §§ 121.369(a) and 135.427 maintenance provider listing is identified as one of those manuals or that it is within the air carrier's manual system. The listing, as stated in §§ 121.369(a) and 135.427, clearly requires an air carrier to keep a list of other persons with whom the air carrier has made arrangements for the performance of maintenance, etc., in its manual. Each EMP contractor listing must contain the RII that the EMP, and only an approved EMP, is authorized to accomplish.

F. Hired Persons. Mechanics hired by the air carrier as an employee do not qualify as a maintenance provider and will not be listed. When an individual is hired as a contract maintenance provider, he or she is not to be considered an EMP when they are given RII authority. In addition, an individual must be listed when:

1) They are hired for labor only and are trained, qualified, and authorized in accordance with the airline's procedures.

2) The airline provides the facilities, parts, tools, equipment, manuals, and other necessary elements, as required by the airline's manual.

3) They get the required audits, as documented in the airline's Continuing Analysis and Surveillance System (CASS).

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4) An individual who provides his or her services as an oncall mechanic or who is hired as a contract flight mechanic must be listed in the vendor listing, as required by § 121.369(a).

G. Organization Extension. FAA policy states that when a certificate holder uses another person to perform maintenance, preventive maintenance, and alterations for it, that person becomes an extension of the certificate holder's organization. The policy is applicable to the authority needed by a person to perform maintenance, preventive maintenance, and alterations for a certificate holder. The authority, which is stated in §§ 121.379(a) and 135.437, comes from the certificate holder to the maintenance provider through the arrangement for the performance of maintenance.

H. Work Categories. The maintenance provider work description categories are very broad. The following are the five categories for classifying work. Keep in mind that the air carrier is responsible for classifying its work into these categories, not the FAA.

1) Aircraft Maintenance:

a) Heavy Maintenance. An example could be the inspection and repair of the aircraft airframe, performed at specified time intervals. These intervals are based upon the guidelines of the aircraft manufacturer, the National Aviation Authority (NAA), the FAA, and the European Aviation Safety Agency (EASA) and further refined by the airline or operator. Scheduled inspections are typically based on a fixed number of flight hours. These are four levels of inspection for commercial jet aircraft, usually termed "A," "B," "C," and "D" checks. A and B checks are normally considered part of line maintenance. C and D checks are classified as heavy maintenance. At the present time, there are a variety of approaches to heavy maintenance.

NOTE: To minimize aircraft downtime and to improve labor efficiency, airlines typically undertake these checks in a series of progressive inspections. D-check tasks are often divided and included into more frequent C-level inspections. Thus, an aircraft might receive a C1, C2, C3, and C4 check in sequence over many years, eliminating the need for a full D check. See Table 3-121A.

Table 3-121A. Example, Airframe Heavy Maintenance Overview

Market	Activity	Description	Frequency	Estimated Time
Air Transport	C Checks	A detailed inspection of the airframe, components, and accessories; some access panels are removed. Typically includes a portion of any applicable corrosion prevention programs.	2,500 to 3,000 flight hours.	72 hours (airlines with small fleets may require 7+ days).
	D Checks	A comprehensive structural	20,000 to 24,000	30 days.

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		inspection and overhaul of the aircraft, intending to return it to its original condition (to the extent possible); interiors and most components are removed.	flight hours (approximately 5 to 8 years).	

NOTE: This table is not meant to be all-inclusive of heavy maintenance or inspection program details.

b) Line Maintenance. Line maintenance includes light, regular checks to ensure that the aircraft is fit for flight. Line maintenance also includes troubleshooting, defect rectification, and component replacement. Aviation Maintenance Technicians (AMT) (Airframe and Powerplant (A&P) Mechanics) diagnose and correct issues on the aircraft and carry out these checks on an ad-hoc basis or at a scheduled interval. Line maintenance consists of three primary activity categories: transit checks, daily and weekly checks, and A checks. Historically, line maintenance included B checks, which rarely exist in current maintenance programs.

NOTE: This table is not meant to be all-inclusive of all line maintenance.

2) Aircraft Engines. Includes off-airplane maintenance of aircraft engines.

3) Propeller Work. Includes off-airplane maintenance of propellers and propeller control components.

4) Components. Includes off-airplane maintenance of individual components.

5) Specialized Service. Includes services such as x-ray, plating, eddy current, painting, shot peening, plasma spray, composite structures maintenance, weighing, welding, etc.

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Table 3-121B. Example, Line Maintenance Overview

Activity	Description	Frequency	Estimated Time
Transit Checks	Sometimes described as turn-around checks. Consist of specific visual checks ("walk-around"), review of check log and defects, and, where needed, defect rectification and troubleshooting. For long-haul operations, it will include tasks for twin-engine operation (Extended Operations (ETOPS)) clearance.	Every flight cycle.	1-4 labor hours.
Daily and Weekly Checks	Sometimes described as overnight checks. Also include 7 or 8 day checks and 3 or 4 day checks. Routine work as well as tasks specified by the maintenance planners; e.g., defect rectification, out-of-phase checks. Increasingly, it is also used for In-Flight Entertainment (IFE) and cabin maintenance.	Every 24 to 36 hours (occasionally 48 hours). Every 4 to 8 days.	Daily: 5-10 labor hours. Weekly: 10-30 labor hours.
A Checks	Usually conducted at a few main bases within the airline network. Routine work as well as tasks specified by the maintenance planners; e.g., defect rectification, out-of-phase checks. Increasingly, this downtime is also used for IFE and cabin maintenance.	Regional: 350-450 flight hours. Narrow body and wide body: 500-700 flight hours.	Regional: 50-100 labor hours. Narrow body and wide body: 100-250 labor hours.

I. Unexpected Requirement for Unscheduled Maintenance. Unscheduled maintenance may occur at any time. If a requirement for unscheduled maintenance occurs as a result of one cause or another, the FAA expects each certificated air carrier to have demonstrated that it has competent personnel and adequate facilities and equipment (including spare parts, supplies, and materials) available to address instances of unscheduled maintenance at a diversion airport. A diversion airport, or airports, is required to be identified in each air carrier flight plan. Each diversion airport identified is considered to be along the air carrier's approved route.

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Further, if a domestic or flag air carrier is operating off its approved routes, it must operate under the applicable supplemental rules and demonstrate compliance with § 121.123 in regards to competent personnel and adequate facilities and equipment (including spare parts, supplies, and materials). See §§ 121.105 and 121.123; part 135 does not have a corresponding rule.

J. Manual Review. Air carrier principal inspectors (PI) should continually review and verify the sections or chapters of the air carrier's manual dealing with the contracting of maintenance to ensure that it is continually updated to reflect changes in its system operations and routing. This section must provide ready reference for contractors and company personnel with an easily controllable and convenient section of its manual in order to meet the requirements of 14 CFR part 145, § 145.205.

K. Qualifications. The air carrier must ensure that the organization or person used as a contract provider has:

1) The capability to do the work;

2) An organization structured to do the work;

3) Competent, trained personnel to do the work;

4) Relevant and current technical and administrative material from the air carrier's manual for the work;

5) Adequate facilities and equipment to do the work;

6) The ability to transfer and receive data and information necessary to support the air carrier's CASS; and

7) A current listing of individuals trained, qualified, and authorized by the air carrier to conduct required inspections. The list must identify these individuals by name, occupational title, and the inspection(s) they are authorized to perform.

L. Maintenance Program Performance Procedures. Due to the wide variety and different levels of contracting out maintenance, the air carrier may evaluate and accept into its CAMP the procedures used by the contractor for the performance of maintenance. However, the air carrier's CAMP must contain the manner used to evaluate, accept, and authorize the contract provider's procedures.

NOTE: The provisions set forth for the contract maintenance provider guidance and the subsequent issuance of operations specification (OpSpec) D091, Requirements: Air Carrier Maintenance Provider, are applicable to part 121 operators only.

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1) Air Carrier Contracts for an All-Encompassing Maintenance Program. These situations allow for an air carrier to contract with another equivalent air carrier for the purposes of the performance of maintenance (including required inspections). In this category, all maintenance is performed in accordance with the contractor's programs, methods, procedures, and standards. The air carrier's aircraft is considered part of the contractor's fleet for purposes of maintenance program content and maintenance intervals, including reliability control. However, this does not alleviate the air carrier of its ultimate responsibility for the maintenance performed on its aircraft. The issuance of the OpSpec will authorize this type of contractual arrangement (see Volume 3, Chapter 18, Section 6, Parts D and E Maintenance OpSpecs/MSpecs/LODAs).

2) Air Carrier Participates in Parts Leasing or Exchanging Pool. Because the air carrier is responsible for the airworthiness of its aircraft and the performance of its maintenance, contract arrangements with persons or organizations that supply parts and components other than new on a lease or exchange basis must also be considered contract maintenance providers. Leases or exchanges that do not allow the air carrier to be in control of the maintenance of the leased or exchanged part or component while it is in a maintenance status are contrary to the regulations, as they circumvent the responsibility for the performance of maintenance.

3) Part Transactions. Sending a component to a supplier and having it replaced with a new or repaired part. There are two types of transactions and both require a look at the contractual agreement between the person providing the part and the air carrier, looking at the bill of work that the air carrier sends along with the part to the person supplying the part, or both. On one hand, the transaction could be a sales receipt transaction where the air carrier sells its part to a parts broker and the air carrier buys the serviceable part from the contracted maintenance provider. This is basic buying and selling (a sales transaction) and the end product does not involve maintenance since the air carrier is buying the part and not sending it out for maintenance. The cost to the air carrier is the cost of the part; i.e., list or retail price for the part. These transactions involve persons who are not authorized to accomplish maintenance on the part. On the other hand, however, if the air carrier sends a part out for maintenance to a maintenance provider authorized to accomplish maintenance on the part, and the maintenance provider simply exchanges the received part for a serviceable one it had on the shelf, it is a maintenance transaction and not a sales transaction. The cost to the air carrier is the cost of the maintenance and not the cost of the part itself. This is a maintenance transaction.

a) In the first instance, the parts broker would not be listed on the maintenance provider list. The surveillance focus would be on the air carrier receiving inspection and bridging the part into the air carrier system.

b) In the second instance, the maintenance provider would be listed on the maintenance provider list. The surveillance focus would be on the air carrier maintenance provider process for handling and repairing the part according to the air carrier program and should be treated as any other maintenance provider that does maintenance, preventive maintenance, or alterations for the air carrier.

4) Required Inspections Regulations. This is only a partial listing of applicable regulations for required inspections (see EPI 1.3.7 for a complete listing of specific regulatory requirements (SRR)).

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a) Section 121.365(b). Other persons performing required inspections must have an adequate organization to perform the inspection.

b) Section 121.369(a). The certificate holder must list in its manual other persons with whom it has arranged for the performance of required inspections, including a general description of that work. This listing should be in a standardized format to align with OpSpec D091. The listing should:

1. Outline five general descriptions of work.

2. Contain the name and location of each maintenance provider.

3. Identify the maintenance providers who are authorized to accomplish essential maintenance.

4. Include the specific RII that each EMP is authorized to accomplish.

M. Continuing Analysis and Surveillance System (CASS). Per §§ 121.373 and 135.431, the air carrier must maintain a system for the Continuing Analysis and Surveillance (CAS) of the performance and effectiveness of its outsourced maintenance, and provide corrective actions for any discrepancies found. As part of its CASS, the air carrier should establish a schedule for accomplishing continuing audits or inspections, designed to determine the maintenance provider's level of compliance with the specific work instruction and the procedures in the air carrier's manual. A number of variables will dictate the frequency of these audits or inspections, such as the air carrier's level of confidence in the maintenance provider, the complexity and quantity of the work, the quality of the work produced, and the quality of the records and certifications produced. Because of these variables, air carriers will have audit schedules that differ from one another. Each air carrier should have an audit schedule based on its own unique set of circumstances and needs.

N. Coordinating Agencies for Supplier's Evaluation (C.A.S.E.). C.A.S.E. functions as a contract auditor for its air carrier members. Qualifying C.A.S.E. audits for an EMP audit can be used for operator followup audits on EMPs, provided the C.A.S.E. audit has been accomplished within the previous 6 months and if the C.A.S.E. 1A audit checklist includes the airline-specific requirements. A C.A.S.E. audit may not be used as an initial audit for newly proposed EMPs.

1) The FAA is charged with the safety oversight of certificate holders, including all other persons, certificated or not, used by the certificate holder to perform maintenance, preventive maintenance, and alterations. There should be no differences in the FAA oversight of a certificated maintenance provider and one that is not certificated. Aircraft maintenance, no matter who performs it or where it is performed, requires effective oversight.

2) In any case, the C.A.S.E. audit alone does not satisfy regulatory requirements. Data collected by the C.A.S.E. audit must be analyzed to determine that the air carrier's programs are working effectively and that any deficiencies are corrected. The C.A.S.E. program must be integral to the air carrier's CASS.

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O. Airworthiness Release or Aircraft Log Entry. Required by §§ 121.709 and 135.443. For the purposes of contract maintenance, it is important to note that §§ 121.709(b)(3) and 135.443(b)(3) outline specific requirements for the persons authorized to sign an airworthiness release or aircraft log entry. As defined in part 1, § 1.1, a person is an individual, firm, partnership, corporation, company, association, joint-stock association, or government entity. Thus, a repair station, as a company, qualifies as a person defined in § 1.1 and can prepare, or cause to be prepared, an airworthiness release or an appropriate entry in the aircraft log. Such a release or aircraft log entry is limited to the work the repair station is rated to perform and actually performs on an aircraft for certificate holders operating under 14 CFR parts 121, 125, and 135. However, in preparing the airworthiness release or aircraft log entry, the person or, in this instance, the certificated part 145 repair station, must comply with the procedures set forth in the part 121 or 135 certificate holder's manual for preparing the airworthiness release or aircraft log entry. Because there is no reference to "person" in §§ 121.709(b) or 135.443(b), the "certificate holder" refers not to the repair station, but the part 121 or 135 certificate holder for whom the repair station is performing maintenance. This provision corresponds to the part 121 and 135 certificate holder's duty under §§ 121.367 and 135.425 to ensure that not only are competent personnel performing maintenance on their fleets, but that each aircraft released to service is airworthy.

3-3846 PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. Previous experience with part 121 or 135 air carriers.

B. Coordination. This task requires coordination with the principal maintenance inspector (PMI) and principal avionics inspector (PAI) and may also require coordination with the certificate-holding district office (CHDO) or certificate management office (CMO) or certificate management unit (CMU) that is responsible for the organization with whom the air carrier has made maintenance arrangements.

3-3847 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- 14 CFR parts 43, 91, 119, 121, and 135;
- Advisory Circular (AC) 120-16, Air Carrier Maintenance Programs;
- AC 120-79, Developing and Implementing an Air Carrier Continuing Analysis and Surveillance System;
- Operator, contractor, or manufacturer's manuals; and
- ATOS Element 1.3.7.

B. Forms. OpSpec D091.

C. Job Aids:

- Automated OpSpecs checklists and worksheets, and
- Job Task Analysis (JTA) 3.3.52, as amended.

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3-3848 PROCEDURES.

A. Utilizing ATOS SAI Element 1.3.7, Maintenance Providers. ASIs with oversight responsibilities for part 121 air carriers are required to use the ATOS SAI Element 1.3.7, Maintenance Providers, Data Collection Tool (DCT) when evaluating the air carrier's contract maintenance program as detailed below. A detailed description of the SAI and general guidance for the use of the tools can be found in Volume 10, Chapter 2, Section 4, Design Assessment Data Collection, and Volume 10, Chapter 3, Section 1, Risk Management Process.

NOTE: To ensure that the version of the SAI assigned is current, it is recommended that copies be obtained from the Flight Standards Information Management System (FSIMS) Web site at http://fsims.faa.gov.

B. Audits. The air carrier must conduct an onsite audit of each EMP and contract provider on the air carrier contract maintenance provider listing. The air carrier must have a method to determine if the maintenance provider has the capability to do the requested work. An air carrier's CASS needs to address both internal and external audits. The air carrier must have procedures for its auditing process, including the scheduling of audits. Audits are intended to ensure that inspection and maintenance personnel, and outside maintenance providers, comply with the operator's manual, program, and all applicable requirements. The audit may be onsite or by some means other than an onsite audit.

C. Audit Accomplishment. Each air carrier must accomplish an onsite audit in accordance with its contract maintenance provider or EMP qualification process before it places that maintenance provider on the listing. The regulatory requirements are part 119, §§ 119.59, 121.367, and 121.373. Section 121.373 does not have a specific requirement to accomplish audits; it does have an air carrier requirement to demonstrate that their maintenance providers comply with § 121.367 and all of the RII requirements. Further guidance for the air carrier can be found in AC 120-79. The air carrier's contract maintenance provider or EMP audit should take into account all of the applicable regulations of part 121 that apply to a maintenance provider through §§ 121.1(b) (particularly), 121.365, 121.367(a), and all of those regulations related to RII.

NOTE: Essential maintenance encompasses any RII accomplished on-wing after any maintenance or alteration. Essential maintenance is maintenance that if done improperly or if improper parts or materials were used, it would result in a failure effect that would endanger the continued safe flight and landing of the airplane. Essential maintenance is the accomplishment of the air carrier-designated inspection item on-wing. Essential maintenance does not encompass any off-wing maintenance.

NOTE: FAA's EMP onsite audits are required to be accomplished on a scheduled basis. It is recommended that the EMP followup surveillance be conducted at intervals not to exceed 3 calendar-years. If an EMP has not performed maintenance work for the air carrier since the provider list was last revised, that EMP would still have a requirement to be inspected by the FAA.

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D. Surveillance. ASIs with surveillance responsibilities for air carriers should review the air carrier's maintenance program to determine whether the certificate holder's procedures adequately address all aspects of contract maintenance. These policies and procedures should be easily recognizable, identified, and defined.

E. CAMP Compliance. Under §§ 121.367 and 135.425, the air carrier's CAMP must ensure that the contract maintenance provider will perform work in accordance with the air carrier's program. The information necessary to ensure compliance with the air carrier's CAMP must be made available to the contract maintenance provider before the work begins. The air carrier must ensure that the contract maintenance provider follows the contract information supplied.

F. Airworthiness Determination. Further, the air carrier must be able to show that the contract maintenance provider has competent personnel, adequate equipment, and facilities. By showing that all of the above requirements are complied with, the air carrier is able to ensure that its aircraft are properly released to service in an airworthy condition under the air carrier's specific CAMP.

1) Under §§ 121.369 and 135.427, the air carrier's manual must cover the administration of its CAMP, as written in its manual. The manual must include specific methods for complying with the applicable sections of parts 121 and 135 when maintenance providers perform maintenance, preventative maintenance, and alterations on behalf of the air carrier. These sections also require the air carrier to list in its manual the persons with whom it contracts for maintenance and RII, and to include a description of the contracted work.

2) The following specific areas must be addressed in the air carrier's CAMP.

a) Under §§ 121.365, 135.423, and 135.425, the air carrier must ensure that the person with whom it arranges to perform maintenance has an organization adequately capable of handling the work. The air carrier must evaluate the minimum organizational requirements that a contract maintenance provider must meet for a particular job. The air carrier must ensure that the contract maintenance provider is capable of performing its CAMP requirements as provided by or as authorized by the air carrier for the type of work being contracted.

b) Furthermore, if RII are to be accomplished by the contract maintenance provider, the inspection functions within the contracting organization must be separate from the production organization. If the air carrier's maintenance program or procedures require specific compliance aspects, the air carrier must be able to show that the contract maintenance provider is equally capable of following its manual procedures, written instructions, and any work scope provided.

G. Required Inspection Personnel.

1) Under §§ 121.371 and 135.429, the air carrier must ensure that the maintenance provider performing the work knows its specified RII. The air carrier must also ensure that the maintenance provider RII-authorized personnel are trained in accordance with the requirements of the air carrier's CAMP.

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2) Each air carrier shall maintain or determine that each person with whom it arranges to perform its required inspections maintains a current listing of persons who have been trained, qualified, and authorized by the air carrier to conduct required inspections. The persons must be identified by name, occupational title, and the inspection that they are authorized to perform. The air carrier shall give written information to each person so authorized by the air carrier, describing the extent of the person's responsibilities, authorities, and inspection limitations. The air carrier must provide this list for inspection upon FAA request.

3) The air carrier's audit used to survey contract maintenance providers or EMPs shall include a specific review of RII qualifications and records of the individual RII-designated personnel.

4) RII qualification requirements apply to both the entity, if there is one, as well as the individual who actually carries out the required inspection. Essential maintenance is anyone who is used by the air carrier to accomplish the inspection that the air carrier has designated as an on-wing RII. It does not include the actual maintenance that requires the RII.

H. One-Time Events. RII EMP authorization for a one-time only event. An RII relates directly to flight safety and, as such, a one-time RII EMP authorization must be accomplished under exactly the same process as an authorization for a continuing use. The one-time authorization is exactly that. If an air carrier makes an authorization due to unscheduled RII requirements, it should have in its manual a process to identify repetitive usage for the same person.

1) In addition to any OpSpec D091 requirements, the PIs should verify that the air carrier's RII qualification and authorization process, including a "one-time RII authorization," demonstrates compliance with at least all of the regulatory requirements of § 121.371, as stated below.

a) The RII candidate is properly trained and qualified for the RII (§ 121.371(a)). An FAA mechanic's certificate with airframe ratings, powerplant ratings, or both, by itself, does not demonstrate that an individual is properly trained and qualified to accomplish RII work.

b) The RII candidate is covered by a training program that ensures that the RII candidate is fully informed about RII procedures and techniques and new equipment in use, and is competent to perform RII duties. (Section 121.375.)

c) The RII inspector will be under the supervision and control of the inspection unit at all times when performing RII duties. When the required inspection is underway, maintenance control may not be involved in the required inspection. (Section 121.371(b).)

d) The RII inspector is provided with the appropriate parts of the air carrier manual that he or she is required to comply with. (Section 121.137.)

e) When the air carrier authorizes an RII inspector, the air carrier provides that individual with written information describing the extent of their RII responsibilities, authorities, and limitations. (Section 121.371(d).)

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2) The air carrier's process for a "one-time" authorization may not require an onsite audit to be accomplished before using the RII EMP. However, the process must meet all of the regulatory requirements for authorizing a person to accomplish the required inspection. The air carrier should have a process in its manual that identifies how it meets all of the regulations for this "one-time" authorization, which may be different than what would be done for a full-time RII.

3) The one-time RII authorization must be accomplished under exactly the same process used to qualify the air carrier's own employees. The air carrier should use the process that it has adopted and documented in its manual for one-time RII authorization.

3-3849 CASS. Under §§ 121.373 and 135.431, the air carrier must continually survey its CAMP and all persons acting under that program to ensure continuous compliance with its CAMP and the regulations. The air carrier must have a system in place that detects, identifies, and provides timely corrective action, on a continuing basis, for all deficiencies or deviations in those portions of the CAMP accomplished by the contract maintenance provider, including maintenance recordkeeping. This generally requires the air carrier to perform audits of all of its maintenance providers.

A. Maintenance Performance Quality. The air carrier must have a system in place that tracks and evaluates, on a continuing basis, the standards of performance (quality) of the maintenance work accomplished by the individual maintenance provider. This must include provisions for timely corrective action if the quality of work becomes unsatisfactory and deficiencies are noted.

1) CASS Audits. The air carrier's CASS audits must be very specific in nature. This will ensure compliance with its program. Audits performed by air carriers that ensure that the contract maintenance provider complies with part 145 may be contrary to regulations. It is highly recommended that the air carrier have an "in-process" audit type that will follow the maintenance through its cycle to ensure that the maintenance provider complies with the air carrier's CAMP.

2) Third Party Evaluation. Air carriers will not normally perform audits of third party organizations with which certificated repair facilities subcontract. However, the air carrier must have a process that determines if the third party contract maintenance provider has the organizational structure, competent and trained personnel, adequate facilities, and equipment to perform the intended functions. This process must ensure that the air carrier maintains its responsibility by being in control of its maintenance, regardless of who performs it.

a) Training Programs. Under §§ 121.375 and 135.433 the PIs must verify that the training program to ensure that each person who determines the adequacy of work is fully informed about procedures, techniques, and new equipment in use and is competent to perform his or her duties. This applies to any person employed by any company that performs maintenance for an air carrier. The air carrier must detail in its CAMP how it will comply with these regulations for all contract maintenance personnel. The air carrier can evaluate and accept the training programs of the maintenance provider if it has determined that the maintenance

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provider's program meets the intent of §§ 121.375 and 135.433. This process must be described in detail in the air carrier's CAMP.

b) Duty Time. Under § 121.377 the air carrier must ensure that its contract maintenance providers follow the duty time requirements. If the air carrier's CAMP indicates that the maintenance provider provides specific assurances, the contractor must provide those assurances. The air carrier must ensure that the maintenance provider has procedures in place to ensure that those assurances are being met.

c) Certificate Requirements. Under §§ 121.378 and 135.435 the air carrier must ensure that only appropriately certificated persons are directly in charge of maintenance, perform required inspections, or both, unless the CRS is located outside the United States.

d) Authority to Perform. Under §§ 121.379 and 135.437, the air carrier is authorized to perform or arrange for the performance of maintenance on its own aircraft as set forth in the air carrier's CAMP. The center of the relationship between air carriers and contracted maintenance providers are the procedures and assurances set forth in the air carrier's CAMP. The ASI should continually ensure that the air carrier is able to establish compliance with its own procedures, either through direct supervision, surveillance, auditing, or both; or through appropriate controls such as contractual relationships.

e) Records. Under part 43, § 43.9; part 91, § 91.417; § 121.380; and § 135.439, aircraft owners and operators must maintain specific records. If the air carrier's CAMP indicates that the responsibility of making regulatory records available may be delegated to maintenance providers, the air carrier should clearly define the records to be maintained, the length of time the records should be kept, and the form and manner of maintaining those records. (See § 119.59(b)(1)(ii).) This must also include where the records will be physically located and how the information will be included in the air carrier's CASS.

B. Other Areas of Consideration.

1) The source of major repair and major alteration data developed by or for the air carrier must be accomplished in accordance with the air carrier's procedures in the CAMP.

2) The air carrier must ensure that all organizations with whom it arranges will adequately and promptly report to the air carrier per the requirements of §§ 121.703 and 121.705 or §§ 135.415 and 135.417.

3) The air carrier must update the list required by §§ 121.369(a) and 135.427(a).

4) Air carriers who are authorized by OpSpecs to utilize C.A.S.E. audits for the surveillance of repair stations must have procedures in their manual to determine if C.A.S.E. audits are acceptable to use for the work being performed.

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5) Air carriers who participate in parts leasing or exchange pools must have policies and procedures in place to ensure that the regulatory responsibility for the performance of maintenance and CASS are met. Data produced by these parts or components must be analyzed to determine that the air carrier's programs are working effectively as intended and that any deficiencies are corrected.

6) An air carrier that elects to obtain the services of a contract maintenance provider either on an unscheduled or short notice basis must include specific procedures for doing so in its manual.

C. Communication Between the Air Carrier and its Contract Maintenance Providers and EMPs. A contractor and an EMP are placed on the air carrier's provider list once the contract agreement is signed and the certificate holder performs the required audit. Once that is accomplished, the air carrier is obligated to advise the contractor of that status. A certificate holder communicates the capabilities for their contract maintenance providers or EMPs in the manner outlined in their manual. See §§ 119.43 and 121.137.

1) All necessary policies and procedures must be included in the air carrier's manual in order for the air carrier to determine that all subcontracted work performed is accomplished in accordance with the CAMP. This includes subcontracted labor at the air carrier's facility or at a contract maintenance facility.

2) All necessary policies and procedures to transfer and receive data and information necessary to support the CAS program, reliability program, or other programs from which the air carrier has interfaces with the contract maintenance provider.

D. Evaluating and Accepting the Procedures or Methods of a Maintenance Provider as Part of the Air Carrier's CAMP.

1) Instead of an air carrier reiterating the maintenance requirements or publications that are already contained in a contract provider's manual, the air carrier may evaluate and accept the provider's manual, in part or as a whole, as part of its CAMP. This evaluation should include the key elements of the performance of maintenance as described in paragraph 3-3843.

a) For example, an air carrier's calibrated tool interval for recalibration is 12 months and a review of the contract maintenance provider's manual shows that their requirement is 18 months. In this situation, the air carrier can evaluate the calibrated tool program of the provider and accept the 18 month interval or the air carrier can instruct the provider that the calibrated tools used on their aircraft must be calibrated within the last 12 months.

b) Another example is maintenance documentation. The air carrier's program will require all maintenance discrepancies to be documented on its specific company forms. An air carrier can evaluate the maintenance forms used by the maintenance provider and determine that their methods of documenting maintenance are acceptable and allow the maintenance provider to use their forms instead of the air carrier's.

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2) In either case, it is important to note that this evaluation is not necessarily a comparison of the contract provider's manuals to the air carrier's manuals to determine that the programs are the same, but rather an evaluation of the maintenance provider's manual to determine if their program is acceptable to the air carrier for the accomplishment of the particular maintenance. Once this evaluation has taken place, the air carrier will detail to the maintenance provider how the maintenance needs to be accomplished. It should also include the method for disseminating the authorization and specific work instructions to the maintenance provider. This evaluation process and subsequent dissemination to the contract provider should be described within the air carrier's contract maintenance program portion of its CAMP. Instead of the air carrier revising its CAMP each time this process takes place, the air carrier can place the specific work instructions to the maintenance provider in the contract or in a letter. This process, as a whole, complies with the requirements to perform maintenance in accordance with the air carrier's manuals per §§ 121.363(b), 121.367(a), 121.379(a), 135.413(b)(2), 135.425(a), and 135.437(a).

3) Air carriers should differentiate these policies and procedures between the different levels of contract maintenance. EMPs versus non-EMPs or providers of on-aircraft work versus a repair station who repairs components. Once the air carrier and the contract provider enter into an agreement in which the air carrier will accept the contract maintenance provider's procedures, those procedures are now part of the air carrier's CAMP. Any revisions to the accepted procedures by the contract provider, in effect, revise the air carrier's CAMP. Policies and procedures must be contained in the air carrier's CAMP to ensure that the air carrier is in control of its CAMP. They must ensure that the air carrier is aware of any such revision prior to the contract provider implementing those revisions. These procedures must include a method to re-evaluate the revisions (as described above) and determine if they continue to be acceptable to the air carrier. The manuals must identify who is responsible to ensure that this process is functioning and who has the authority to revise this process.

E. Determine Qualification to Perform Essential Maintenance for an Air Carrier.

1) For EMPs. Before identifying any maintenance provider in the listing required by § 121.369(a) (as an entity, the certificate holder intends to authorize the accomplishment of essential maintenance for it), the certificate holder shall, consistent with §§ 121.365, 121.367, and 121.373(a), conduct an onsite audit designed to determine that each proposed EMP has an adequate organization and provides competent personnel and adequate facilities and equipment for the essential maintenance intended. The audit shall ensure that the essential maintenance can be performed in accordance with § 121.369(b).

2) Communication Between the Certificate Holder and the CHDO. Revisions to the contract maintenance provider or EMP listing are a normal part of doing business and, because in some cases it happens very frequently, its process should be well documented in the air carrier's manual. The revisions should occur through the provisions of § 121.369(a). The air carrier must keep in its manual a list of other persons with whom it has arranged for the performance of any required inspections, maintenance, preventive maintenance, or alterations. Additionally, notification of the revision should occur through the provisions of § 121.137, where the air carrier must furnish the CHDO with all changes and additions to its manual, including changes or additions to its list of other persons doing maintenance, etc.

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3) C.A.S.E. Audit Report. Air carriers may substitute a current C.A.S.E. audit report for the required onsite audit if the air carrier can determine that the C.A.S.E. audit addresses all of the elements above, the airline-specific requirements, and has been accomplished within the previous 6 months. The air carrier must perform an onsite audit of those elements that are not accomplished by the auditing organization.

NOTE: For EMPs, before identifying any maintenance provider in the listing required by § 121.369(a) as an entity that the certificate holder intends to authorize to accomplish essential maintenance for it, the certificate holder shall (in accordance with §§ 121.365, 121.367, and 121.373(a)) conduct an onsite audit designed to determine that each proposed EMP has an adequate organization and provides competent personnel and adequate facilities and equipment for the essential maintenance intended. The audit shall ensure that the essential maintenance can be performed in accordance with § 121.369(b).

4) Audit Report. The air carrier must submit a copy of the audit report to the CHDO, PMI, and PAI for review in a checklist or summary analysis form. That report should show how the air carrier made its determination that all of the requirements in this chapter have been adequately addressed.

3-3850 TASK OUTCOMES.

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

1) If the operator's manual and contract maintenance provider are determined satisfactory, accept the manual and issue OpSpec D091 (if applicable). Follow the guidance in Volume 3, Chapter 18, Section 6.

2) If the operator's manual is determined to be unsatisfactory, return the manual for corrections.

3) If the contract maintenance provider is determined to be unsatisfactory, deny the operator the use of that provider.

B. Update the Vital Information Subsystem (VIS). If the maintenance provider is accepted, open the operator's VIS record and update the information on the VIS, page 4 of the air operator record, in the field "Airworthiness Agreement." The PMI should determine whether revisions to OpSpecs for contracted maintenance are required or not. The VIS record field(s) should reflect the most appropriate choice. The two pertinent option codes for maintenance are:

- Contracts out most or all maintenance, and
- Contracts out a substantial maintenance function.

C. Document the Task. File all supporting paperwork in the operator or applicant's office file.

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D. Complete PTRS/ATOS SAI/EPI DCTs.

1) Comment Fields.

a) Inspectors will validate the overall effectiveness of their assigned certificate holders' management and oversight of contracted maintenance.

b) All comments should be written in clear, concise language. Explanations should be complete and descriptive, with as much information as necessary for other Certificate Management Team (CMT) members to understand the comments without requiring further information from the inspector. Comments submitted should include who, what, where, when, why, and how. References should be entered when appropriate.

2) SAI Recording. Essential elements of the system, as outlined in the SAI, must be validated through the collection and recordation of objective evidence that the system is properly designed and well managed. The objective is to evaluate the effectiveness of the certificate holder's system. The collection and recordation of objective evidence will assist in determining whether the system is properly designed and well managed.

3) Part 135 (10 or More). Open PTRS Data Sheets for each inspection of the contract maintenance provider performed by the CHDO team. Comments concerning the method of inspection used by the air carrier or operator, and any other possible findings identified during the inspection process, should be recorded in section IV of the PTRS Data Sheet.

4) ATOS CMTs. Inspectors will record SAI information in accordance with the ATOS guidance in Volume 10, Chapter 2, Section 6.

E. Future Activities.

1) Continuous Monitoring. The process of risk management (RM) is continuous and goes hand-in-hand with the air carrier's CAMP. The certificate holder must continuously update its programs and allocate its resources and activities to meet changes in its operating environment.

2) Continuous Responsibility. Inspectors must emphasize this continuing responsibility to air carrier management personnel.

RESERVED. Paragraphs 3-3851 through 3-3865.

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VOLUME 4 AIRCRAFT EQUIPMENT AND OPERATIONAL AUTHORIZATIONS

CHAPTER 4 MINIMUM EQUIPMENT LISTS AND CONFIGURATION DEVIATION LISTS

Section 3 Approve a Minimum Equipment List for a 14 CFR Part 125 Operator

4-696 PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

A. Initial Approval. 1321

B. Revision. 1322

4-697 OBJECTIVE. The objective of this task is to determine that an operator meets the regulatory requirements for safe and appropriate flight, with certain instruments and equipment inoperative, under Title 14 of the Code of Federal Regulations (14 CFR) part 125. Successful completion of this task results in the approval or disapproval of a minimum equipment list (MEL) document and the issuance or denial of a letter of authorization (LOA) to operate under part 125 with an MEL.

4-698 GENERAL.

A. Authority. Part 125, § 125.201 authorizes flight with inoperative equipment under specific conditions.

1) Inspectors may approve MELs for part 125 operators as part of the certification process. (See Volume 2, Chapter 6, Section 2, Conduct Certification of a 14 CFR Part 125 Operator.)

2) Holders of full deviations from part 125 operate under 14 CFR part 91 subpart F. Inspectors may issue MEL authorization to deviation holders using the procedures for part 91 MELs. (See Volume 4, Chapter 4, Section 2, Approve a Minimum Equipment List for a 14 CFR Part 91 Operator.)

B. Definitions.

1) The Aircraft Evaluation Group (AEG) is the Federal Aviation Administration (FAA) office responsible for the development and publication of an approved Master Minimum Equipment List (MMEL) for those aircraft within its area of responsibility.

2) The Aircraft Flight Manual (AFM) contains the operational limitations and performance standards for an aircraft. The term AFM can apply to either an airplane flight manual or a Rotorcraft Flight Manual (RFM). The FAA requires an AFM for type certifications. The responsible FAA Aircraft Certification Office (ACO) approves an AFM.

3) The Aircraft Maintenance Manual (AMM) is the source document for maintenance procedures for an aircraft. The term AMM can apply to either an airplane

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maintenance manual or a rotorcraft maintenance manual. The FAA requires the AMM for type certification.

4) An Airworthiness Directive (AD) is a mandatory airworthiness requirement for a particular make and model aircraft or installed equipment. An AD is supplementary to the aircraft's original airworthiness approval.

5) The standard Air Transportation Association of America (ATA) numbering system refers to systems on different aircraft in a standardized manner. MMELs use the ATA numbering stem.

6) The term calendar days includes all days, with no exclusion for weekends and holidays.

7) Deactivation means to make a piece of equipment or an instrument unusable by the pilot/crew by preventing its operation.

8) Deferred maintenance is the postponement of repair or replacement of an item of equipment or an instrument.

9) An equipment list is an inventory of equipment installed by the manufacturer or operator on a particular aircraft.

10) The Flight Operations Evaluation Board (FOEB) is composed of FAA personnel who are operations, airworthiness, avionics, and aircraft certification specialists. The FOEB develops an MMEL for a particular aircraft type under the direction of the AEG.

11) Inoperative means a system or component has malfunctioned to the extent that it does not accomplish its intended purpose or is not consistently functioning within its approved operating limits or tolerances.

12) The Kinds of Operations List (KOL) specifies the kinds of operations (e.g., visual flight rule (VFR), instrument flight rule (IFR), day, or night) in which the aircraft can be operated. The KOL also indicates the installed equipment that may affect any operating limitation. Although the certification rules require this information, there is no standard format; consequently, the manufacturer may furnish it in various ways.

13) The FSDO issues a LOA to the operator when the FSDO authorizes the operator to operate under the provisions of an MEL. Together, the LOA and the operator's MEL constitute a Supplemental Type Certificate (STC). The operator must carry the STC in the aircraft during its operation.

14) Maintenance is the inspection, overhaul, repair, preservation, or replacement of parts. This definition excludes preventive maintenance (see subparagraph 21) following. After a mechanic performs maintenance other than preventive maintenance, a properly certificated maintenance person must approve the aircraft for return to service.

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15) An MMEL is a list of equipment and instruments that may be inoperative on a specific type of aircraft. It is also the basis for the development of an individual operator's MEL.

16) An MEL is a list of equipment and instruments that may be inoperative on a particular make and model of aircraft. The MEL permits operation of the aircraft under specified conditions with certain equipment inoperative. A part 125 MEL is based on the MMEL but is approved by FSDO inspectors. The FAA considers the MEL as an STC.

17) The next required inspection is an inspection required under an FAA-approved inspection program, a 100-hour inspection, or an annual inspection, as appropriate.

18) Operator refers to an individual or company (corporation, entity, etc.) and, as used in this chapter, refers to holders of part 125 operating certificates.

19) O and M procedures in the MMEL refer to specific operating conditions and limitations, and to specific maintenance procedures used to deactivate inoperative items.

a) An O symbol in column 4 of the MMEL indicates that a specific operations procedure must be accomplished before or during operation with the listed item of equipment inoperative. Normally, the flightcrew accomplishes these procedures; however, other personnel, such as maintenance personnel, may be qualified and authorized to perform the procedures.

b) An M symbol in column 4 of the MMEL indicates that a specific maintenance procedure must be accomplished before beginning operation with the listed item of equipment inoperative. Normally, maintenance personnel accomplish these procedures; however, other personnel, such as the flightcrew, may be qualified and authorized to perform certain functions. Qualified maintenance personnel must perform procedures requiring specialized knowledge, skills, or the use of tools, or test equipment.

20) A placard is a decal or label with letters at least 1/8-inch high. The operator or mechanic must place the placard on or near inoperative equipment or instruments so that it is visible to the pilot or flightcrew and alerts them to the inoperative equipment.

21) The term preventive maintenance refers to simple or minor preservation operations and/or the replacement of small standard parts not involving complex assembly. Title 14 CFR part 43 appendix A(c) contains a list of preventive maintenance items. Qualified mechanics or certificated pilots may accomplish preventive maintenance and approve the aircraft for return to service.

22) Procedures document, as referred to in this chapter, pertains to a separate document containing the O and M procedures developed by the operator and any other operating information applicable to operation with an MEL, such as the as required by the 14 CFR items that list the CFR by part and section or stipulate the operating conditions.

23) The proposed master minimum equipment list (PMMEL) is the working document used as the basis for development of the MMEL. Normally, the manufacturer proposes it during the certification process. However, an operator of a unique type aircraft, for which an MMEL does not exist, may submit a PMMEL for FAA approval.

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24) Return to service has two applications. An appropriately certificated person approves an aircraft for return to service after an inspection or after maintenance. A certificated pilot, in fact, returns the aircraft to service after conducting an appropriate preflight and accepting the aircraft for flight.

25) An STC is a major change in type design not great enough to require a new application for a type certificate (TC) under 14 CFR part 21, § 21.19. An example would be installation of a powerplant different from what was included in the original TC.

26) Type Certificate Data Sheets and Specifications (TCDS) is a document issued by the FAA which describes the aircraft's airworthiness requirements relating to a specific type and make and model of aircraft. These documents are available at a FSDO.

4-699 BACKGROUND.

A. MEL Concept. The MEL concept was first adopted in 1954 for large airplanes used by air carriers and commercial operators. The FAA recognized that, under specified flight conditions, flights could be conducted safely with certain instruments and equipment inoperative. However, before October 9, 1990 the provisions of part 91 applied to operators who operated for private carriage, and operations with inoperative instruments or equipment were not permitted. In addition, such operations were also prohibited for aircraft which had no MMEL.

B. Required Equipment. Much of the equipment installed in an aircraft is required by the kinds of operations the aircraft is certificated to conduct (VFR day, VFR night, IFR, etc.) or by the airworthiness standards for the type design (e.g., part 23, 25, 27, or 29). Other, nonessential equipment may be installed for the convenience of the operator or passengers.

1) The CFR require that the aircraft and all installed equipment meet the airworthiness standards under which it was type certificated and continue to meet those standards during its service life.

2) Additionally, the CFR require that all equipment installed on an aircraft must be operative, except under the provisions of an MEL or § 91.213.

C. MEL Use. The CFR permit use of an MEL if the FAA finds that literal compliance with those equipment requirements is not necessary in the interest of safety, i.e., because the equipment is additional or redundant.

1) The MEL concept has improved aircraft use and schedule reliability while continuing to provide an acceptable level of safety.

2) An approved MEL is an FAA-controlled document based on the CFR and applicable to a particular U.S. operator or authorized foreign operator of U.S.-registered aircraft.

4-700 MMEL. Before including an item on an MMEL, potential and historical operation with the item inoperative is critically evaluated relative to its potential impact on safety. This evaluation consists of appropriate analysis, demonstration, or test the subsequent failure of the

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next critical component and the interrelationships between inoperative items are considered the impact on AFM procedures and the increase in crew workload are also considered.

A. Limitations. The MMEL may not conflict with AFM limitations, AMM, emergency procedures, or ADs. Suitable limitations in the form of placards, maintenance procedures, crew operating procedures, and other restrictions as necessary are specified in the MEL to ensure that an acceptable level of safety is maintained.

B. MMEL Contents. The MMEL lists all items of installed equipment that may be inoperative. The MMEL does not contain obviously required items such as wings, flaps, rudders, etc. Inoperative items may include instruments and equipment required by the airworthiness standards under which the aircraft is type certificated, instruments and equipment required by the operating rules, and items in excess of these requirements.

1) The MMEL contains a condition that allows passenger convenience items such as galleys, lavatories, and entertainment systems to be inoperative with appropriate conditions and limitations should the operator list them in the MEL.

2) Items specifically addressed elsewhere in the MMEL or in an ATA chapter may not be listed under passenger convenience items in the MEL.

3) *Items not listed on the MMEL must be operative.*

4) The MMEL is not a list of items required to be in the aircraft.

5) The MMEL and MEL do not provide the authority to install or remove an item from the aircraft.

6) The MMEL may include multiple versions of particular items (e.g., VHF communications systems, fire extinguishers) which are installed on different models or series of the aircraft covered by the MMEL. Only the item appropriate to the specific aircraft would be selected to be included in the MEL.

7) The MMEL for an aircraft does not cover equipment installed or modified under STCs. Any STC or other major modification may make the MMEL invalid for that particular modified aircraft.

C. MMEL Intent. The MMEL allows certain items to be inoperative or deactivated for a minimum period of time until repair can be accomplished.

1) Operators are responsible for establishing a controlled and effective repair program which includes tracking of inoperative items and coordinating parts, personnel, facilities, and procedures necessary to ensure timely repair.

2) Paragraph 4-706, following, provides limitations on the duration of operation with inoperative equipment. The time limits contained in that paragraph should not be exceeded.

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3) The operator's manual or MEL, as appropriate, must include an acceptable method of compliance with repair intervals.

D. Inoperative Components Within a System. MEL provisions for inoperative items which are components of a system usually consider that the system overall is operative. When the system is inoperative, however, there usually is no need for the component to be operative. Therefore, any component directly associated with and having no function other than supporting a system listed in the MEL may be inoperative when that system is inoperative. However, warning/caution systems associated with the inoperative system must be operative unless relief is specifically authorized in the MMEL.

E. Different MMELs. It is erroneous to assume that relief granted for an item under one MMEL means that similar relief will be applicable to the same item in another MMEL. Relief for the particular item which is not covered may not have been requested for consideration in the MMEL. It is incumbent upon the operator to request consideration of desired items and provide supporting documentation.

4-701 REPORTING INOPERATIVE INSTRUMENTS OR EQUIPMENT. When an item becomes inoperative, it must be reported by making an entry in the aircraft's maintenance record or logbooks as prescribed by § 125.323 the item must then be either repaired in accordance with an acceptable maintenance procedure or deferred per the MEL before further operation.

A. Responsibility. In addition to the specified MEL conditions and limitations, the certificate holder is responsible for determining that the aircraft is in condition for safe operation. The certificate holder must develop detailed procedures for release of the aircraft with inoperative items.

B. Airworthiness Release. Information regarding an airworthiness release, aircraft maintenance record or logbook entry, or other approved documentation is contained in § 125.411.

1) Following the release for return to service, the appropriate conditions and limitations as prescribed by the MEL must be applied for continued operations.

2) When preparing to operate with multiple inoperative items, the interrelationship between those items and the effect on aircraft operation and crew workload must be considered by the certificate holder and the crew.

4-702 MEL DEVELOPMENT. A part 125 operator develops an MEL from the MMEL. The operator must consider its particular aircraft's equipment configuration and operational conditions.

A. Considerations for MEL Development.

1) The operator's MEL may not be less restrictive than the MMEL, i.e., the MEL may not contain relief for items not in the MMEL.

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2) Where the MMEL shows a variable number of items installed, the MEL must reflect the actual number of items installed in the operator's aircraft. If there are several configurations within the operator's fleet, the MEL will reflect the number of items installed on each aircraft, referenced by N-number.

3) Where the MMEL states, as required by CFR, the MEL must reflect the actual requirement of 14 CFR applicable to the operator's particular operations. For example, where the CFR require distance measuring equipment (DME) to be operable above flight level (FL) 240 and the DME is inoperative, the operator's MEL should state, aircraft may not be operated above FL 240.

4) Where the MMEL contains an asterisk (*), (M) symbol, (O) symbol, or any combination thereof, the operator's MEL should reflect the same symbols, unless the FAA approves an alternative procedure. The operator should develop the required procedures for inoperative equipment for the MEL. For example, the MMEL may contain a *(M) symbol with the provision provided the valve is closed. The operator is required to develop and publish in its MEL or other suitable manual the detailed procedures involved in closing and testing the valve and also installing the inoperative placard.

5) Where the MMEL contains the (***) symbol in Column 1, the MEL should reflect this item only after the approving office has determined that the item is installed on one or more of the operator's aircraft. The (***) symbol indicates that an item, which is not required by regulation, had been installed on some models of the aircraft covered by the MEL. The symbol shall not be carried forward to the operator's MEL.

6) To assist operators, several manufacturers have produced manuals of recommended procedures for inoperative equipment. The FOEB normally considers these procedures when approving the MMEL. When manufacturer-recommended procedures exist, the operator may use them as published or to develop equivalent procedures, which the Flight Standards District Office (FSDO) approves.

7) Some operators use their MELs as a comprehensive document to control items for administrative purposes. In such cases, operator MELs may include items not contained in the MMEL; however, the FAA grants no relief for these administrative control items.

8) The repair intervals specified in the MMEL by the categories A, B, C, D, etc., must be retained in the operator's MEL. The MEL may not relax the intervals. Components or subsystems of items categorized in the MMEL, but which are not themselves listed in the MMEL, have the same repair interval as their particular system and must retain the same repair interval in the MEL if they are listed as separate items.

9) An operator's MEL may differ in format from the MMEL, but the different format cannot make the MEL less restrictive than the MMEL.

10) An operator bases the MEL on a particular revision of the MMEL. The operator's MEL revision number does NOT have to be the same as that of the MMEL. For example, a newly certificated operator may be basing an original MEL on revision 23 of the MMEL for the aircraft. The next revision may be the operator's MEL revision 1 based on MMEL revision 24.

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Automated MEL approval documents will list both the operator MEL revision number and the MMEL revision number.

11) Administrative control items and passenger convenience items may not include items or subsystem of items addressed on the MMEL.

12) Equipment listed on an MMEL but not actually installed not the aircraft should not appear on the MEL. Inspectors should verify that the proposed MEL corresponds to equipment on the aircraft before approval of the MEL.

B. Fleet Approvals. An operator may have multiple aircraft configured exactly alike and operated interchangeably as a fleet.

1) The FAA will usually accept duplicate MELs for the make and model of identically altered aircraft. For part 125 operators the operations specifications and a company manual, such as a maintenance manual, must list all aircraft registration numbers and serial numbers for fleet approval.

2) The FAA may approve one MEL for fleet operators with the same make and model of aircraft, but with minor differences in equipment, provided that it contains a differences page listing the registration/serial numbers and the items of equipment that are different. The operator may copy the approved MEL to be carried aboard these aircraft, but all aircraft registration numbers and serial numbers for the fleet approval must be listed appropriately.

3) Fleet operator with different make and model aircraft, or with the same make and model aircraft but with major differences in configuration, must have an original MEL for each aircraft by serial and registration number.

4-703 REVISIONS. Procedures exist to revise both MMELs and MELs. FSDOs handle MEL revisions locally, but MMEL revisions require more extensive coordination.

A. MMEL Revisions. Since the MMEL is designed to assist the operator by providing relief, the MMEL must be a dynamic, easily revised document that responds to operator experience and specific requests.

1) The FOEB makes changes to the MMEL. The FOEB will consider those items that users request based on operational considerations which indicate needed relief. The operator or the FAA can initiate changes; however, other industry sources may also request changes.

a) Inspectors should encourage operators to submit requests for additional MMEL relief as soon as the need becomes apparent to them.

b) Operators should route these requests through principal inspector (PI) for concurrence, nonconcurrence, or comment.

c) When necessary, the FOEB may propose changes without the full revision process.

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d) The operator must furnish the following information:

1. A copy of the STC or FAA Form 337, Major Repair & Alteration (Airframe, Powerplant, Propeller, or Appliance) that documents approval of each equipment installation and the associated limitations listed in the AFM supplement or on the 337 (required to account for installation differences and maintain MMEL relief consistent with the limitations).

2. A system description that details the interface of the equipment with the crew (location, controls, operation, use, etc.).

3. A complete description of the transfer-of-function when an item is inoperative (not required for the flight, as per crew procedures, because of alternate systems, etc.)

e) If the FAA determines that the equipment has been previously considered by the FOEB for inclusion on the MMEL and denied, or if the FOEB convenes and denies inclusion, the FAA will not grant relief. The equipment must be operational before the aircraft can take off.

f) If the FOEB determines that the equipment should be added to the MMEL, the operator will receive the updated MMEL and must prepare O and M procedures for that piece of equipment, if required.

g) The FSDO should review these petitions to ensure they contain the above information before forwarding the petitions to the FOEB.

2) The operator must provide justification for the changes. The amount of justification required for a change is related to the impact on safety. Changes having a greater impact require more detailed research and documentation. Some proposals may require demonstration and/or evaluation flights, which the FOEB or an authorized representative will conduct or witness.

3) The FOEB will periodically schedule a joint FAA/industry meeting to examine new submissions and, if necessary, re-examine any MMEL actions taken since the last public meeting. The FAA will provide the operator sufficient advance notification of the meeting date and cut-off date for submission of proposals.

B. MEL Revision. An operator may request MEL revisions through its PI, or the FAA may issue a revision to the MMEL on which the MEL is based.

1) When an operator requests an MEL revision, that revision may be equal to or more restrictive than the MMEL, and require no FOEB action; or it may be less restrictive than the MMEL, and require FOEB action for approval. The AEG determines whether a revision is more or less restrictive than the operator's MMEL.

a) Revisions equal to or more restrictive than an MMEL are within the provisions of an existing MMEL, but the operator must still submit them to the FSDO for approval.

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b) For revisions less restrictive than the MMEL, the operator must use the same process for MMEL revisions as above. The FAA processes the proposal in the same manner. When the operator receives notification of approval of the less restrictive revision, the operator begins the process of revising the MEL to incorporate the additional relief.

2) When the FAA initiates a change to an operator's MEL, it could be as a result of an FAA revision to the MMEL. Operators, manufacturers, and FSDOs receive postcard notification of the revision through the FAA's automated MMEL subsystem.

a) The notification indicates whether the revision is more or less restrictive than the previous MMEL. Revisions that are less restrictive are interim revisions and carry the current revision number and a letter; e.g., a less restrictive revision following revision 5 will be labeled 5a. Revisions that are more restrictive will carry the next number in succession; e.g., the more restrictive revision following revision 5 will be revision 6.

b) If an MMEL revision is less restrictive than the MEL, the operator has the option of revising the MEL to correspond to the MMEL. The FAA will not require revision of the MEL, and the operator may continue to operate under the more restrictive MEL.

c) If an MMEL revision is more restrictive than the original MMEL, all MELs based on that MMEL must be revised.

3) Major modification to an aircraft (STC, Form 337, type certificate amendment) may invalidate the MEL for that aircraft. Operators should review their MEL or proposed MEL to assess the impact of any modification. In some cases, the modification may require a revision to the MMEL.

4-704 OPERATIONS (O) AND MAINTENANCE (M) PROCEDURES.

A. O and M Guidelines. Guidelines for O and M procedures may be found in the preambles of MMELs for parts 23, 27, 29, and 41 aircraft. Those guidelines indicate what the O or M procedure must cover.

1) Manufacturers normally develop such procedures for transport category aircraft. However, aircraft certificated under part 23, i.e., normal, utility, aerobatic, and commuter category airplanes, do not generally have procedures developed by the manufacturer.

2) Operators must specifically describe each O and M procedure which appears in the MMEL.

B. Specific Steps and Actions. O and M procedures should be described in terms of specific steps and actions to be followed, and should detail each process from beginning to end. The procedures should answer the following questions;

1) How does a person accomplish the procedure?

2) What is done first? second? etc.

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3) What action competes the procedure?

4-705 MEL USE IN SERVICE.

A. Release. The MEL is applicable only to the release of a flight with inoperative instruments and equipment.

1) The Pilot's Operating Handbook (POH) or the AFM addresses in-flight failures; the pilot in command (PIC) handles them accordingly.

2) When a PIC finds an inoperative item, the PIC must enter the discrepancy in the aircraft's maintenance record/logbook.

3) The discrepancy must be either repaired in accordance with the maintenance manual or deferred as per the MEL before the next flight.

B. Removal From Service.

1) A defect entered into the aircraft's maintenance record/logbook in effect removes the aircraft from service. The aircraft remains out of service (OTS) until the defect is corrected or deferred and an appropriate maintenance person returns the aircraft to service.

2) Maintenance personnel can reflect this approval for return to service in the aircraft's maintenance record/logbook in one of two ways:

a) An entry showing the corrective action that was taken for the defect; appropriate maintenance personnel sign the entry and include the signer's certificate number.

b) A deferral statement with the signature of a person authorized to defer needed maintenance for the operator.

C. Deferral. The FAA grants deferral per the MEL only after maintenance personnel have determined that the aircraft is safe to be flown and that the specific conditions, limitations, and procedures for that item have been accomplished. The satisfactory accomplishment of all procedures is primarily the responsibility of the operator. This responsibility may be delegated to qualified persons when published in the operator's manual or MEL.

D. Removal/Deactivation. Those who elect to operate without an MEL must remove (§ 91.213(d)(3)(i) or deactivate (§ 91.213 (d)(3)(ii)) and placard any inoperative item.

1) Removal of any item that affects an aircraft's airworthiness requires following an approved procedure. A properly certificated maintenance person must record the removal in accordance with § 43.9. A person authorized by § 43.7 must make the appropriate adjustments to the aircraft's weight and balance information and the equipment list, complete and submit Form 337, and approve the aircraft for return to service.

2) The operator must evaluate any proposed deactivation to ensure there is no adverse effect that could render another system less than fully capable of its intended function.

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a) A certificated pilot can accomplish deactivation involving routine pilot tasks, such as turning off a system. However, this deactivation must qualify under the definition of preventive maintenance in part 43 subpart A.

b) If the deactivation does not qualify as preventive maintenance, a properly certificated maintenance person must perform the deactivation this person must record the deactivation in accordance with § 43.9.

3) Placarding can be as simple as writing the word inoperative on a piece of masking tape and attaching it to the inoperative equipment or to its cockpit control. Placarding is essential since it reminds the pilot that the equipment is inoperative. It also ensures that future flightcrews and maintenance personnel are aware of the discrepancy.

4-706 REPAIR INTERVALS.

A. Source. The Definitions section of the MMEL establishes repair intervals. The AEG assigns each item of the MMEL, with the exception of passenger convenience items, a specific repair interval category. Components or subsystems of an item listed in an MMEL have the same repair interval as the item (A, B, C, D, etc.). The operator must retain these intervals in the operator's approved MEL.

B. Excess Items. For components or systems in excess of those required for normal operations, the operator may use C intervals. For example, if the MMEL requires one altitude alerting system (B category repair interval) but two systems were installed, maintenance for the failure of one system could be deferred for 10 days as per the C repair interval. Failure of the second system requires at least one system be repaired within three days, as indicated by the B repair interval requirements.

C. Inability To Meet Repair Deadlines. There may be instances when an operator cannot meet a repair deadline because of unusual circumstances, such as a nationwide unavailability of a certain part. In these instances, the FAA may grant continuing relief as provided in the operations specifications (OpSpecs); however, these occurrences should be rare, and FAA must carefully control them.

1) The operator must have a tracking system to record when an MEL item becomes inoperative and when it is repaired.

2) When an operator becomes aware that it cannot meet a repair deadline, it must document the time extension required and the reasons for the inability to meet the deadline.

3) The operator must notify its principal maintenance inspector (PMI) in writing within 24 hours after deciding to extend the time limit. The PMI will review the reasons for the extension.

4) Based on the PMI's review, the FAA will decide whether to allow the time limit extension.

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a) If the PMI approves the extension, the PMI must notify the Flight Standards division in the region of each extension.

b) If the operator abuses the continuing relief, the PMI may revoke the appropriate paragraph of the OpSpecs.

D. Items That Cannot Be Extended. Certain items, such as full-authority digital electronic controls (FADEC), qualify for time limited release based on the specifications in the TCDS. The time limits specified for such items may not be extended. The notation, and no extensions are authorized, will appear on the MMEL for such an item.

4-707 ADDITIONAL ITEMS.

A. Passenger Convenience Items. Passenger convenience items are related to the comfort or entertainment of the operator's passengers. They include items such as galley equipment, movie equipment, ash trays, stereo equipment, and overhead reading lamps.

1) Passenger convenience items do not carry a specific repair interval. However, the FAA expects the operator to repair these items within a reasonable time.

2) These items will generally be listed individually in ATA, Chapter 25. However, an item may be included elsewhere in the document under a more appropriate chapter, as long as it is clearly identified as a passenger convenience item. A PI will review the operator's proposed passenger convenience item list to ensure that:

a) No passenger convenience item appears elsewhere in the MMEL, or is included as a subsystem of an item on the MMEL.

b) No passenger convenience item affects airworthiness.

B. Administrative Control Items. Operators may choose to use administrative control items within an MEL to track items or provide information to their employees. However, another FAA document (such as the manufacturer's structural repair manual or an AD) may contain conditions and limitations for the item and relief. To be included on an MEL, an administrative control item cannot be included elsewhere on the MMEL, part of a subsystem on the MMEL, or an item for which no relief is granted on the MMEL.

1) Administrative control items would appear in the appropriate ATA chapter and would not have a repair interval category. Examples are cockpit procedures cards, medical kits, crash axes, life vests, etc. Seat belts, tray tables, underseat restraints, and similar items are covered by MMEL items and consequently are not administrative control items.

2) Approved administrative control items should be listed with the number installed and the number required being equal, with either no remarks or a reference to another document. The content of the reference document (such as maintenance parameters) should not be included on the MEL.

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3) PIs will examine each proposed administrative control item to ensure that the above conditions are met. At their discretion, items may be included on an MEL. As previously stated, administrative control items must be operative, just as items not included in the MMEL must be operative.

4) If relief other than that granted by an approved document is sought for an administrative control item, a request must be submitted using the FOEB process. If approved, the item becomes an MMEL item rather than an administrative control item.

4-708 AIRCRAFT USED IN MULTIPLE OPERATIONS. Section 91.213(c) allows a person who has an approved MEL under part 125 to use that MEL for part 91 operations. The part 125 MEL must specify requirements for authorized part 91 operators to comply with the more restrictive provisions established in the approved MEL. It is important that operators be capable of conducting operations in accordance with the MEL. This includes, but is not limited to, accomplishing required maintenance in accordance with the certificate holder's requirements.

A. Leased Aircraft. The use of a leased aircraft creates a situation where several persons may be operating the same aircraft under different regulations. The FAA will not approve multiple MELs, which would create pilot confusion with multiple discrepancy lists and multiple sets of procedures for the same aircraft.

B. Approval. Operators with a part 125 MEL may operate aircraft under other 14 CFR parts, such as part 91, subject to the following conditions:

1) The operator is responsible for training all persons in the MEL's use, including the logging and clearing of discrepancies and the use of the A, B, C, D, etc., codes.

2) Operators shall maintain a complete, current list of all persons trained and authorized to use the MEL.

3) The operator is responsible for determining the aircraft's maintenance status on its return from a part 91 operation. The operator must accomplish this before the aircraft is put back into part 125 service.

4) FAA principal operations inspectors (POI) shall verify that operators can ensure an acceptable level of safety before authorizing persons to use the MEL under part 91.

4-709 PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. This task requires knowledge of part 125 requirements and FAA policies and qualification as an aviation safety inspector (ASI) (Operations). If applicable, the inspector should hold the appropriate type rating for the aircraft for which the operator seeks MEL authorization or be rated in the same category and class of aircraft.

B. Coordination. This tasks requires coordination with airworthiness and avionics and possibly with the appropriate AEG or FOEB.

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4-710 REFERENCES, FORMS, AND JOB AIDS.

A. References (current edition):

- 14 CFR Part 91.
- Order 8000.9X.
- Advisory Circular (AC) 125-1, Operations of Large Airplanes Subject to Federal Aviation Regulation Part 125.

B. Forms. FAA Form 8430-7, Master Minimum Equipment List.

C. Job Aids:

- MEL Approval Job Aid, Figure 4-45.
- Sample letters and figures.

4-711 PROCEDURES.

A. Certification Process. If applicable, at the appropriate point in the certification process, give the applicant a copy of the MMEL for the particular aircraft, the MMEL Preamble, a sample title page, and a current copy of AC 125-1.

1) Open PTRS.

2) Advise the operator to submit an original of the proposed MEL, its associated procedures, and any manufacturer recommended procedures for inoperative equipment.

3) Inform the operator of the (O) and (M) procedures for the proposed MEL.

4) Inform the operator that the MEL's provisions cannot be less restrictive than the MMEL.

B. Receipt of Proposed MEL. Upon receipt, compare the proposed MEL to Figure 4-45 and determine if the proposed MEL:

1) Corresponds to the MMEL;

2) Addresses all items required by the CFR;

3) Is specific to the operation;

4) Lists only equipment installed on the aircraft;

5) Specifies appropriate operational limitations, e.g., placards or maintenance or flightcrew operating procedures;

6) Uses the ATA code numbering system;

7) Has a revision system;

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8) Incorporates references from the operator's policies and procedures manual; and

9) The proposed MEL should contain the (O) and (M) procedures. If the (O) and (M) procedures are already stated in another document, ensure that the applicant has referenced that document.

a) Ensure that the (O) symbol denotes a specific operations procedure that must be accomplished before or during operation with listed items of equipment inoperative.

b) Ensure that the (M) symbol denotes a specific maintenance procedure that must be accomplished before operation with listed items of equipment inoperative.

10) The title page must include the operator's name and the aircraft's make, model, and registration and serial numbers.

11) The MEL may have an aircraft discrepancy record (optional).

12) Ensure that the following are NOT listed on the MEL:

a) TC data equipment;

b) Any equipment required by the airworthiness rule under which the aircraft is type-certificated;

c) Instruments and equipment required by AD; or

d) Instruments and equipment required for a specific operation in § 91.213(b)(1)(3).

13) Ensure that the equipment indicated on the MEL is actually installed on the airplane.

a) If so, approve the MEL.

b) If not, indicate the discrepancies to the operator. Inform the operator that the MEL must reflect equipment installed on the airplane.

C. Approval.

1) If the MEL document meets all of the above requirements, indicate approval by stamping each page Approved. Note the FSDO identifier and date of approval on each page, and sign each page.

2) Issue the LOA (Figure 4-46).

3) Issue OpSpecs authorizing use of the MEL.

4) Enter the MEL holder's information (name, address, MMEL number, etc.) into the MMEL Subsystem to ensure that the MEL holder receives MMEL revision notifications.

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5) Close PTRS.

D. Disapproval. If there are discrepancies with the draft MEL, inform the applicant in writing, listing the items that require correction. Indicate that all items must be corrected before the applicant can re-submit the MEL document.

E. Resubmission of Draft MEL. Determine whether all discrepancies were corrected satisfactorily. Approve or disapprove the MEL.

4-712 MEL REVISIONS.

A. FOEB Revisions.

1) Provide the operator with the revised MMEL.

2) Instruct the operator to incorporate the applicable changes to the MEL within 30 days. Inform the operator to submit the revised MEL pages for FAA approval.

B. Operator Installation of Equipment Not on MMEL.

1) Inform the operator to apply through the FSDO for MMEL amendment within 10 days of installing the equipment.

2) Explain the following to operators regarding MMEL changes:

a) The operator should propose revisions on a form similar to Form 8430-7. This assists FAA review and ensures standardization.

b) The operator is responsible for furnishing any required substantiating data and for scheduling demonstrations and/or evaluation flights, as necessary.

c) There can be no conflict with existing AFM limitations, emergency procedures, or ADs.

d) The operator must substantiate an acceptable level of safety with an inoperative item, considering the next worst failure in flight.

e) The operator must specify differences between proposed and existing MMEL items, when applicable.

f) The operator must include an evaluation of the effect the inoperative item will have on crew workload. The FOEB will apply conditions or limitations, as necessary.

3) Explain the following FOEB process for evaluating proposed changes.

a) The operator submits the proposal to the FSDO along with any required substantiating data.

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b) The FSDO will review and forward the proposal, with recommendations, to the appropriate AEG.

c) The FOEB will normally consider the proposal at the next scheduled FOEB meeting, if it receives the proposal before the established cut-off date.

d) The FOEB will forward the items it recommends for approval to the Flight Standards Service (AFS) in FAA headquarters (HQ) for its review and approval. Once the FOEB receives Flight Standards' approval, it incorporates the changes to the MMEL via an automated system. The revised MMEL is then available to the FSDO for submission to the operator.

e) The FOEB does not normally forward items it does not accept to FAA HQ. Unresolved items that are not published in the revision may be considered unapproved. The operator may resubmit unacceptable items with additional justification.

4) Inform the applicant that once the FOEB approves the addition to the MMEL, the operator must amend the MEL. Instruct the operator to submit the revised MEL pages for FAA approval.

5) If the FOEB denies the amendment to the MMEL, inform the operator that the equipment cannot be added to the MEL. Remind the operator that the equipment must be operative when conducting operations.

4-713 TASK OUTCOMES. Completion of this task results in:

A. Issuance. Issuance or denial of an LOA.

B. Approval or Denial. Approval or denial of a MEL document.

4-714 FUTURE ACTIVITIES.

A. Discussion. Discussing MMEL revisions with applicants.

B. Issuance. Issuance of a new LOA after revision of an MMEL.

C. Approval. Approval of revisions to a part 125 MEL.

D. Surveillance. Surveillance of holders of MEL authorizations.

E. Enforcement. Possible enforcement investigation if operators do not operate in accordance with the MEL authorization.

F. Cancellation. Cancellation of an MEL because of change of ownership, because of the operator's failure to comply with MEL requirements, or at the operator's request.

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Figure 4-45. MEL Approval Job Aid

Name of Operator _____ Certificate Number: _____

Address _____

	YES	NO	N/A
1. The MEL is current with the MEL date and revision number.			
2. Contains the ATA Table of Contents.			
3. Contains the Preamble verbatim.			
4. Contains the Notes and Definitions Section same as the MMEL.			
5. All items addressed in the MMEL covered in the MEL.			
If no, include explanation:			
6. Items have been deleted.			
If yes, include explanation:			
7. Items have been added.			
If so, include description:			
8. Revision page is appropriate.			
9. Each page of the MEL can be matched to MMEL to confirm revision number and date of revision.			
10. Describe the operations procedure for placarding:			
11. Describe the procedure for recording discrepancies:			
12. Describe the procedure for clearing discrepancies:			
13. Describe the procedure for carrying over items per the MEL:.			
14. Describe how the time to fix the open MEL items is controlled (A, B, C, or D)			
15. There is a procedure for each O and M procedure found in the MMEL.			
a. Procedure describes who			
b. Procedure describes what			
c. Procedure describes when			
d. Procedure describes why			
e. Procedure describes how			

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Figure 4-46. Letter of Authorization

FAA LETTERHEAD

NAME AND ADDRESS OF OPERATOR

Dear _____:

This letter is issued under the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 125, § 125.201 and authorizes [name of operator] ONLY to operate [make and model of aircraft, n-number, and serial number] under the Master Minimum Equipment List (MMEL), using it as a minimum equipment list (MEL).

This letter of authorization (LOA) and the MMEL constitute a Supplemental Type Certificate (STC) for the aircraft and must be carried on board the aircraft as prescribed by § 125.201.

Operations must be conducted in accordance with the MMEL. Operations and maintenance (O and M) procedures for the accomplishment of rendering items of equipment inoperative must be developed by the operator. Those procedures should be developed from guidance provided in the manufacturer's aircraft flight and/or maintenance manuals, manufacturer's recommendations, engineering specifications, and other appropriate sources. Such operations or maintenance procedures must be accomplished in accordance with the provisions and requirements of 14 CFR part 43, 91, or 145.

A means of recording discrepancies and corrective actions must be in the aircraft at all times and available to the pilot in command. Failure to perform O and M procedures in accordance with part 43, 91, or 145, as appropriate, or to comply with the provisions of the MMEL, preamble, O and M procedures, and other related documents, is contrary to 14 CFR and invalidates this letter. All MMEL items that contain the statement, as required by 14 CFR must either state the 14 CFR by part and section with the appropriate 14 CFR part carried aboard the aircraft, or the operational requirements/limitations required for dispatch must be clearly stated. When the MMEL is revised by the FOEB, [name of operator] will be notified by postcard of the revision. [Name of operator] must then obtain a copy of the revision from this Flight Standards District Office (FSDO) or the FSDO having jurisdiction and incorporate any changes as soon as practicable, including Os and Ms as required.

[Name of operator] must develop O and M procedures that correspond with those listed in the MMEL. [Name of operator] must also list the as required by 14 CFR by specific 14 CFR part and section or state the operational requirements/limitations for dispatch. These items must be contained in a document separate from the MMEL and must accompany the MMEL, preamble, and LOA. They must all be on board the aircraft anytime it is operated.

Equipment installed on this aircraft (other than passenger convenience items such as galley equipment and passenger entertainment devices) that are in excess of what is required, and are not listed on the MMEL, must be operational for dispatch unless a request is made to this FSDO (or subsequent FSDO that has jurisdiction) to seek relief from the FOEB, through a revision to the MMEL, at the earliest opportunity for the FOEB to convene. If MMEL relief is sought, this

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FSDO (or subsequent FSDO) must be notified within 10 calendar days (including weekends and holidays) following installation. The operator may dispatch provided the excess equipment, if inoperative, is disabled or rendered inoperative, in accordance with all 14 CFR parts. It is the responsibility of [name of operator] to endeavor to determine if O and/or M procedures must be developed for disabling, rendering inoperative, or removing the equipment. If so, any procedures that are developed must comply with all 14 CFR parts. If MMEL relief is not sought, the FSDO need not be notified following installation of the equipment.

Should [name of operator] relocate its principal base of operations at [address], it must notify, in writing, both this FSDO and the new FSDO that will have jurisdiction within 10 calendar days following relocation.

This letter is issued without an expiration date and will remain valid until voluntarily surrendered by [name of operator], until [name of operator] ceases to be the operator of [aircraft n-number], or it is surrendered or revoked for cause by the FAA. In any case, should it become invalid, it must be returned to this office or the FSDO having jurisdiction within 10 calendar days from the date it becomes invalid.

STATEMENT OF OPERATOR

As evidenced by my signature below, I certificate that [name of operator] will operate [aircraft make and model and N-number] in compliance with the authorizations, provisions, and limitations incumbent with the use of this LOA issued in accordance with § 125.201. A copy of this letter will be made a part of the MEL file maintained by this FSDO and [name of operator].

Operator's signature

Title

Date/Signed by POI

RESERVED. Paragraphs 4-715 through 4-730.

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VOLUME 5 AIRMAN CERTIFICATION

CHAPTER 2 TITLE 14 CFR PART 61 CERTIFICATION OF PILOTS AND FLIGHT INSTRUCTORS

Section 11 Conduct a Title 14 CFR Part 61 Flight Instructor Initial/Reinstatement/Renewal Certification and Additional Category/Class Ratings

5-496 PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

A. Original Certification. 1525.

B. Reinstatement. 1529.

C. Additional Rating. 1526.

D. Renewal. 1527 (Flight) and 1528 (No Flight).

5-497 OBJECTIVE. This task determines if an applicant is qualified for an initial flight instructor certificate, a reinstatement of a certificate, a renewal of a certificate, or to add an additional category or class rating to an existing certificate. Completion of this task results in the issuance of Federal Aviation Administration (FAA) Form 8060-4, Temporary Airman Certificate, with appropriate ratings; FAA Form 8060-5, Notice of Disapproval of Application; or a letter of discontinuance.

NOTE: On September 1, 2004, the Certification of Aircraft and Airmen for the Operation of Light-Sport Aircraft final rule became effective. This created a new sport pilot rating and privileges at the flight instructor certificate level. This Section 11 does NOT address the requirements for a flight instructor certificate with a sport pilot rating or the addition of category and class privileges for a flight instructor exercising the privileges of a flight instructor certificate with a sport pilot rating. Refer to FAA Order 8900.1, Volume 5, Section 12, FAA Order 8900.2, Chapter 7, Section 15, and to Title 14 of the Code of Federal Regulations (14 CFR) part 61 subpart K for information on the flight instructor certificate with a sport pilot rating.

5-498 GENERAL.

A. Inspector Qualifications. The aviation safety inspector (ASI) performing an airman certification test for flight instructor certification must:

- Possess pilot and flight instructor certificates and ratings in the same category and class as the test being conducted;
- Have an FAA Order 4040.9, FAA Aircraft Management Program (current edition), pilot-in-command (PIC) check in the applicable category and class; and
- Have completed on-the-job training (OJT) in that task.

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NOTE: Inspectors hired after January 1986, may not conduct practical tests for applicants prior to their successful completion of the pilot certification testing procedures course.

B. Airworthiness Coordination. When the applicant submits a completed application and the other required documents for a practical flight test, the ASI conducting the practical test or an airworthiness ASI should review the applicant's aircraft maintenance records, aircraft logbooks, airworthiness certificate, and aircraft registration. The ASI will review these documents to determine if the aircraft is Airworthy and suitable for this practical test. After review, the ASI will return the documents to the applicant.

C. Knowledge Test. The flight instructor knowledge examination consists of the fundamentals of instructing (FOI) and appropriate rating tests.

1) An applicant for an initial flight instructor certificate must present two knowledge test reports:

- One for the FOI, unless test credit is given per paragraph 5-510H7 below, and
- One for the appropriate flight instructor rating.

2) In addition to the FOI, an applicant must pass a second knowledge test for *one* of the following, appropriate to the instructor rating sought:

- Flight Instructor, Airplane;
- Flight Instructor, Rotorcraft—Helicopter;
- Flight Instructor, Rotorcraft—Gyroplane;
- Flight Instructor, Powered-Lift;
- Flight Instructor, Instrument—Airplane;
- Flight Instructor, Instrument—Helicopter;
- Flight Instructor, Glider; or
- Flight Instructor, Instrument—Powered-Lift.

5-499 FAA CONDUCT OF INSTRUCTOR PRACTICAL TESTS.

A. Contact With Flight Instructor Community. The General Aviation Safety Audit and other sources indicated that the FAA needed closer contact with the flight instructor community. Therefore, the FAA resumed the responsibility of conducting practical tests for initial issuance of flight instructor certificates. Flight Instructor Examiner (FIE) designations were withdrawn for the purpose of conducting these practical tests. However, the FAA still authorizes the FIEs to conduct practical tests for the renewal, reinstatement, and addition of a rating to a flight instructor certificate.

B. Public Complaint. After this policy was implemented, the FAA received complaints from the public and some regional Flight Standards division (RFSD) managers that applicants for flight instructor practical tests were experiencing excessive delays in obtaining appointments at some Flight Standards District Office (FSDO). An investigation of these complaints revealed that such delays had occurred.

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1) The FAA intends to continue conducting initial flight instructor certifications, but recognizes that conditions sporadically occurring at some FSDOs may cause lengthy or unacceptable delays in administering flight instructor practical tests.

2) RFSD managers may authorize individual FSDOs to designate highly qualified FIEs to conduct practical tests for the initial issuance of the flight instructor certificate according to the following procedures:

a) FSDOs may designate FIEs to conduct flight instructor practical tests for the initial issuance of the flight instructor certificate with RFSD manager's approval. When an appointment cannot be made with an FAA ASI within 2 weeks, the FSDO may direct an applicant to a selected FIE, in accordance with the following:

1. The FSDO must:

- Review the qualifications of FIEs or other examiners whom it deems highly qualified,
- Create a pool of the most qualified examiners to administer initial flight instructor practical tests,
- Notify the examiners that they are being considered to administer the tests, and
- Inform the examiners that administering the tests is subject to approval by the RFSD manager and to cancellation, at any time and without cause, by the FSDO.

2. The examiner must consent to conduct such tests.

3. When allowed, the FSDO will direct applicants to an FIE nearest the applicant's location. When several examiners are available within a 50-mile radius of the applicant, the FSDO should select examiners on a rotating basis.

b) Each FSDO must obtain advance approval from the RFSD manager before designating examiners to conduct the initial flight instructor practical test. FSDOs must submit justification for the request, including enough information on ASI resources and applicant demand, to enable the region to determine if that FSDO cannot serve the applicants within 2 weeks. Before approving the request, the region should determine whether other FSDOs adjacent to that office are also unable to conduct the tests.

c) When conditions indicate only a short-term demand for testing services, such as completion of a semester or training class, the region may limit the period when a FSDO may refer applicants to FIEs.

d) RFSD managers will maintain documentation for such authorizations granted. In addition, they will review FSDO policies on this subject at least annually to determine if existing FIE designation procedures are needed.

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3) This initiative is deemed necessary to ensure that the FAA continues to meet its obligations to initial flight instructor applicants in a timely manner while providing the highest level of safety.

4) It must be emphasized that the use of this policy is limited to those instances when an applicant cannot be scheduled for a practical test within 2 weeks of the original request. FSDOs are expected to conduct initial flight instructor certification practical tests whenever resources are available.

C. Recommend Graduates of Part 141 Approved Schools. Title 14 CFR part 141, § 141.65 authorizes some pilot schools operating under part 141 to hold examining authority and recommend certain graduates from its approved course for the appropriate flight instructor certificate or rating without taking the FAA knowledge or practical test.

5-500 ESTABLISHING ELIGIBILITY.

A. Airmen Requirements for Initial Issuance. An applicant may satisfy the aeronautical knowledge requirements of part 61, § 61.185 by showing evidence of ground instruction in the specified areas or presenting a certified college transcript or teaching certificate. When test credit is given, a copy of the teacher's certificate should be obtained and submitted, along with the airman certification file, to the Airmen Certification Branch, AFS-760. If this is impractical, for whatever reason, the ASI responsible for the certification file should include the following statement in lieu of a copy of the teacher's certificate: "This is to certify that I have examined the qualifications and credentials of this applicant for a (ground or flight instructor certificate) and find the credentials acceptable to meet the criteria stated in this order and appropriate to the instructor certificate sought."

1) As a part of the prerequisites for a degree program, a number of colleges and universities in the United States conduct courses in aviation technology and science, and require flight training. However, students attending such schools may not complete all the course requirements for the degree sought. Many of the students enrolled in aviation courses are well qualified in the required subject areas. An applicant's knowledge in these subject areas must be determined.

2) A transcript should list the following items or their equivalents:

- Educational psychology,
- General psychology,
- Tests and measurement,
- Aviation or science teaching methods,
- Secondary school curriculum development and lesson planning, and
- Practice teaching in a classroom or on the flight line.

B. Airmen Requirements for Additional Ratings. All applicants for an added rating must complete any required knowledge test, except for an instructor adding a single-engine or multiengine class rating to an instructor certificate.

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C. Statement of Endorsement. To prove that applicants satisfy the requirements of § 61.185, they should possess a flight or ground instructor's certified statement similar to the sample provided in the current edition of Advisory Circular (AC) 61-65, Certification: Pilots and Flight and Ground Instructors. If the ground instruction received for the private, commercial, and airplane instrument ratings was endorsed by an authorized ground or flight instructor, as provided in §§ 61.65, 61.105, and 61.125, that endorsement may also be accepted.

D. English Language Requirements.

1) Early in the process of issuing a flight instructor certificate/rating, it must be determined whether the applicant can read, speak, write, and understand the English language. AC 60-28, English Language Skill Standards Required by 14 CFR Parts 61, 63, and 65, explains how to determine English language abilities required for pilot certification.

2) If the applicant cannot read, speak, write, or understand the English language, then the flight instructor certificate/rating may not be issued unless the reason is because of a medical disability. If the reason for the applicant being unable to read, speak, write, and understand the English language is because of a medical disability (e.g., a hearing impairment or speech impairment that is medically substantiated by a certified medical physician), then an operating limitation may be placed on the person's pilot certificate and flight instructor certificate. The operating limitation may require the person to be accompanied by another pilot who is qualified to act as a PIC for the appropriate aircraft category, class, type (if class and type of aircraft is applicable), and operating privilege.

3) Although the FAA has not established practical test standards (PTS) to ascertain if an applicant can read, speak, write, and understand the English language, ASIs may use the following examples as guidelines in this evaluation:

a) An ASI may ask the applicant to listen to a tape recording of an air traffic control (ATC) clearance or set of instructions and speak and explain the clearance or instructions back to the ASI in the English language.

b) An instructor may ask an applicant to write down, in English, the meaning of an ATC clearance, set of instructions, or weather report and speak and explain the clearance, instructions, or weather report back to the ASI in the English language.

4) The intent of the evaluation is not to require the applicant to read, speak, write, and understand the English language at college level standards. The ASI should be logical when evaluating an applicant for this requirement (refer to § 61.183(b)).

5-501 PRACTICAL TEST.

A. Conducting the Practical Test.

1) Although ASIs judge an applicant's performance by the flight instructor PTS, they may also require an applicant to demonstrate skill and knowledge from other PTS, such as private pilot, commercial pilot, and instrument rating.

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2) When administering the practical test for renewal or reinstatement, an ASI may, at his/her discretion, recognize qualifications previously demonstrated by an applicant, provided the extent and standards of the flight instructor's practical test are not compromised. For example, an ASI may accept any current and required flight check conducted under part 121, 125, or 135, as applicable.

B. Spin Training Requirement.

1) Section 61.183(i)(2) states, in part, that an applicant for a flight instructor certificate for a glider or airplane rating must have received a logbook endorsement from an authorized flight instructor who:

- Has provided the applicant with spin entry, spin, and spin recovery training in an aircraft of the appropriate category that is certified for spins, and
- Has found the applicant to possess instructional proficiency in stall awareness, spin entry, spin, and spin recovery.

2) Section 61.187 states that an applicant for a flight instructor certificate must have received:

- Flight instruction in the performance and analysis of standard flight training procedures and maneuvers appropriate to the instructor rating sought, and
- An endorsement by the person who has given the instruction certifying that the applicant is competent to pass the practical test on the subjects listed.

5-502 REINSTATEMENT. A holder of an expired flight instructor certificate issued after November 1, 1975 may have all ratings reinstated by accomplishing a flight instructor additional rating practical test. If appropriate, for an additional flight instructor rating, an aeronautical knowledge test may be required (refer to § 61.183(f)).

A. Conversion to New System. The holder of a flight instructor certificate issued before November 1, 1975 that does not bear any of the new class or instrument ratings listed in § 61.5(c)(2), (3), or (4), may not exercise the privileges of that certificate. Until November 1, 1975, holders of those old flight instructor certificates were permitted to convert them to the new system of flight instructor certificates and ratings.

1) Applicants who failed to convert old flight instructor certificates before November 1, 1975, may reinstate those certificates under the provisions of paragraph B below.

2) The holder of a flight instructor certificate with a glider rating does not need to convert that rating to a new class rating to exercise the privileges of that certificate and rating.

B. Reinstatement of Old Instructor Certificates. The FAA did not intend for the revision of part 61 to rescind any privilege previously authorized. The holder of an old flight instructor certificate issued before November 1, 1975, authorizing "FLIGHT INSTRUCTOR—AIRPLANES" or "FLIGHT INSTRUCTOR —INSTRUMENTS," may no longer exchange that certificate for a flight instructor certificate issued under revised part 61.

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However, the applicant may reinstate the old instructor certificate by passing the practical test prescribed by § 61.183 for each aircraft class rating sought. The FAA does not require a knowledge test.

1) An applicant who holds an old instructor certificate for "FLIGHT INSTRUCTOR— AIRPLANES" and wants flight instructor privileges for single- and multiengine aircraft must pass both practical tests. If only the single-engine test is completed, the applicant is issued a certificate noting "FLIGHT INSTRUCTOR—AIRPLANE SINGLE-ENGINE."

2) An applicant who holds an old instructor certificate for "FLIGHT INSTRUCTOR—INSTRUMENTS" may be issued a certificate authorizing "FLIGHT INSTRUCTOR, INSTRUMENT—AIRPLANE" and/or "FLIGHT INSTRUCTOR, INSTRUMENT—HELICOPTER," depending on the category of aircraft in which the applicant passes the practical test.

3) An applicant who holds an old instructor certificate that authorizes AIRPLANES and INSTRUMENTS may reinstate either or both privileges. An aeronautical knowledge test is not required for flight instructor ratings previously held. If the applicant satisfactorily completes the practical test for airplane instructor privileges, but does not take the test for instrument rating privileges, the new flight instructor certificate would state "FLIGHT INSTRUCTOR AIRPLANE SINGLE-ENGINE, INSTRUMENT INSTRUCTOR EXPIRED [insert date]." If the applicant passes the appropriate practical test, the expired rating may be reinstated.

C. Old Flight Instructor Ratings on Pilot Certificates. An old instructor rating on a pilot certificate may not be reinstated, exchanged, or used for any current instructor privileges. A flight instructor rating or limited flight instructor rating on a pilot certificate is no longer valid and the holder may not exchange it for a similar rating or a flight instructor certificate. The holder of a pilot certificate with a flight instructor or limited flight instructor rating may be issued a flight instructor certificate only if the applicant passes the knowledge and practical tests, prescribed by § 61.183, for the certificate and rating sought.

5-503 REGULATORY REQUIREMENTS. In accordance with § 61.195, flight instructors may not conduct flight instruction in any aircraft for which they do not hold category, class, and type ratings, if appropriate, on the pilot and flight instructor certificates. The phrase "if appropriate" applies equally to and in combination with both certificates when instrument instructor ratings are involved.

A. Single- and/or Multiengine Ratings. According to part 61, flight instructors who hold an "INSTRUMENT—AIRPLANE" rating only on their flight instructor certificate are authorized to give instrument flight instruction in single- and/or multiengine airplanes for instrument certification, provided they hold single- and/or multiengine ratings on their pilot certificate.

B. Class Ratings. Flight instructors who hold flight instructor certificates issued under part 61, which allow only instrument instructor privileges in airplanes, may give instrument flight instruction in any class airplane that is listed without restriction on their pilot certificate.

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Instructors holding only a helicopter instrument rating on their flight instructor certificate are limited to conducting instrument flight instruction in helicopters.

C. Ratings Limited to Instrument. Instructors with ratings limited to instrument may not give instrument flight instruction to students who do not hold category and class ratings in the aircraft used. This would be instruction for the addition of a rating that conveys other than instrument privileges. These instructors may not certify logbooks or recommend applicants for any aircraft category or class rating.

5-504 RENEWAL OF FLIGHT INSTRUCTOR CERTIFICATE. Section 61.197(a) states that a holder of a current flight instructor may renew that certificate and rating by passing a practical test for one of the ratings listed on the applicant's current flight instructor certificate. Section 61.199(a) states that the holder of an expired flight instructor certificate may reinstate that certificate by passing a practical test for one of the ratings listed on the applicant's expired flight instructor certificate.

A. Section 61.197(a). A person who holds a flight instructor certificate that has not expired may renew that certificate for an additional 24 calendar-months if the holder:

1) Passes a practical test for renewal of the flight instructor certificate or an additional flight instructor rating; or

2) Presents at least one of the following to an ASI:

a) A record of training students that shows, during the preceding 24 calendar-months in which the flight instructor has:

- Endorsed at least five students for a practical test for a certificate or rating, and
- Passed at least 80 percent of those students on the first attempt of the test.

b) A record that shows that within the preceding 24 calendar-months, the flight instructor has served in one of the following positions in which the ASI is acquainted with the duties and responsibilities, and has knowledge of its current pilot training, certification, and standards, of:

- A company check pilot,
- A chief flight instructor,
- A company check airman,
- A flight instructor in a part 121 or 135 operation, or
- A position involving the regular evaluation of pilots.

c) A graduation certificate showing the person has successfully completed an approved flight instructor refresher course/clinic, consisting of ground training or flight training, or both, within the 3 calendar-months preceding the expiration month of his/her flight instructor certificate.

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B. Section 61.197(a)(2)(iii). Questions have been asked about whether a person who elects to attend an approved flight instructor refresher course/clinic more than once every 24 months would be permitted to renew his or her flight instructor certificate more frequently. Even though the rule was written in a permissive format, it does not preclude a person from renewing his/her flight instructor certificate once a year or more if the person chooses to renew by attending an approved flight instructor refresher course/clinic with greater frequency. However, for an applicant who renews his or her flight instructor certificate outside the 3 calendar-month window (refer to § 61.197(b)(2)(i)), the new expiration date will be 24 calendar-months from the month of renewal.

1) A holder of a current flight instructor certificate who has been designated as a Master Certificated Flight Instructor (CFI) by the National Association of Flight Instructors (NAFI) within the current renewal period may renew his or her flight instructor certificate.

2) A holder of a current flight instructor certificate who serves as a flight instructor in the FAA's Pilot Proficiency Awards Program (WINGS) and gives flight training to qualify pilots for a Phase I through XX proficiency award may renew his/her certificate, in accordance with the following criteria. That CFI must:

- Hold a flight instructor certificate that has not expired,
- Have provided at least 15 hours of *flight training* in a phase of the FAA WINGS Program,
- Have provided *flight training* in a phase of the FAA WINGS Program to at least five pilots and signed the logbooks of those pilots,
- Be enrolled and actively participating in or previously accomplished all of the phases of the FAA WINGS Program,
- Present a record to an ASI showing that the CFI has met the requirements of the prior three bullets within the preceding 24 calendar-months before the month of application for renewal of his or her flight instructor certificate, and
- Present a completed FAA Form 8710-1, Airman Certificate and/or Rating Application, to an ASI or aviation safety technician (AST) for renewal of his or her flight instructor certificate.

C. Section 61.197(a)(2)(ii). Individuals have asked FAA about the intent of the statement, "in a position involving the regular evaluation of pilots" in § 61.197(a)(2)(ii) and whether it has the same meaning as the old provision in § 61.197(b). The FAA rewrote § 61.197 to expand the renewal provisions, mainly to include other PICs. For example, the following PICs, who regularly evaluate pilots, have the same reward provisions as a PIC in a part 121 operation:

- A PIC of a multiple pilot flightcrew aircraft under part 135,
- Corporate PICs of a multiple pilot flightcrew aircraft under part 125 or part 133,
- U.S. military pilots who are PICs of a multiple pilot flightcrew aircraft,
- U.S. military instructor pilots and examiners who regularly evaluate pilots, and
- Flight instructors who actively instruct in part 61 schools.

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NOTE: FAA ASIs should review evidence of the applicant's employment, which should clearly show that the applicant is in a position involving the regular evaluation of pilots. ASIs also should have personal knowledge of the applicant's flight instructing capabilities and qualities before renewing that applicant's flight instructor certificate.

D. Procedures for Processing a Flight Instructor Certification Renewal Via U.S. Mail. Flight instructor renewal applicants are now able to renew their flight instructor certificates on a personal computer workstation and complete an approved flight instructor refresher clinic (FIRC) over the Internet. Some flight instructor renewal applicants have inquired about being able to mail in the required documents to renew their flight instructor certificates. The Airmen Certification and Training Branch, AFS-810, has approved procedures that will allow a flight instructor renewal applicant whose flight instructor certificate has not expired (meaning the flight instructor has satisfactorily accomplished the flight instructor renewal requirements and has submitted an application prior to the expiration date of his or her flight instructor certificate) to renew his/her flight instructor certificate by sending the application and superseded flight instructor certificate to his or her jurisdictional FSDO via the mail delivery. The procedural requirements that must be followed to accomplish the flight instructor renewal requirements via the mail delivery service are as follows:

1) The flight instructor renewal applicant is required to submit an original completed FAA Form 8710-1.

2) The flight instructor renewal applicant must submit his or her permanent flight instructor certificate.

3) The flight instructor renewal applicant must submit a copy of his or her identification that contains a picture of the applicant (driver's license, military ID card, etc.). That copy of the applicant's identification document must be notarized by a notary public.

4) If the flight instructor renewal applicant is renewing on the basis of satisfactory completion of a FIRC (i.e., § 61.197(a)(2)(iii)), the applicant will be required to submit a copy of his or her graduation certificate.

5) If the flight instructor renewal applicant is renewing on the basis of § 61.197(a)(2)(i) or (ii), the applicant must provide copies of the records that substantiate the training of "… at least five students for a practical test for a certificate or rating and at least 80 percent of those students passed that test on the first attempt," or having served as a "… company check pilot, chief flight instructor, company check airman, or flight instructor in a part 121 or part 135 operation, or in a position involving the regular evaluation of pilots." Those records must be notarized by a notary public.

6) The jurisdictional FSDO will then process the application file and issue the flight instructor renewal applicant a temporary airman certificate. The FSDO will then process the applicant's file and temporary airman certificate to the FAA Airmen Certification Branch, AFS-760, P.O. Box 25082, Oklahoma City, OK 73125. The FSDO need not have a signed

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temporary airman certificate by the flight instructor renewal applicant in order to submit the applicant's file to AFS-760.

7) Per § 61.3(d)(1) (i.e., "or other documentation acceptable to the Administrator"), the flight instructor renewal applicant may use the original of his or her FIRC graduation certificate and a copy of the superseded flight instructor certificate until the applicant's permanent flight instructor certificate arrives. Or the flight instructor renewal applicant may use a copy of his or her FAA Form 8710-1 and a copy of the superseded flight instructor certificate until the applicant's permanent flight instructor certificate arrives.

E. Renewal on the Basis of Acquaintance. The FAA has been asked whether the revision of § 61.197 prevents renewal of a flight instructor certificate on the basis of acquaintance. The old § 61.197 never allowed a person to be renewed merely on the basis of acquaintance. The misconception was erroneously promulgated in the Inspector's Report section on the back of the FAA Form 8710-1. The FAA never intended or permitted that an applicant's flight instructor certificate be renewed merely on the basis of acquaintance. FAA policy has always required ASIs to see evidence of the applicant's employment, which should clearly show that applicants are in a position involving the regular evaluation of pilots, or to have personal knowledge of an applicant's flight instructing capabilities and qualities before renewing that applicant's flight instructor certificate.

F. Section 61.197(b) Renewal Requirements.

1) Section 61.197(b) states that if a person accomplishes the renewal requirements of § 61.197 paragraph (a)(1) or (a)(2), within 3 calendar-months preceding the expiration month of his/her flight instructor certificate:

- The FAA considers that person to have accomplished the renewal requirement of this section in the month due, and
- The current flight instructor certificate will be renewed for an additional 24 calendar-months from its expiration date.

2) The statement, "within 3 calendar-months preceding the expiration month" in § 61.197(b)(2)(i) means that in computing the 3 calendar-months, one would date backward from the first day of the month even though the flight instructor certificate expires at the end of the month. For example, a person whose flight instructor certificate expires on June 30, 2004 could have attended and completed an approved flight instructor refresher course/clinic at anytime on or after March 1, 2004 to June 30, 2004. Also, he/she could have his/her flight instructor certificate renewed for an additional 24 calendar-months with a new expiration date of June 30, 2006.

G. Section 61.197(c). This section states that instructors may accomplish the practical test required by § 61.197(a)(1) in an approved flight simulator or flight training device if he or she accomplishes the test pursuant to an approved course conducted by a training center certificated under part 142.

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H. Denial of Renewal. If an applicant for renewal is unable to demonstrate by record or practical test that he or she possesses the qualifications for renewal or reinstatement of the flight instructor certificate, the applicant should be issued an FAA Form 8060-5. The form specifies exactly what demonstration of currency and competency will be required for the reinstatement of the instructor certificate or rating. If renewal is denied on the basis of the instructor's flying proficiency, consideration must be given to action against the instructor's pilot certificate. Except for a retest, the FAA does not require a flight instructor recommendation for the renewal or reinstatement of a flight instructor certificate. Yet, the instructors may recommend additional preparation to the applicant.

5-505 WEATHER-RELATED ACCIDENTS AND THE NEED FOR FLIGHT INSTRUCTOR EMPHASIS ON CRITICAL WEATHER SITUATIONS.

A. Background. Studies indicate that the most likely candidate for a fatal, weather-related aviation accident is a relatively inexperienced private pilot who receives a reasonably accurate weather briefing before departure. The pilot is usually informed of the existence or potential of a critical weather situation. Typically, the pilot takes one passenger and crashes in weather conditions less than the minimums prescribed for visual flight rules (VFR) flight during daylight hours. Private pilot applicants should be familiar with this profile and should receive the highest quality of meteorological instruction possible. Many applicants for pilot certificates, when asked to collect weather data while planning a cross-country flight, are unable to locate the meteorological information needed to make proper in-flight decisions.

B. Flight Instructor Responsibilities. ASIs should ensure that flight instructors are aware of the record of private pilots' weather-related accidents. ASIs should encourage the discussion of critical weather recognition and proper decisionmaking when contacting flight instructors. Flight instructors should stress "the recognition of critical weather situations, while on the ground and in flight, and the procurement and use of aeronautical weather reports and forecasts" during instruction.

5-506 DESIGNATED PRACTICE AREAS. The current edition of FAA Order 7420.1, Certificated Pilot School Practice Areas, describes procedures for the establishment of certificated pilot school practice areas. Designation of specific practice areas was part of the FAA's effort to reduce the potential for midair and near midair collisions. However, because nonaffiliated flight instructors of pilot schools conduct most flight training in the United States, it is necessary that additional steps be taken to reach those flight instructors. During routine surveillance and at FIRCs, ASIs should emphasize to flight instructors and flight instructor applicants that they can enhance safety by conducting student instruction and solo practice within designated areas known to ATC and FSDOs.

5-507 AIRMAN MEDICAL AND FLIGHT INSTRUCTOR CERTIFICATES. FSDOs continue to receive the following three inquiries:

- Whether a CFI who does not hold a valid airman medical certificate may conduct flight instruction,
- Whether a certificated pilot who does not hold a valid airman medical certificate may renew a flight instructor certificate, and

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- Whether a certificated pilot who does not hold a valid airman medical certificate may be originally issued a flight instructor certificate.

A. Required Flightcrew Member. It is stated in § 61.3(c) that no person may act as a PIC or in any other capacity as a required flightcrew member of an aircraft under a certificate issued under part 61 unless that person has, in his/her possession, an appropriate current medical certificate issued under part 67. Sections 61.3(c) and 61.19(d)(1) state that a flight instructor certificate is effective only while the holder has a current pilot certificate and a medical certificate appropriate to the pilot privileges being exercised.

B. Not PIC or Required Crewmember. A CFI who is on board an aircraft for the purpose of providing flight instruction and does not act as a PIC or as a required flightcrew member is not performing a function or exercising pilot privileges that would require him or her to possess an appropriate current medical certificate in accordance with part 61. Therefore, the FAA does not require a CFI who does not exercise pilot privileges as a PIC or required crewmember while giving flight instruction to have a valid medical certificate. Similarly, the FAA does not require a valid medical certificate from a certificated pilot who does not exercise privileges as a PIC or as a required crewmember during a practical test leading to the issuance or renewal of a flight instructor certificate. FSDO managers are encouraged not to direct ASIs to act as a PIC to permit an applicant to take the practical test for renewal or initial issuance of a flight instructor certificate if that applicant does not hold a valid medical certificate (reference § 61.23(b)).

C. Public Queries. ASIs receiving questions concerning the information above should ensure that the following points are emphasized in discussion with pilots:

1) A CFI who acts as a safety pilot during simulated instrument flight, as required by § 91.109(b)(2), is a required pilot flightcrew member and must have an appropriate, current medical certificate.

2) A CFI who conducts a flight review, required by § 61.56, after a pilot's currency has expired, must have the appropriate, current medical and pilot certificates.

3) A CFI who gives flight instruction and acts in the capacity of a required pilot crewmember must have a valid medical certificate.

4) A CFI who does not hold a current medical certificate may give, and charge a fee for, flight instruction during any flight in which the certificated pilot being instructed (other than a student pilot) is the PIC, provided the flight instructor at least holds commercial pilot privileges on his/her pilot certificate and does not act as a required pilot flightcrew member.

5) A CFI who contemplates the use of a flight instructor certificate when he or she does not hold an appropriate, current medical certificate should be fully aware of the various circumstances under which he or she may be required to assume responsibility for the safety of the aircraft during flight and remain in compliance with applicable regulations.

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5-508 PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. This task requires knowledge of the requirements of part 61 and FAA policies and qualification as an ASI (Operations) or AST.

B. Coordination. This task requires coordination with the airworthiness unit and Airmen Records section of the AFS-760.

5-509 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- Title 14 CFR Parts 1, 61, 91, 141, 142, and 187 (Appendix A, Fees).
- Applicable PTS.
- AC 61-65, Certification: Pilots and Flight and Ground Instructors.
- PTRS Procedures Manual (PPM).

B. Forms:

- FAA Form 8060-4, Temporary Airman Certificate (Figure 5-52).
- FAA Form 8060-5, Notice of Disapproval of Application (Figure 5-50).
- FAA Form 8710-1, Airman Certificate and/or Rating Application.

C. Job Aids. Sample letters and figures.

5-510 PROCEDURES.

A. Schedule Appointment. Advise the applicant to bring the following documents to the appointment:

- A commercial or airline transport pilot (ATP) certificate.
- A flight instructor certificate (if applicable).
- FAA Form 8500-9, Medical Certificate _____ Class, and a Statement of Demonstrated Ability (SODA), if applicable.
- A knowledge test report (if required).
- A school graduation certificate (if required by § 61.71).
- Personal logbooks that substantiate the flight experience shown on the application form.
- The aircraft maintenance records.
- The aircraft airworthiness certificate.
- The aircraft registration.
- An acceptable form of photo identification.
- The Federal Communications Commission (FCC) aircraft station license documents, if applicable.

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B. Applicant Arrives for Appointment.

1) Collect the documents indicated above.

2) Open the PTRS file.

C. Review Application.

1) In Section I of FAA Form 8710-1, ensure that the applicant has checked "Flight Instructor—Initial." If the applicant is renewing a flight instructor certificate, ensure that "Renewal" is checked. If the applicant is having a flight instructor certificate reinstated, "Reinstatement" must be checked.

2) Check the application for accuracy, using the instructions attached to FAA Form 8710-1.

3) Check to make sure a flight instructor applicant has a logbook endorsement, a signed application, or a written statement signed by the recommending flight instructor no more than 60 days before application for certification.

4) The date the ASI or AST places next to his or her signature on the application must be the same date as on the temporary flight instructor certificate.

a) For flight instructor renewal applicants, the date the ASI or AST places next to his or her signature must be a date that is on or before the expiration date of the superseded flight instructor certificate. In the past, some ASIs or ASTs have dated the application and temporary flight instructor certificate using a date that was after the expiration month of the superseded flight instructor certificate. For recordkeeping purposes for AFS-760, it is mandatory that the date on the application and temporary flight instructor certificate be the same date and be a date that is on or before the expiration date of the superseded flight instructor certificate.

b) Provided the flight instructor renewal applicant renews in the 3 calendar-months preceding the expiration month of the superseded flight instructor certificate or during the month of expiration, that applicant is entitled to keep the expiration month that is on the superseded flight instructor certificate.

5) In section III of the application, confirm that the applicant listed at least the aeronautical experience required for the airmen certificate and rating sought. Graduates of part 141 pilot schools or part 142 training centers must provide their aeronautical experience on the application even though the graduation certificate is evidence of having completed the course of training. If aeronautical experience has no bearing on the airmen certification action being sought, it is not necessary for an applicant to complete section III. For example, flight instructor renewal applications, flight instructor reinstatement applications, ground instructor qualification applications, and pilot type rating applications are examples for which aeronautical experience would not have a bearing on the airmen certification action and thus the applicant would not be required to complete section III. However, the FAA encourages all applicants to complete section III of the application. This is because the application remains on file with the FAA and

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can be used to substantiate past aeronautical experience if an individual were to ever lose his or her logbook.

D. Verify Applicant's Identity. Inspect acceptable forms of identification to verify 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 or inadequate identification, explain what types of identification are acceptable. Advise the applicant to return with the appropriate identification to reapply.

3) Do not continue with this task if:

- The applicant's identity appears to be different from the information supplied on FAA Form 8710-1.
- It appears that an attempt at falsification has been made.

NOTE: See Volume 7, Chapter 6.

E. General Procedures For Renewal or Reinstatement of a CFI Certificate. An ASI may require an applicant for renewal or reinstatement to complete all or any portion of the flight instructor practical test that the ASI deems necessary to determine the applicant's competence to hold a flight instructor certificate. The required tasks that an applicant need to accomplish to renew/reinstate a flight instructor certificate are covered in the appropriate flight instructor PTS.

1) A flight instructor endorsement is not required for the renewal or reinstatement of a flight instructor certificate except in accordance with the provisions of § 61.49 for a retest.

2) A flight instructor certificate is renewed or reinstated with an expiration date 24 calendar-months after the month of renewal/reinstatement or the month of expiration of the current flight instructor certificate, provided the provisions of § 61.197(a) are accomplished within the 3 calendar-months preceding the expiration month of the current flight instructor certificate.

3) In order to conduct a practical test for the renewal of a flight instructor certificate with more than one aircraft category rating, an ASI must be qualified to conduct a practical test in at least one of the aircraft categories on the flight instructor certificate to be renewed.

4) An applicant may renew all ratings on a current flight instructor certificate by satisfactorily completing one practical test. Also, the satisfactory completion of a practical test for an additional flight instructor rating constitutes the renewal of a flight instructor certificate.

F. Renew a CFI Based on Participation in the FAA WINGS Program. Upon receipt of FAA Form 8710-1 from a flight instructor who elects to renew his or her flight instructor certificate on the basis of complying with paragraph 5-504B2, the approving ASI or AST should complete the Inspector's Report section of FAA Form 8710-1.

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1) Review the flight instructor renewal applicant's FAA Form 8710-1 to ensure that the applicant has fully completed the front of the application and has signed and dated the application. If the FIRC is an approved part 141 course, ensure that the applicant has completed section II of the application. This area is only completed if the FIRC provider and course is an approved part 141 course.

2) If the FAA WINGS provider has an Airman Certification Representative (ACR) assigned, ensure the ACR has completed the appropriate areas on the back side of the applicant's FAA Form 8710-1. The marked boxes and shaded areas in the sample form in Figure 5-53 need to be completed.

3) Complete the Aviation Safety Inspector or Technician Report on the reverse side of the flight instructor renewal applicant's FAA Form 8710-1. The marked boxes and shaded areas in Figure 5-53 need to be completed by an ASI or AST.

4) Sign and date the application. This date must be the same date as on the temporary flight instructor renewed certificate.

G. Renew a CFI Based on Completion of a FIRC in Accordance With § 61.197(a)(2)(iii). See paragraph 5-504B. When renewing a flight instructor renewal applicant, the ASI or AST must perform the following:

1) Review the flight instructor renewal applicant's FAA Form 8710-1 to ensure that the applicant has fully completed the front of the application and has signed and dated the application. If the FIRC is an approved part 141 course, ensure that the applicant has completed section II C of the application. This area is only completed if the FIRC provider and course is an approved part 141 course.

2) If the FIRC provider has an ACR assigned, ensure the ACR has completed the Designated Examiner or Airman Certification Representative Report areas on the reverse side of the applicant's FAA Form 8710-1. The marked boxes and shaded areas in the Figure 5-54 need to be completed. Additionally, the ACR is required to complete the other areas in Figure 5-54 noted as "To be completed by the ACR" in the Aviation Safety Inspector or Technician Report section of the form.

3) If being reviewed by an ASI or AST, complete the Aviation Safety Inspector or Technician Report on the reverse side of the form. The marked boxes and shaded areas in the sample form in Figure 5-54 need to be completed by an ASI or AST.

4) Sign and date the application. This date must be the same date as on the temporary flight instructor renewed certificate.

H. Establish Eligibility.

NOTE: Refer to part 61, §§ 61.183, 61.185, 61.187, and 61.191.

1) Ensure that the applicant holds either a commercial pilot or an ATP certificate with an aircraft rating appropriate to the instructor rating sought. If the applicant is applying for

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an airplane instructor rating or an instrument instructor rating, verify that the applicant has an instrument rating.

2) Inspect the applicant's medical certificate and SODA, if applicable, to ensure that it is appropriate to the pilot privileges being exercised.

3) Determine whether the applicant is able to read, write, and converse fluently in the English language (see paragraph 5-500D).

4) If the applicant graduated from an FAA-approved school, have the applicant present the appropriate graduation certificate. Verify that the date issued shows that the applicant graduated within the past 60 days.

5) If the applicant is not a graduate of an FAA-approved school and is applying for a flight instructor certificate, have the applicant present evidence of passing a course of instruction in the subjects listed in § 61.185.

6) Determine if § 61.185(a) requirements are met by having the applicant present evidence of *one* of the following:

- Satisfactory completion of a home study course or any of the alternatives outlined in the current edition of AC 61-65, or
- A certified college transcript listing subjects equivalent to the subjects listed in § 61.185(a).

7) Determine whether an applicant is required to take the FOI knowledge test by examining the following substitutes:

- A current teacher's certificate issued by a state, county, or city that authorizes the applicant to teach in a secondary school;
- Proof of regular employment as an instructor in an accredited college or university; and/or
- The applicant's ground instructor certificate with any rating.

8) Determine if the applicant satisfies the requirements of § 61.185(a) by an endorsement from a flight or ground instructor, who meets the requirements of § 61.185(a), certifying that the prescribed instruction was given.

9) Request and examine any of the following documents, which qualify as acceptable evidence of having passed the appropriate knowledge tests:

- Two knowledge test reports, one for the appropriate instructor rating and one for the FOI,
- Test reports from an FAA-approved school with knowledge test examining authority, and/or
- A computer test report from an approved computer testing center.

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10) If the applicant is not a graduate of an FAA-approved school, have the applicant present a logbook endorsement. Ensure that the instructor has signed it and certifies that the applicant is competent to pass a practical test on the required subjects listed in § 61.187(a).

11) For initial flight instructor certification, the instructor who provides the training and the instructor who recommends the applicant must meet the requirements of § 61.195.

12) If the applicant has failed the flight (aircraft)-rating practical test, make sure that applicant submits an FAA Form 8710-1 with the instructor's recommendation for the retest.

13) Determine if the applicant for an additional flight instructor rating meets specific eligibility requirements, as listed in § 61.191. Ensure that the applicant meets the following requirements:

a) Holds at least a commercial pilot certificate with ratings appropriate to the instructor rating sought.

b) Holds a valid medical certificate and SODA, if applicable, appropriate to the pilot privileges being exercised.

c) Has passed the appropriate knowledge test for the instructor rating sought.

d) Has at least 15 hours of PIC time in the category and class of aircraft appropriate to the rating sought. The record of flight time in Section III of the application must show at least the minimum flight experience required for the additional rating sought.

14) Determine if the applicant for a flight instructor renewal or reinstatement meets specific eligibility requirements:

- A private pilot, commercial pilot, or ATP pilot certificate with the appropriate ratings, and
- A valid medical certificate and SODA, if applicable, appropriate to the pilot privileges being exercised.

15) The ASI conducting the practical test or an airworthiness ASI should review the applicant's aircraft maintenance records, aircraft logbooks, airworthiness certificate, and aircraft registration to determine if the aircraft is Airworthy and suitable for this practical test. After review, the ASI should return the documents to the applicant.

I. Discrepancies. If a discrepancy that cannot be immediately corrected exists in any of the aircraft documents, the ASI should return the application and all submitted documents to the applicant. The ASI should inform the applicant of the reasons for ineligibility, and explain how the applicant may correct the discrepancies.

J. Conduct Practical Test. After determining if the applicant is eligible and meets all prerequisites for the flight instructor certificate and associated ratings, the ASI should conduct the practical test.

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1) Use the procedures and maneuvers outlined in the applicable flight instructor PTS for the category and class of aircraft or instrument aircraft rating.

2) Give credit to the applicant who retests tasks already completed on the previous practical examination (ASI's option).

3) If the applicant does not complete the practical test for reasons other than proficiency, issue the applicant a letter of discontinuance (Figure 5-51). Return the application and all submitted documents to the applicant.

4) Close PTRS.

K. Unsatisfactory Performance. Upon determining that an applicant's practical test performance is not satisfactory, the ASI should terminate the practical test and inform the applicant of the reasons for the termination.

1) Prepare in duplicate FAA Form 8060-5 (see Volume 5, Chapter 1, Section 6 and Figure 5-50).

a) Record any specific procedures or maneuvers that must be repeated by the applicant on FAA Form 8060-5.

b) Record the number of practical test failures by the applicant for this certificate or rating on FAA Form 8060-5.

2) Proceed with the following suspension action if an applicant fails a practical test for the renewal of a flight instructor certificate that would normally remain valid for more than 30 days.

a) Prepare three copies of FAA Form 8060-5 bearing the following statement: "An applicant must pass a practical test given by an FAA ASI within 15 days, or the FAA will take action to suspend the certificate."

b) Give two copies of FAA Form 8060-5 to the applicant, file the original and the application form at the FSDO, and return all other submitted documents to the applicant.

c) If the applicant does not pass the practical test, open a PTRS file for airman certification technical assistance (PTRS code 1595) with a date for initiating enforcement action.

3) If the applicant's flying proficiency is seriously in doubt, begin reexamination action against the applicant's pilot certificate in accordance with the regulations. (See Volume 5, Chapter 7, Section 1).

4) Forward the certification file to AFS-760.

L. Satisfactory Performance. The ASI should issue a Temporary Airman Certificate to the applicant who meets all requirements for a flight instructor certificate.

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1) Prepare FAA Form 8060-4 in duplicate, as indicated in Volume 5, Chapter 1, Section 5 (see Figure 5-52).

2) Enter the following ratings, when appropriate, on the certificate:

- Airplane, Single-Engine;
- Airplane, Multiengine;
- Instrument, Airplane;
- Instrument, Helicopter;
- Rotorcraft, Helicopter;
- Rotorcraft, Gyroplane;
- Glider;
- Powered-Lift; and
- Instrument, Powered-Lift.

3) Enter the expiration date on the certificate. Inform the applicant that the certificate expires at the end of the 24th calendar-month after the month it is issued.

4) Use the same certificate number on the temporary certificate that is on the superseded flight instructor certificate, or in the case of an original certificate issuance, the certificate number on the applicant's pilot certificate followed by the letters "CFI."

5) If the applicant is eligible for a gold seal certificate, see Volume 5, Chapter 2, Section 13.

6) Complete the Inspector's Report section and the Attachments section on FAA Form 8710-1. Sign the reverse side of FAA Form 8710-1.

7) Forward the completed file to AFS-760.

8) Return to the applicant all submitted documents not forwarded to AFS-760.

9) Indicate satisfactory performance approval on one copy of FAA Form 8060-5 if a suspension action was pending on the applicant's flight instructor certificate at another FSDO. Forward one copy of FAA Form 8060-5 to the ASI at the other FSDO who issued the previous notice of disapproval of application.

M. PTRS. Complete PTRS in accordance with the PPM.

5-511 TASK OUTCOMES. Completion of this task results in the issuance of *one* of the following:

- Temporary Airman Certificate,
- Notice of disapproval of application, or
- Letter of discontinuance.

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5-512 FUTURE ACTIVITIES.

A. When a suspension action is pending because the applicant did not pass a practical test for the renewal of a flight instructor certificate, one of the following future activities will result.

1) Suspension action must be initiated if the applicant has not passed the practical test in the allotted time.

NOTE: Refer to the current edition of FAA Order 2150.3, Compliance and Enforcement Program.

2) Close the PTRS entry if the applicant passes the practical test in the required time.

B. The applicant may return for a renewal or reinstatement.

C. The applicant may return for an additional flight instructor rating.

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Figure 5-50, FAA Form 8060-5, Notice of Disapproval of Application—Flight Instructor

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
JOHN M. DOE 751 SOUTH MAIN STREET KEYWANA, NM 80010	FLIGHT INSTRUCTOR ASE

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
CESSNA 172 RG	250	40	100

UPON REAPPLICATION YOU WILL BE REEXAMINED ON THE FOLLOWING:

XIII. EMERGENCY OPERATIONS
TASK A, EMERGENCY APPROACH AND LANDING
TASK B, SYSTEMS AND EQUIPMENT MALFUNCTIONS
FIRST FAILURE

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.
8/14/2003	Brett Forman BRETT FORMAN	NM 07

FAA Form 8060-5 (5-80)

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Figure 5-51, Letter of Discontinuance

FAA letterhead

[*date*]

[*applicant's name and address*]

Dear [*applicant's name*]:

On this date, you successfully completed the oral portion of the practical test for a [*indicate grade*] certificate with an [*indicate category*] and [*indicate class*] class rating. The practical test was discontinued because of [*indicate reason*].

If application is made by [*indicate date 60 days from date of letter*], this letter may be used to show the following portions of the practical test which have been completed satisfactorily:

[*Indicate areas of operation completed on the test*]

After [*indicate expiration date*], you must repeat the entire practical test.

This letter does not extend the expiration date as shown on the knowledge test results, medical certificate, or required endorsements.

Sincerely,

[*signature of inspector conducting practical test*]

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Figure 5-52, FAA Form 8060-4, Temporary Airman Certificate—Flight Instructor

I. UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION – FEDERAL AVIATION ADMINISTRATION
ii. **TEMPORARY AIRMAN CERTIFICATE**

III. CERTIFICATE NO. 9876543CFI

THIS CERTIFIES THAT IV. JOHN RYAN DOE

V. 5421 WEST BIRD DRIVE
NEW YORK, NY 20002

DATE OF BIRTH	HEIGHT	WEIGHT	HAIR	EYES	SEX	NATIONALITY VI.
11/30/74	73 IN.	175	BROWN	BLUE	M	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

FLIGHT INSTRUCTOR

RATINGS AND LIMITATIONS

XII. AIRPLANE SINGLE ENGINE

XIII. VALID ONLY WHEN ACCOMPANIED BY PILOT CERTIFICATE NO. 9876543; EXPIRES 9/30/07

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 9/1/05

X. SIGNATURE OF EXAMINER OR INSPECTOR John Ayres EA 23
John Ayres

EXAMINER'S DESIGNATION NO. OR INSPECTOR'S REG. NO. 001234567

DATE DESIGNATION EXPIRES

vii. AIRMAN'S SIGNATURE John Ryan Doe

FAA FORM 8060-4 (8-79) USE PREVIOUS EDITION

SAMPLE

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Figure 5-53, Designated Examiner or Airman Certificate Representative Report and Aviation Safety Inspector or Technician Report Portions of FAA Form 8710-1, Filled Out for Renewal of CFI Based on Wings Program Participation

Designated Examiner or Airman Certification Representative Report

- ☐ Student Pilot Certificate Issued (Copy attached)
- ☒ I have personally reviewed this applicant's pilot logbook and/or training record, and certify that the individual meets the pertinent 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.
- ☐ I have personally tested and/or verified this applicant in accordance with pertinent procedures and standards with the result indicated below.
  - ☒ Approved -- Temporary Certificate Issued (Original Attached)
  - ☐ Disapproved -- Disapproval Notices Issued (Original Attached)

Location of Test (Facility, City, State)	Duration of Test		
	Ground	Simulator/FTD	Flight

Certificate or Rating for Which Tested	Type(s) of Aircraft Used	Registration No.(s)

Date	Examiner's Signature (Print Name & Sign)	Certificate No.	Designation No.	Designation Expires

Evaluator's Record (Use For ATP Certificate and/or Type Rating)

	Inspector	Examiner	Signature and Certificate Number	Date
Oral	☐	☐		
Approved Simulator/Training Device 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.

☒ Approved -- Temporary Certificate Issued (Original Attached) ☐ Disapproved -- Disapproval Notice Issued (Original Attached)

Location of Test (Facility, City, State)	Duration of Test		
	Ground	Simulator/FTD	Flight

Certificate or Rating for Which Tested	Type(s) of Aircraft Used	Registration No.(s)

- ☐ Student Pilot Certificate Issued
- ☐ Examiner's Recommendation
  - ☐ Accepted ☐ Rejected
- ☐ Reissue or Exchange of Pilot Certificate
- ☐ Special Medical test conducted -- report forwarded to Aeromedical Certification Branch, AAM-330
- ☐ Certificate or Rating Based on
  - ☐ Military Competence
  - ☐ Foreign License
  - ☐ Approved Course Graduate
  - ☐ Other Approved FAA Qualification Criteria
- ☒ Flight Instructor ☐ Ground Instructor
  - ☒ Renewal
  - ☐ Reinstatement
  - Instructor Renewal Based on
    - ☐ Activity ☒ Training Course
    - ☐ Test ☐ Duties and Responsibilities

Training Course (FIRC) Name	Graduation Certificate No.	Date

Date	Inspector's Signature (Print Name & Sign)	Certificate No.	FAA District Office

Attachments:

- ☐ Student Pilot Certificate (Copy)
- ☐ Knowledge Test Report
- ☒ Temporary Airman Certificate
- ☐ Notice of Disapproval
- ☒ Superseded Airman Certificate

☒ Airman's Identification (ID)

Form of ID

Number

Expiration Date

Telephone Number

ID:
Name:

Date of Birth:

Certificate Number

E-Mail Address

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Figure 5-54, Designated Examiner or Airman Certificate Representative Report and Aviation Safety Inspector or Technician Report Portions of FAA Form 8710-1, Filled Out for Renewal of CFI Based on a FIRC

Designated Examiner or Airman Certification Representative Report

☐ Student Pilot Certificate Issued (Copy attached)
☒ I have personally reviewed this applicant's pilot logbook and/or training record, and certify that the individual meets the pertinent 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.
☐ I have personally tested and/or verified this applicant in accordance with pertinent procedures and standards with the result indicated below.
☒ Approved -- Temporary Certificate Issued (Original Attached)
☐ Disapproved -- Disapproval Notices Issued (Original Attached)

Location of Test (Facility, City, State)	Duration of Test		
[Name of FIRC] Flight Instructor Renewal Course, [City, State]	Ground	Simulator/FTD	Flight

Certificate or Rating for Which Tested	Type(s) of Aircraft Used	Registration No.(s)
Flight Instructor Renewal		

Date	Examiner's Signature (Print Name & Sign)	Certificate No.	Designation No.	Designation Expires

Evaluator's Record (Use For ATP Certificate and/or Type Rating)

	Inspector	Examiner	Signature and Certificate Number	Date
Oral	☐	☐		
Approved Simulator/Training Device 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.

☒ Approved -- Temporary Certificate Issued (Original Attached) ☐ Disapproved -- Disapproval Notice Issued (Original Attached)

Location of Test (Facility, City, State)	Duration of Test		
	Ground	Simulator/FTD	Flight

Certificate or Rating for Which Tested	Type(s) of Aircraft Used	Registration No.(s)

☐ Student Pilot Certificate Issued
☐ Examiner's Recommendation
☐ Accepted ☐ Rejected
☐ Reissue or Exchange of Pilot Certificate
☐ Special Medical test conducted -- report forwarded to Aeromedical Certification Branch, AAM-330

☐ Certificate or Rating Based on
☐ Military Competence
☐ Foreign License
☐ Approved Course Graduate
☐ Other Approved FAA Qualification Criteria

☒ Flight Instructor ☐ Ground Instructor
☒ Renewal
☐ Reinstatement
Instructor Renewal Based on
☐ Activity ☒ Training Course
☐ Test ☐ Duties and Responsibilities

Training Course (FIRC) Name	Graduation Certificate No.	Date

Date	Inspector's Signature (Print Name & Sign)	Certificate No.	FAA District Office

The marked and shaded areas of this section must be completed by the ACR.

Attachments:
☐ Student Pilot Certificate (Copy)
☐ Knowledge Test Report
☒ Temporary Airman Certificate
☐ Notice of Disapproval
☒ Superseded Airman Certificate

☒ Airman's Identification (ID)
Form of ID
Number
Expiration Date
Telephone Number

ID:
Name:
Date of Birth:
Certificate Number
E-Mail Address

RESERVED. Paragraphs 5-513 through 5-530.

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VOLUME 5 AIRMAN CERTIFICATION

CHAPTER 2 TITLE 14 CFR PART 61 CERTIFICATION OF PILOTS AND FLIGHT INSTRUCTORS

Section 19 Conduct a Pilot Type Rating Certification

5-726 PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

A. Oral: 1514.

B. Simulator: 1515.

C. Aircraft: 1516.

5-727 OBJECTIVE. This task provides background and policy information to enable the aviation safety inspector (ASI) (Operations) to determine if an applicant is eligible to receive an initial or additional type rating for a private, commercial, or Airline Transport Pilot Certificate (ATPC)under Title 14 of the Code of Federal Regulations (14 CFR) part 61. Successful completion of this task results in the issuance of Federal Aviation Administration (FAA) Form 8060-4, Temporary Airman Certificate (with a type rating), FAA Form 8060-5, Notice of Disapproval of Application, or a letter of discontinuance.

5-728 GENERAL. An aircraft type rating may be added to a private pilot, commercial pilot, or ATPC. However, type rating practical tests are conducted to a single standard for all certificate levels. Regardless of the grade of certificate held, an applicant must meet the standards for a type rating in the airline transport pilot (ATP) and/or type rating practical test standards (PTS). All type ratings within category and class held on a superseded certificate are carried forward to the new certificate level without further testing. For military pilots applying under the provisions of part 61, § 61.73, a type rating may be upgraded to the ATP level. Type ratings limited to visual flight rules (VFR) also may be upgraded to the ATP level without further testing. A type rating for a single-place (single-pilot station) airplane may not be upgraded to the ATP level.

A. Flight Instructor Recommendation. For an applicant applying for a type rating only, the “Instructor’s Recommendation” section of FAA Form 8710-1, Airman Certificate and/or Rating Application, does not need to be signed unless the applicant is retesting due to a previously failed practical test for the rating.

1) If the applicant is applying for a type rating to be added to an ATPC or for the original issuance of an ATPC in an airplane requiring a type rating, the applicant must have an endorsement in the applicant’s logbook or training records, from an authorized instructor, certifying satisfactory completion of the training required by the appropriate provisions of part 61, subpart G.

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2) If the applicant is applying for a type rating to be placed on a private or commercial pilot certificate, the airman must have an endorsement in the airman's logbook or training records, from an authorized instructor, certifying satisfactory completion of the training required by § 61.63.

B. Evaluator's Record. The "Evaluator's Record (Use For ATP Certificate and/or Type/Ratings)" section of FAA Form 8710-1 must be signed on the appropriate lines, even if the type rating practical test is conducted for the holder of a private or commercial pilot certificate.

C. Aircraft Undergoing Certification. For type ratings in aircraft that are undergoing type certification and which have not been issued a type designation, refer to Volume 5, Chapter 9, Section 3, Issue a Letter of Authorization in Lieu of a Type Rating.

D. Medical Certificate. The requirements for a medical certificate for a practical test are addressed in § 61.23. An applicant is not required to hold a medical certificate if the practical test is given in a flight simulator or flight training device (FTD).

E. Type Rating Limited to VFR. A type rating bearing the limitation "VFR ONLY" may be added to an existing certificate other than an ATPC under the provisions of § 61.63(e). This limitation may be added to an aircraft type rating not capable of instrument maneuvers or procedures required on a practical test. The practical test must be administered under the appropriate ATP PTS for an aircraft type rating limited to "VFR ONLY". A type rating bearing the limitation "VFR ONLY" may be added to an existing ATP certificate under the provisions of § 61.157(g). There is no provision for taking an initial practical test for an ATP pilot certificate in an aircraft that would require a VFR limitation. The practical test must be administered under the appropriate ATP PTS for an aircraft type rating limited to "VFR ONLY".

F. Amphibian Aircraft. The applicant must demonstrate both land and sea operations. If the applicant is unable to demonstrate both due to the capability of the aircraft, the amphibian type rating must bear the limitation "LIMITED TO LAND" or "LIMITED TO SEA" as appropriate.

5-729 PILOT TYPE RATING THAT MAY BE PERFORMED AS EITHER A SINGLE-PILOT OR WITH A SECOND IN COMMAND (SIC). Practical tests for pilot type ratings may be performed as either a single-pilot or with an SIC in accordance with § 61.43(b).

A. General. This policy guidance shows how to record whether the pilot type rating practical test was performed as a single-pilot or by using an SIC crewmember.

1) In a previous version of this order, the FAA had established policy that clarified the intent of 14 CFR part 91, § 91.531(a) and (b) for allowing practical tests for some pilot type ratings to be performed as either a single-pilot or with an SIC.

2) This policy addresses performing pilot type rating practical tests as a single-pilot crew composition or with an SIC pilot crewmember in:

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- Large airplanes that were certificated under Special Federal Aviation Regulation (SFAR) 41 where the airplane's type certificate (TC) authorizes single-pilot operations. Although SFAR 41 expired on September 13, 1983, many of the large airplanes that were certificated under SFAR 41 are still in active service (refer to § 91.531(a)(1)).
- Turbojet airplanes where the airplane's TC or Aircraft Flight Manual (AFM) allows for both single-pilot and two-pilot operations (refer to § 91.531(a)(2) and (b)).
- Commuter category airplanes that have a passenger seating configuration, excluding pilot seats, of nine seats or fewer where the airplane's TC authorized single-pilot operations (refer to § 91.531(a)(3)).
- Situations where the FAA may issue a letter of authorization (LOA) for authorizing single-pilot operations if that airplane is designed for and TC'd with only one pilot station (refer to § 91.531(b)).
- Situations where the FAA has issued grants of exemption from §§ 91.9(a) and 91.531(a)(1) (2) to some training providers that give single-pilot training.

3) The following are some makes and models of airplanes where applicants may perform the pilot type rating practical test as either a single-pilot or with an SIC. In the future, this list of airplanes may expand when more turbojet airplanes (that are commonly referred to as very light jets) receive certification with both single-pilot and two-pilot crew compliments.

- Cessna 501.
- Cessna 525.
- Cessna 551.
- Raytheon 390.
- Beech 300 airplanes that were certificated under SFAR 41.
- Beech 1900 and Beech 1900C airplanes that were certificated under SFAR 41;
- Empresa Brasileira de Aeronautica EMB 110 airplanes that were certificated under SFAR 41.
- Beech 2000.
- Swearingen Fairchild Aircraft Corporation SA-227-CC and SA-227-DC airplanes, certificated in the commuter category.
- Certain large airplanes that were certificated under SFAR 41, if the airplane's TC authorizes single-pilot operations.
- Certain turbojet airplanes, if the airplane's TC authorizes single-pilot operations.
- Certain commuter category airplanes if the airplane's TC authorizes single-pilot operations.

4) If an applicant obtains a pilot type rating by accomplishing one of these approved single-pilot training programs and a pilot type rating practical test, that applicant will be issued an LOA for single-pilot operations by the training provider. Currently, the training providers that hold this kind of grant of exemption and the airplanes authorized under their grant of exemption are:

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- Cessna Aircraft Company for its Cessna 550, Cessna S550, Cessna 552, and Cessna 560.
- Beech B300, B300C, and 1900D certificated under commuter category.
- Sierra Industries, Inc. for the Cessna 500 series airplanes, serial Nos. 0001 through 0349 only; those are equipped with STC No. SA8176SW or STC No. SA09377SC and either STC No. SA2172NM or STC No. SA645NW.
- M. Shannon and Associates for the Cessna 500, Cessna 550, and Cessna S550.
- Pan Am International Flight Academy for the Cessna 550, Cessna S550, Cessna 552, and Cessna 560.

5) When the airplane's Type Certificate Data Sheet (TCDS) or AFM specifically requires the crew composition to be a single-pilot, an applicant for that pilot type rating must perform the practical test as a single-pilot. The applicant must be tested on all of the applicable PTS areas of operation and tasks as a single-pilot. This requires the pilot to demonstrate, without assistance, the required PTS areas of operation and tasks as a single-pilot.

6) Where the FAA has provided for a crew composition with either a single-pilot crew or an SIC, the applicant may elect to perform the practical test as a single-pilot or with an SIC. The FAA has several ways of noting whether the practical test was performed as a single-pilot or with an SIC. This provision is provided for in accordance with §§ 61.43(b) and 91.531(b).

7) Questions about what aircraft are permitted to be operated with either of these pilot compositions may be directed to the FAA's General Aviation and Commercial Division, AFS-800, 800 Independence Avenue SW., Washington, DC 20591, (202) 267-8212.

B. Recording Procedures for Authorizing Single-Pilot Operations or Requiring the SIC Limitation on the Applicant's Pilot Certificate and Logbook.

1) An applicant who satisfactorily accomplishes the practical test as a single-pilot: the ASI (Operations) will issue the applicant the appropriate pilot type rating on the temporary airman certificate, and will record the results of the practical test in the applicant's logbook as: "[*DATE*] I certify that [*Name of applicant, certificate level and number*] satisfactorily accomplished the [*the pilot type rating*] practical test as a single-pilot in a [*make and model of aircraft*]." Example of an endorsement for recording the results of the practical test as a single-pilot in the applicant's logbook:

> *2/14/2008- I certify that Dean Chamberlain, ATP Certificate No. 1111111 satisfactorily accomplished the CE-525 pilot type rating practical test as a single pilot in a Cessna 525.*
>
> *Christine Clark, ASI, WP FSDO No. 7*

2) An applicant who satisfactorily accomplishes the practical test with an SIC crewmember: the ASI (Operations) will issue the applicant the appropriate pilot type rating on the pilot's temporary airman certificate with the limitation "[*make and model of aircraft*] Second in Command Required" and will record the results of the practical test in the applicant's logbook as: "[*DATE*] I certify that [*Name of applicant, certificate level and number*] satisfactorily

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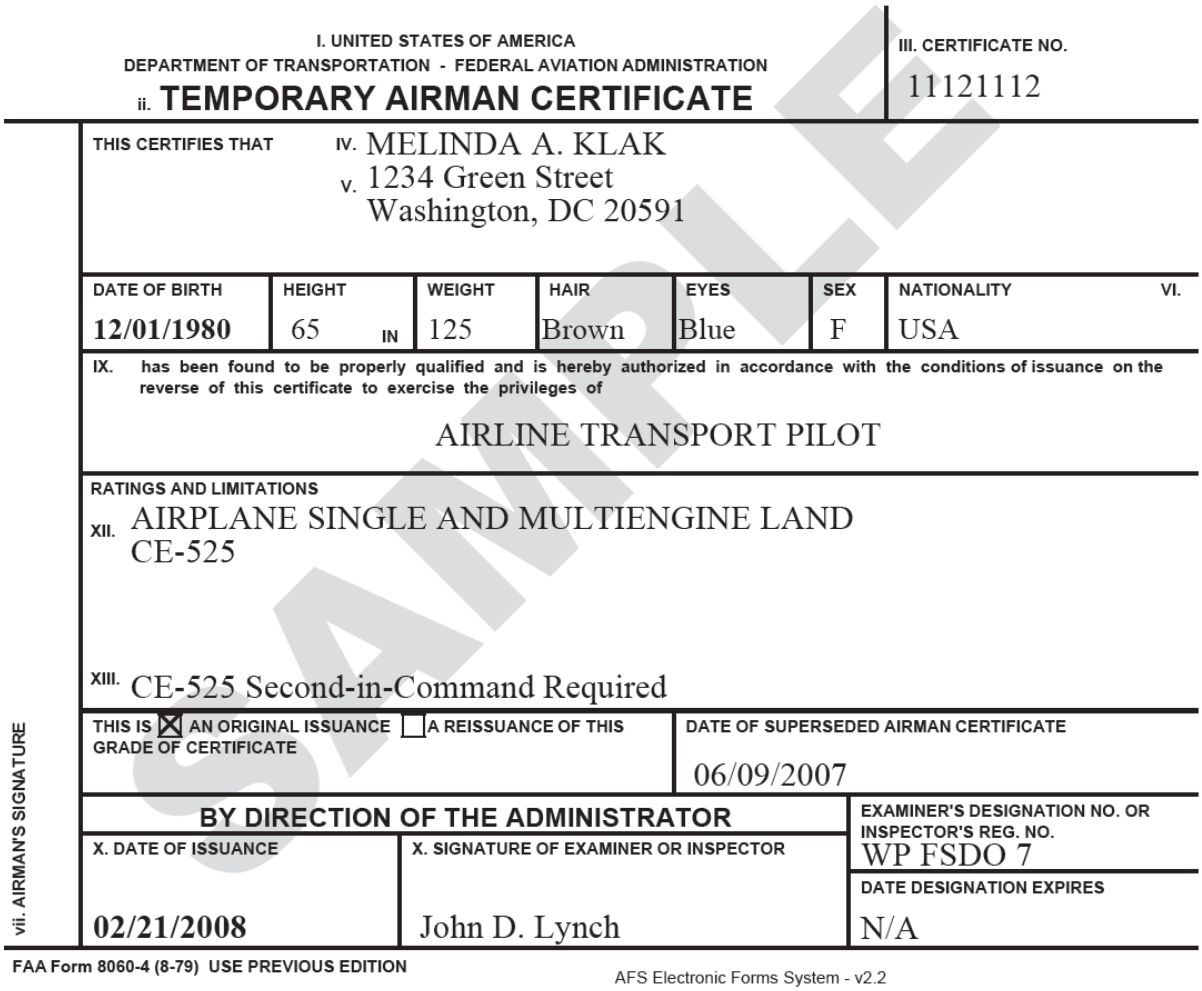
accomplished the [*the pilot type rating*] practical test in a [*make and model of aircraft*] with an SIC pilot crewmember." Example of an endorsement for recording the results of the practical test with an SIC pilot crewmember in the applicant's logbook:

> *2/14/2008- I certify that Dean Chamberlain, ATP Certificate No. 1111111 satisfactorily accomplished the CE-525 pilot type rating practical test in a Cessna 525 with a SIC pilot crewmember.*
>
> *Christine Clark, ASI, WP FSDO No. 7*

Figure 5-85, Sample FAA Form 8060-4, Temporary Airman Certificate—Pilot Type Rating with the SIC limitation (this example is for the CE-525 pilot type rating with the SIC limitation)



I. UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION
ii. TEMPORARY AIRMAN CERTIFICATE

III. CERTIFICATE NO. 11121112

THIS CERTIFIES THAT IV. MELINDA A. KLAK
V. 1234 Green Street
Washington, DC 20591

DATE OF BIRTH	HEIGHT	WEIGHT	HAIR	EYES	SEX	NATIONALITY VI.
12/01/1980	65 IN	125	Brown	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

AIRLINE TRANSPORT PILOT

RATINGS AND LIMITATIONS
XII. AIRPLANE SINGLE AND MULTIENGINE LAND
CE-525

XIII. CE-525 Second-in-Command Required

THIS IS ☒ AN ORIGINAL ISSUANCE ☐ A REISSUANCE OF THIS GRADE OF CERTIFICATE

DATE OF SUPERSEDED AIRMAN CERTIFICATE 06/09/2007

BY DIRECTION OF THE ADMINISTRATOR

X. DATE OF ISSUANCE 02/21/2008

X. SIGNATURE OF EXAMINER OR INSPECTOR John D. Lynch

EXAMINER'S DESIGNATION NO. OR INSPECTOR'S REG. NO. WP FSDO 7

DATE DESIGNATION EXPIRES N/A

vii. AIRMAN'S SIGNATURE

FAA Form 8060-4 (8-79) USE PREVIOUS EDITION

AFS Electronic Forms System - v2.2

SAMPLE

C. Removal of the "Second-in-Command Required" Limitation from a Pilot Type Rating on the Pilot Certificate. To remove the limitation, it is not necessary to complete the entire practical test as a single-pilot.

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1) All areas of operations/tasks approved for a flight simulator may be accomplished in that flight simulator for the purpose of removing the "Second-in-Command Required" limitation. However, this does not change any flight simulator requirements for the original issuance of the pilot type rating.

2) Satisfactory completion of an approved single-pilot training program and an end-of-course test of that program meet the requirements for removal of the "Second in Command Required" limitation.

3) Areas of operation include the following:

- Preflight preparation tasks: none;
- Preflight procedures tasks: all;
- Takeoff and departure phase tasks: all;
- In-flight maneuvers tasks: c, e, f;
- Instrument procedures tasks: all;
- Landings and approaches to landing tasks: all;
- Normal and abnormal procedures;
- Emergency procedures; and
- Postflight procedures tasks: all.

4) Additional areas include:

- Collision avoidance;
- Communication management; and
- Instrument flight rules (IFR) cross-country flight plan avionics loading.

5-730 BEECH MODEL 200 HEAVY AIRCRAFT. By letter of August 5, 1994, to the Small Airplane Directorate, ACE-100, Kansas City, Missouri, the Department of the Army, Headquarters, United States Army Aviation Center, Fort Rucker, Alabama, requested that aircraft type rating data applicable to Beech Model 200 aircraft eligible to be operated at more than 12,500 pounds gross weight, be amended as necessary to include all currently eligible aircraft. Accordingly, a consolidated list of all Beech Model 200 and derivative military aircraft eligible to be operated at more than 12,500 pounds gross weight is provided in Figure 5-92, Beech Model 200 and Military RC/FWC (Heavy Aircraft).

5-731 PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. This task requires knowledge of the part 61 rules and FAA policies, and qualification as an ASI (Operations). In addition, the ASI (Operations) should have completed the appropriate initial pilot type rating course or be considered "best qualified" by the Regional Office (RO). The ASI (Operations) must have completed an initial or recurrent pilot type rating course within the previous 12 months or hold an LOA or waiver authorizing that ASI (Operations) to conduct the practical test.

B. Coordination. This task requires coordination with the airworthiness unit and with the airmen records section of the Airmen Certification Branch, AFS-760.

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5-732 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- Title 14 CFR parts 1, 61, 91, 141, and 187 Appendix A, Methodology for Computation of Fees for Certification Services Performed Outside the United States;
- PTRS Procedures Manual (PPM);
- FAA-S-8081-5, Airline Transport Pilot and Aircraft Type Rating Practical Test Standards;
- FAA-S-8081-12, Commercial Pilot Practical Test Standards, if applicable; and
- FAA-S-8081-14, Private Pilot Practical Test Standards, if applicable.

B. Forms:

- FAA Form 8060-4, Temporary Airman Certificate (Figure 5-91);
- FAA Form 8060-5, Notice of Disapproval of Application (Figure 5-87); and
- FAA Form 8710-1, Airman Certificate and/or Rating Application.

C. Job Aids. Sample figures.

5-733 PROCEDURES.

A. Schedule Appointment. Advise the applicant to bring the following documents to the appointment:

- A properly completed FAA Form 8710-1;
- A private, commercial, or ATPC;
- An appropriate class of medical certificate Statement of Demonstrated Ability (SODA), if applicable;
- A knowledge test report, if applicable;
- An FAA-approved pilot school graduation certificate, if applicable;
- Personal logbook or other records substantiating the flight experience shown on the application form;
- The aircraft maintenance records;
- The aircraft airworthiness certificate;
- The aircraft registration;
- The Federal Communications Commission (FCC) aircraft station license, if applicable; and
- An acceptable form of photo identification.

B. Applicant Arrives for Appointment.

1) Collect and review the documents listed above.

2) Open PTRS file.

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C. Review Application. Verify that the information on the application (FAA Form 8710-1) is presented accurately and completely.

1) In section I, ensure that the applicant has checked "Additional Aircraft Rating" and "Private," "Commercial," or "ATP," as appropriate. Ensure that the applicant has checked any other applicable boxes.

2) Ensure that the remainder of the application is completed in accordance with the instructions attached to the form and the information in Volume 5, Chapter 1, Section 3, Phases of Certification.

3) If the applicant is applying for a private or commercial pilot certificate in conjunction with the type rating, ensure that the flight instructor has signed an endorsement no more than 60 days before the application was submitted.

4) In section III of the application, Record of Pilot Time, the applicant must list at least the aeronautical experience required for the airman certificate and rating sought. Graduates of part 141 pilot schools or 14 CFR part 142 training centers must provide their aeronautical experience in section III on the application even though the graduation certificate is evidence of having completed the course of training. If aeronautical experience has no bearing on the airman certification action being sought, it is not necessary for an applicant to complete section III. Flight instructor renewal applications, flight instructor reinstatement applications, ground instructor qualification applications, and pilot type rating applications would be examples where aeronautical experience would not have a bearing on the airman certification action and thus the applicant would not be required to complete section III. However, all applicants are encouraged to complete section III because FAA Form 8710-1 remains on file with the FAA and can be used to substantiate past aeronautical experience if a person were to ever lose his or her logbook.

D. Verify Applicant's Identity. Inspect acceptable forms of identification to establish the applicant's identity (refer to Volume 5, Chapter 1, Section 3). Compare the identification with the personal information provided on FAA Form 8710-1.

1) If the applicant's identity can be verified, proceed with the practical test.

2) If the applicant's identity cannot be verified because of lack of identification or inadequate identification, explain what types of identification are acceptable. Advise 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 this task. (Refer to Volume 7, Chapter 6, Conduct an Investigation of FAA Flight Operations to Determine Compliance.)

E. Establish Eligibility. Determine if the applicant meets the type rating requirements of § 61.63(d)(1) through (6), as appropriate.

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1) If the applicant is upgrading a pilot certificate, ensure that the applicant meets the general eligibility, aeronautical knowledge, aeronautical experience, and flight proficiency requirements for the grade of certificate sought.

2) Verify that the applicant holds an airman medical certificate appropriate to the certificate/rating sought.

3) Inspect the medical certificate to ensure that it does not bear any limitation that would make a special medical flight test necessary. (Refer to Volume 5, Chapter 8, Conduct a Special Medical Test—Title 14 CFR Part 67.)

4) Check the record of flight time in section III of the application to determine if the applicant has the minimum flight experience required for the type rating/grade of pilot certificate sought.

5) If the applicant is applying for a test based on graduation from an approved pilot school, inspect the applicant's graduation certificate to verify that the applicant meets the requirements of § 61.71.

6) Examine the applicant's logbook and/or other reliable record(s) to verify that all aeronautical knowledge, aeronautical experience, and the required instructor endorsements for ground and flight training are recorded.

7) If the applicant is upgrading a certificate or concurrently obtaining an instrument rating, examine the knowledge test report or test report from an approved school with knowledge test authority, as applicable.

8) If the applicant has checked the "Yes" box of section IV of the application, verify that the applicant meets the requirements of § 61.49.

9) Several questions have been raised concerning the standards and the testing to determine whether an applicant can read, speak, write, and understand the English language. While there are no PTS established to ascertain the applicant's English language ability, the following examples may be used as guidelines in this evaluation:

a) An ASI (Operations) may ask the applicant to listen to a tape recording of an air traffic control (ATC) clearance or instructions, and then ask the applicant to speak and explain the clearance or instructions back to the ASI (Operations) in the English language.

b) An applicant may be asked to write down in English the meaning of an ATC clearance, instructions, or a weather report, then asked to speak and explain the clearance, instructions, or weather report back to the ASI (Operations) in the English language.

10) The intent is not to require the applicant to read, speak, write, and understand the English language at college level standards. A common sense approach should be used in evaluating an applicant for this requirement (reference § 61.153(b)).

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F. Aircraft Requirements. Review, or arrange for an ASI (Airworthiness) to review, the applicant's aircraft maintenance records, logbooks, airworthiness certificate, and aircraft registration to determine if the aircraft is airworthy and suitable for this practical test. Ensure that a type rating exists for the aircraft and determine if the aircraft is certificated under SFAR 41 for single-pilot operation. After review, return the documents to the applicant.

G. Discrepancies. If a discrepancy that cannot be immediately corrected exists in any of the documents, return the application and all submitted documents to the applicant. Inform the applicant of the reasons for ineligibility, and explain how the applicant may correct the discrepancies.

H. Conduct Practical Test. After determining the applicant is eligible and meets all prerequisites for the type rating/certificate sought, accept the application and conduct the practical test. A preflight briefing must be conducted before the practical test. (Refer to Volume 5, Chapter 1, Section 4, Considerations for the Practical Test.)

1) Use the procedures and maneuvers outlined in the ATP and/or Type Rating PTS for the category of aircraft for which a type rating is sought.

2) The ASI (Operations) may give an applicant who is retesting credit for those areas of operation successfully completed on the previous practical test, provided the test was conducted within 60 days before the retest. If the previous test was conducted more than 60 days before the retest, the applicant must be tested in all areas.

3) When conducting type rating practical tests in turbojet airplanes for which a single-pilot is authorized, ensure that the single-pilot applicant satisfactorily performs all pilot duties without assistance.

4) Require applicants for type ratings on aircraft not listed in Figure 5-88 or 5-89 to present evidence that at least one aircraft of the type concerned has been issued a U.S. TC in accordance with 14 CFR part 21, § 21.175 (as a standard airworthiness certificate or a Special Airworthiness Certificate).

5) The aircraft, if type-certificated under § 21.175(b), will not be operated for any purpose other than the purpose for which the Special Airworthiness Certificate was issued.

I. Discontinuance. If the practical test is not completed for reasons other than unsatisfactory performance, issue the applicant a letter of discontinuance (refer to Figure 5-90, Letter of Discontinuance).

1) Return the application and all other submitted documents to the applicant.

2) Close the PTRS.

J. Unsatisfactory Performance. If the applicant did not meet the applicable standards for the certificate sought, inform the applicant of the reasons for the unsatisfactory performance.

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1) Prepare FAA Form 8060-5 in duplicate as per Volume 5, Chapter 1, Section 6, Issuance of Notices of Disapproval of Application. An example of a correctly completed form is found in Figure 5-87. In addition to those instructions:

a) Record areas of operation that were unsatisfactory or not completed. If specific procedures and flight maneuvers need to be repeated, record them on the form.

b) Indicate the number of the applicant's practical test failures for this certificate or rating.

2) Sign, date, and check the appropriate boxes on the form. Give the applicant a copy of FAA Form 8060-5 and retain the original for the certification file.

3) Retain the FAA Form 8710-1 and return all other submitted documents to the applicant.

K. Satisfactory Performance. When the applicant has satisfactorily met all requirements for the type rating/certificate sought, prepare FAA Form 8060-4 (refer to Figure 5-91), in accordance with the guidance in Volume 5, Chapter 1, Section 5, Issuance of Temporary Certificates.

1) Use Figure 5-88 or 5-89, as appropriate, for guidance on how to enter the type rating on FAA Form 8060-4.

2) Enter all previous category, class, and type ratings, including any limitations held by the applicant.

3) Enter the type rating under the appropriate airman certificate privileges.

4) Enter any required operating limitations such as "CV-PBY5 LIMITED TO SEA" or "N-B25 VFR ONLY."

5) For type ratings issued for SFAR 41 or commuter category aircraft when single-pilot competency was not demonstrated, enter the limitation "[*insert appropriate aircraft type*] SECOND-IN-COMMAND REQUIRED."

6) Verify all information on the form is correct. Sign the certificate and direct the airman to sign line VII of the form.

7) Retain the original for the file and give the applicant the copy of the temporary certificate.

8) If the pilot certificate is issued in a foreign country, refer to § 61.13(a) and part 187, appendix A.

L. Complete the Certification File. Complete the certification file and return to the applicant all submitted documents not forwarded to AFS-760.

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M. PTRS. Complete PTRS in accordance with the PPM.

5-734 TASK OUTCOMES. Completion of this task results in the issuance of one of the following:

- Temporary airman certificate;
- Notice of disapproval of application; or
- Letter of discontinuance.

5-735 FUTURE ACTIVITIES.

A. Applicant may return for another type rating.

B. Applicant may return for an upgraded certificate.

Figure 5-87, Sample FAA Form 8060-5, Notice of Disapproval of Application for Aircraft Type Rating

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
JOHN RONALD DOE 751 SOUTH MAIN STREET KEYWANA, NM 80010	TYPE RATING CE-500

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
CESSNA CITATION 500	1050	100	180

UPON REAPPLICATION YOU WILL BE REEXAMINED ON THE FOLLOWING:

V. INSTRUMENT PROCEDURES
TASK B. HOLDING PROCEDURES
TASK D. NONPRECISION INSTRUMENT APPROACH PROCEDURES
TASK E. CIRCLING APPROACH PROCEDURES

(First Failure) Oral Passed 08/12/2005

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.
08/14/2005	Rhett H. Forman Rhett H. Forman	SW01

FAA Form 8060-5 (5-80)

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Figures 5-88 and 5-89

The pilot type rating designations have been moved to the Web site at: http://162.58.35.241/e.gov/airmen/Type_Rating_Table.pdf. This Web site is maintained by the FAA Airmen Registry, AFS-760.

Figure 5-90, Letter of Discontinuance

FAA letterhead

[*date*]

[*applicant's name and address*]

Dear [*applicant's name*]:

On this date you successfully completed the oral portion of the practical test for a [*grade*] certificate with a [*category*] category and [*class*] class rating. The practical test was discontinued because of [*reason*].

If application is made by [*date 60 days from date of letter*], this letter may be used to show that the following portions of the practical test have been completed satisfactorily.

[*Pilot operations completed on the test*]

After [*expiration date*] you must repeat the entire practical test. This letter does not extend the expiration date as shown on the knowledge test results, medical certificate, or required endorsements.

Sincerely,

[*signature of the Aviation Safety Inspector (Operations) conducting practical test*]

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Figure 5-91, FAA Form 8060-4, Temporary Airman Certificate—Type Rating

I. UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION – FEDERAL AVIATION ADMINISTRATION
ii. **TEMPORARY AIRMAN CERTIFICATE**

III. CERTIFICATE NO. 112234459

THIS CERTIFIES THAT IV. JOHN RONALD DOE
751 SOUTH MAIN STREET
V. KEYWANA, NM 80010

DATE OF BIRTH	HEIGHT	WEIGHT	HAIR	EYES	SEX	NATIONALITY VI.
06-11-63	73 IN.	180	BROWN	GREEN	M	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

COMMERCIAL PILOT

RATING AND LIMITATIONS
XII. AIRPLANE SINGLE-ENGINE LAND & SEA
AIRPLANE MULTIENGINE LAND
CE-500

XIII.
THIS IS ☐ AN ORIGINAL ISSUANCE ☒ A REISSUANCE OF THIS GRADE OF CERTIFICATE

DATE OF SUPERSEDED AIRMAN CERTIFICATE 11/16/02

BY DIRECTION OF THE ADMINISTRATOR

X. DATE OF ISSUANCE 09/15/05

X. SIGNATURE OF EXAMINER OR INSPECTOR
Wesley B. Crusher
WESLEY B. CRUSHER

EXAMINER'S DESIGNATION NO. OR INSPECTOR'S REG. NO. AWS FSDO 01

DATE DESIGNATION EXPIRES --

vii. AIRMAN'S SIGNATURE
John Ronald Doe

SAMPLE

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Figure 5-92, Beech Model 200 and Military RC/FWC (Heavy Aircraft)

The following list identifies all current Beech Model 200 and Military RC/FWC (Heavy Aircraft) by either model and serial number, or by model, serial number, and Army Tail number for which a type rating is authorized. The maximum gross weight of these aircraft exceeds 12,500 pounds.

The BE-200 pilot type rating designation may be placed on the pilot certificate of airmen who successfully complete the appropriate practical examination in the listed aircraft or who can provide documentary evidence of eligibility under applicable provisions of 14 CFR part 61, § 61.73 based on flight experience in one of the model number/serial number aircraft listed below.

COMMERCIAL AIRPLANES

MODEL NUMBER	SERIAL NUMBER
B200	BB-1114, BB-1204, BB-1205, BB-1206, BB-1314, BB-1315, BB-1434, BB-1436, BB1441, BB-1443
B200CT	BN-1, BN-2, BN-3, BN-4
B200C	BL-65, BL-128, BL-130
200T	BT-1, BT-2, BT-3, BT-4, BT-5, BT-6, BT-7, BT-8, BT-9, BT-10, BT-11, BT-12, BT-13, BT-14, BT-15, BT-16, BT-17, BT-18, BT-19, BT-20, BT-21, BT-22, BT-28
B200T	BT-23, BT-24, BT-25, BT-26, BT-27, BT-29, BT-30, BT-31, BT-32, BT-33, BT-34, BT-35, BT-36, BT-37, BT-38

MILITARY AIRPLANES

MODEL NUMBER	SERIAL NUMBER
RC-12D	GR-1 thru GR-13 (Army Tail #'s 80-233778, 78-23144, 78-23145, 80-23373, 80-23374, 78-23141, 80-23371, 78-23142, 78-23143, 80-23376, 80-23377, 80-23542, 80-23375)
RC-12F	BU-11, BU-12, Supplement NAVAIR RC-12 FFF-1
RC-12G	FC-1, 2, 3 (Army Tail #'s 80-23372, 80-23379, 80-23380)
RC-12H	GR-1114 thru GR-19 (Army Tail #'s 83-24313 thru 83-24319)
PWC-12D	BP-7 thru BP-11

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RC-12K and RC-12N	FE-1 thru FE24* (Army Tail #'s 85-0149 thru 85-0155, 88-0325 thru 88-0327, 89-0268 thru 89-0276, 91-0516, 91-0517) *Army designated FE-10 thru FE-24 as RC-12N's
RC-12P	FE-25 and after

The following policy will be made applicable to the issuance of BE-200 pilot type ratings for Beech Model 200 aircraft authorized to be operated at weights above 12,500 pounds gross weight: Pilots of the United States Armed Forces who provide acceptable documentary evidence of eligibility under applicable provisions of § 61.73, may be issued a BE-200 type rating provided that:

> In addition to the documentary evidence of eligibility required under § 61.73, the pilot applicant is able to present an FAA-approved Flight Manual Supplement or military flight manual (i.e., Naval Air Training and Operating Procedures Standardization (NATOPS) Flight Manual, USAF-1, or other acceptable military document) authorizing operations at weights above 12,500 pounds.
>
> The applicant's qualifying flight experience was acquired in a Beech Model 200 aircraft that is eligible for operation at weights above 12,500 pounds gross weight, according to the Kansas City Aircraft Evaluation Group (AEG) (MKC/AEG).

RESERVED. Paragraphs 5-736 through 5-750.

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VOLUME 6 SURVEILLANCE

CHAPTER 5 PART 133 INSPECTIONS

Section 1 Conduct a Part 133 Base Inspection

6-1371 PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODE. 1635.

6-1372 OBJECTIVE. The objective of this task is to determine whether an applicant meets the Title 14 of the Code of Federal Regulations (14 CFR) part 133 regulatory requirements for initial certification, or whether an applicant continues to be able to conduct operations in compliance with the 14 CFR. Successful completion of this task results in either an indication of compliance or non compliance in the applicant's or operator's file.

6-1373 GENERAL.

A. Authority. Part 133, § 133.39 allows the Administrator to make the inspections and/or tests found necessary to ensure compliance with the regulations.

B. Flight Under Instrument Flight Rules (IFR). Upon inspection, part 133 operators, with authorization to conduct flight under IFR must present records showing they have a pilot who is rated and current and a rotorcraft that is certificated and equipped for flight under IFR. If the operator cannot produce this documentation during a base inspection, then the operations specifications (OpSpecs) authorizing flight under IFR should be surrendered or rescinded. This is notwithstanding § 133.27(c). The operator may retain the operating certificate for up to two years after discontinuing operations, but the operator may not retain IFR OpSpecs without having a current IFR pilot and appropriately equipped rotorcraft.

C. Operator Recordkeeping. The Administrator requires the operator to maintain records for the purposes of inspections and determining compliance with the regulations.

1) For each class of authorization, the operator must maintain current pilot records signed by the chief pilot. These records should include the following:

a) The rotorcraft classes each pilot is authorized to fly;

b) A record of each pilot's duty appointment, such as chief or assistant chief pilot, and the effective date of the appointment to each duty position;

c) The dates each pilot was assigned to operate external loads and the dates each pilot was removed from an assignment;

d) A copy of the appropriate logbook endorsements, letters of competency, or verification of a pilot's passing a knowledge and skill test for the class of external load that pilot is assigned to; and

e) A record of each pilot's operational checks.

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2) For Class D, the operator shall maintain the following records, which are signed by the chief pilot, in addition to those listed above:

a) All the pilots' training records signed by the chief pilot, reflecting the date(s) the pilot completed the initial or recurrent training; and

b) A record for each pilot of Class D currency within the past 12 months that specifies class load, make and model rotorcraft, and date of operations.

3) For flight under IFR, the operator shall maintain the following additional records for each pilot:

a) A list of assignments stating the class of load and make and model of rotorcraft each pilot is authorized to operate; and

b) An IFR currency record, a copy of logbook endorsement for 14 CFR part 61, § 61.57 instrument competency check, or a record of instrument currency (6 hours and 6 approaches) obtained within the past 6 months.

6-1374 GUIDELINES FOR DIFFICULTIES FREQUENTLY ENCOUNTERED IN PART 133 OPERATIONS.

A. Coordination. When an airworthiness inspector cannot attend the base inspection, the operations inspector should tailor the inspection to examine general airworthiness aspects.

1) The inspector should be prepared to conduct a general examination of the equipment, including the attaching means, the personnel lifting devices (PLD), and the normal and emergency release devices.

2) The inspector should observe actual operational checks performed by the pilots, such as the installation and removal of the attaching devices that are approved for pilots to install.

3) The inspector should coordinate with the airworthiness unit to ensure followup inspection of any items outside of the inspector's expertise.

B. Levels of Deficiency and Appropriate Corrective Action. This paragraph offers examples of various deficiencies that might occur in an inspection and the appropriate action to take for each situation. The actions described are based on two assumptions. First, even though a discrepancy is found, the base inspection is completed. 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. Secondly, an unsatisfactory report often calls for an enforcement action. Unsatisfactory reports are usually based on violations of certification or operating rules found during the inspection. The requirements for holding an external load operating certificate are never less than those for initial certification. There are intermediate stages between satisfactory and unsatisfactory results that may result in a satisfactory inspection with corrective action.

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1) A spot correction is a discrepancy that is not a violation and is corrected during the inspection. It may require no further action. An example of a spot correction is: the inspector does not find a facsimile of the external load operating certificate on board the rotorcraft. The corrective action is the inspector notifying the operator that the certificate is not in the rotorcraft. During the inspection, the operator makes a copy of the certificate and places it in the rotorcraft. No other corrective action is taken because no external load operation was found to be conducted without the certificate. However, the inspector marks the PTRS Data Sheet with an "I" to indicate that information, and notes that no facsimile of the certificate was found upon inspection, and that a spot correction was made.

2) Followup action is taken on deficiencies or lack of pilot knowledge that do not involve violations. An example of a correction that needs followup action is: at the time of inspection, a placard was missing from the rotorcraft and it was not readily available. However, there was no evidence that the aircraft was operated without it. As a corrective action, the inspector advises the operator verbally of the deficiency, then writes a letter to the operator outlining the discrepancy found during the inspection, makes a copy of the letter for the Flight Standards District Office (FSDO) file, and schedules a followup inspection. The inspector marks the PTRS Data Sheet with an "F" indicating followup.

3) A finding of unsatisfactory involves a blatant violation. An example of an unsatisfactory inspection is: during an inspection, the inspector finds that a new chief pilot has been designated who has not completed the knowledge and skill test. The inspector contacts the previous chief pilot and obtains verbal and written statements, as well as a copy of the previous chief pilot's last pay stub that proves the chief pilot ceased serving as chief pilot more than 30 days before the last external load operation conducted by the operator (See Volume 7, Chapter 6, Conduct an Investigation of FAA Flight Operations to Determine Compliance, and FAA Order 2150.3).

C. Presence of Chief Pilot and Other Pilots at Inspection. It is desirable to be able to spot check the knowledge of the chief pilot and other pilots of the operation. Spot check examination of pilots is necessary to verify continuing compliance because of the lack of annual proficiency checks in part 133 operations. The inspector, for example, should ask questions on the Rotorcraft-Load Combination Flight Manual (RLCFM), including weight and balance problems and, if applicable, questions on the OpSpecs for Class D and/or IFR operations. In addition, the inspector should ask the pilots to demonstrate the use of attaching means, the operation of normal and emergency release mechanisms, and the operation of the winch, as applicable. If, as a result of an inspection or test, the pilot or operator's competency is found questionable, the inspector takes action under Title 49 of the United States Code (49 U.S.C.) § 44709 and/or enforcement action (see Volume 7, Chapter 6, and Volume 4, Chapter 7, Section 1, Instrument Flight Rules (IFR) Offshore Operations).

D. Discrepancy Between FSDO Files and Home Base Files. If there is a discrepancy between the records kept in the FSDO file and those found during the base inspection, the inspector determines which records are current and/or approved and requires correction of the unapproved or outdated ones. For example, a new rotorcraft may have been used without having been added to the list of authorized rotorcraft. The list is no longer current, and the inspector may require an enforcement action to rectify the omission.

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E. An Expired Lease Agreement. For purposes of renewal, the exclusive use agreement must be current.

6-1375 INITIAL CERTIFICATION VS. LATER SURVEILLANCE. When this task is performed as the base inspection for original certification (during the demonstration and inspection phase of the certification process), there are some items that cannot be inspected. For example, an applicant for an external load operating certificate would not have certificate facsimiles or lists of authorized rotorcraft for examination. For an original certification, the inspector marks the "N/A" column on the base inspection job aid (Figure 6-63) for items that cannot be evaluated.

6-1376 PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. This task requires knowledge of the regulatory requirements of part 133 and FAA policies and qualification as an aviation safety inspector (ASI) Operations with knowledge of external load operations.

B. Coordination. This task requires coordination with the airworthiness unit.

6-1377 REFERENCES, FORMS, AND JOB AIDS.

A. References (Current Editions):

- 14 CFR parts 1, 27, 29, 61, 91, and 133;
- Advisory Circular (AC) 133-1, Rotorcraft External-Load Operations in Accordance with Federal Aviation Regulations Part 133;
- PTRS Procedures Manual (PPM); and
- FSDO files for this operator or applicant working file for initial certification.

B. Forms. FAA Form 8710-4, Rotorcraft External-Load Operator Certificate Application (for renewal or amendment).

C. Job Aids:

- Part 133 Base Inspection Job Aid (Figure 6-63).
- Sample letters and figures.

6-1378 PROCEDURES.

A. Pre-Inspection Activities.

1) Open PTRS file.

2) Review operator's records file at the FSDO for currency and applicability of the following:

- Congested Area Plans (CAP);
- Minimum Equipment Lists (MEL);

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- Training program (Class D only);
- RLCFM (except restricted category aircraft);
- Operating certificate;
- List of authorized rotorcraft;
- OpSpecs for Class D and IFR;
- Chief pilot's designation;
- Training records and evidence of knowledge and skill tests;
- Previous ramp inspections;
- Complaints;
- Operator's and pilots' violation histories;
- Operator's and pilots' accident/incident histories; and
- Associated records of surveillance.

3) Schedule the base inspection.

a) Schedule an appointment with the operator at the home base.

b) Advise the operator to have the chief pilot and at least one other pilot available during inspection, if possible.

c) Arrange to have at least the exclusive use rotorcraft available.

d) Remind the operator that the rotorcraft logbooks and engineering data must be available at the inspection, if practicable.

B. Conduct the Base Inspection.

1) Inspect the following records to determine compliance with the regulations.

a) Ensure that the operating certificate is available for inspection and lists all current authorizations. A copy must be on board each rotorcraft during part 133 operations. The original operating certificate and all facsimiles must be identical to the copy in the FSDO files.

b) Inspect the list of authorized rotorcraft to ensure that it reflects the rotorcraft currently available for use. A copy of this should also be on board each rotorcraft during part 133 operations. This list and all copies of it must be identical to the most current version in the FSDO files.

c) Examine the RLCFM of each rotorcraft for currency.

d) Check to see that the operator has copies of the current regulations, ACs, and current approved Rotorcraft Flight Manual (RFM) for each rotorcraft.

e) For CAPs, see Volume 3, Chapter 51, Section 6, Evaluate a Part 133 Congested Area Plan.

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f) Check for proof of ownership of the rotorcraft, or check the exclusive lease agreement, or notes on the agreement for exclusivity of use.

g) Check for the appropriateness of external load classification.

h) Determine each pilot's qualifications for the operation by examining the records of each pilot's logbook endorsement or knowledge and skill letter of competence.

i) For Class D, check training program to see if there are any unapproved changes. Ensure that the program matches the one filed in the FSDO.

j) For an IFR authorization, check that at least one pilot is current for IFR rotorcraft operations and that at least one rotorcraft is certificated and equipped for flight under IFR (Airworthiness Unit).

k) Examine the OpSpecs to determine if it is available for inspection and current for Class D and IFR.

1. Inspect the records of each pilot.

2. For pilots with Class D authorization, check their records to ensure initial or recurrent training (as appropriate) has been received within the preceding 12 calendar months.

3. For all pilots, ensure they have conducted rotorcraft external load operations of the same class and in a rotorcraft of the same type within the preceding 12 calendar months.

2) Spot check any available external load pilots. Examine the pilots verbally for competence in the following critical areas.

- Determine the pilots' understanding of the operating limitations outlined in § 133.45.
- Determine the pilots' knowledge of the OpSpecs (Class D and/or IFR).
- Ask the pilots to compute a weight and balance problem.

3) Inspect the rotorcraft (Airworthiness Unit).

C. Observe an On Site Operation. If possible, observe an actual external load operation. Do not request the operator to conduct one unless one is scheduled.

D. Satisfactory Examination Results.

1) For an initial certification, indicate "satisfactory" on the base inspection job aid and the certification job aid. Proceed with the other demonstration and inspection phase inspections.

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2) For a renewal, complete the application, prepare and issue a new certificate, and make a copy of the certificate for the FSDO file. If there are any changes from the initial certification or previous renewal, make a copy of the most recent certificate and indicate the changes from that copy to the current one. Indicate "satisfactory" on the base inspection job aid.

3) For followup items, advise the operator verbally of the deficiency and, if necessary, write a letter to the operator outlining the discrepancies found during the inspection (Figure 6-64). Schedule a followup inspection as appropriate.

E. Unsatisfactory Examination Results.

1) Inform the operator that the inspection was unsatisfactory. Confirm the deficiencies encountered in writing (Figure 6-65).

2) According to the severity of the problem, take one of the following actions:

- Schedule a followup inspection in 30 days; or
- Initiate an enforcement investigation (see Volume 7, Chapter 6).

F. PTRS. Close PTRS file.

6-1379 TASK OUTCOMES. Completion of this task results in one or more of the following.

- A record indicating a satisfactory inspection.
- A record indicating an unsatisfactory inspection.
- A record on file indicating deficiencies found during inspection that were corrected on the spot.
- A letter to the operator indicating any discrepancies found during inspection.

6-1380 FUTURE ACTIVITIES.

- Followup inspection with a change in frequency of the surveillance plan for unannounced inspection.
- Reexamination of pilot by conducting knowledge and skill test, as necessary.

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Figure 6-63. Part 133 Base Inspection Job Aid

14 CFR PART 133 BASE INSPEDCTION JOB AID	NAME OF OPERATOR:				
_____ Initial Certification _____ Renewal _____ Amendment _____ Surveillance	INSP. INITIAL	DATE	YES	NO	N/A
1. FSDO file reviewed					
2. Application properly completed for renewal/amendment					
3. Rotorcraft inspection					
a. Equipped with a fixed external cargo carrying device for Class A loads					
b. Equipped with a hook for Class B and C loads					
c. Equipped with a winch or other device					
d. 14 CFR § 133.49(a) placard in the cabin stating the class or classes for which approval has been given					
e. 14 CFR § 133.49(b) marking adjacent to the load carrying device -stating maximum load as per the rotorcraft					
f. Inspection of all aircraft:					
(1) Installation and function of the load carrying or attaching devices					
(2) Optional equipment installations inspected					
4. Operator has a copy of AC 133-1					
S. Operator has pertinent 14 CFR					
6. RLCFM's approved and current					
a. Ground crew briefing included					
b. All items required by 14 CFR § 133.47					
7. Operator holds Class D Authorization					
a. OpSpecs current and available for inspection					
b. Operator has use of an FAA-approved PLD					
c. Training records for each pilot participating in Class D operations					
d. Operator has use of operable ground and flightcrew -communica-tions equipment					
8. Operator has appropriate chief pilot and other pilot services					
a. All pilots passed knowledge test (14 CFR § 133.23(b))					
b. All pilots passed skill test (14 CFR § 133.23(c))					
c. All pilots have conducted FAR Part 133 Operations within previous 12 months					
9. Congested area operations conducted					
10. CAP approved					
11. Pilot understands 14 CFR § 133.45 limits					
a. Understands operating limitations in 14 CFR § 133.4					
b. Understands passenger carrying limitations during external-load operations					
c. Able to compute weight and balance					
d. Understands operating airspeed limit					
e. Understands limitations concerning restricted category rotorcraft					
f. Understands typical hand signals					
g. Understands content of OpSpecs					
12. Operator has IFR authorization					
a. At least one pilot IFR rated and current in rotorcraft					
b. At least rotorcraft certified and equipped for IFR flight					
c. IFR OpSpecs current and available for inspection					
13. External-Load Operator Certificates available for inspection/current					
14. Lists of authorized rotorcraft available for inspection/current					

REMARKS:

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Figure 6-64. Letter Outlining Inspection Discrepancies

FAA Letterhead

[*date*]

[*operator's name and address*]

Dear [*name of responsible person*]:

During an inspection of your facilities and equipment conducted on [date], the following discrepancies were noted:

- List specific discrepancies.
- List discrepancies that were corrected during the inspection.

The above items should be corrected within 30 days of receipt of this letter. A followup inspection is scheduled for [time and date]. If you are unable to correct these discrepancies before the next inspection or have any questions, please contact this office.

Sincerely,

[signature of Principal Operations Inspector (POI) or Certification Project Manager (CPM)]

Figure 6-65. Letter Indicating Unsatisfactory Inspection

FAA Letterhead

[date]

[operator's name and address]

Dear [name of responsible person]:

The inspection of your facilities and equipment conducted on [date] was unsatisfactory.

The following items were determined to be not in compliance with 14 CFR.

[List each specific item and the related 14 CFR, for example:

Pilot training records for [pilot's name] did not indicate satisfactory completion of the appropriate knowledge and skill tests (14 CFR § 133.37).]

This matter is now under investigation by the Federal Aviation Administration. We wish to offer you an opportunity to discuss the incident personally and submit a written statement. If you desire to do either, this should be accomplished within 10 days following receipt of this letter. Your statement should contain all pertinent facts and any extenuating or mitigating circumstances that you believe may have a bearing on the incident. If we do not hear from you within the specified time, our report will be processed without the benefit of your statement.

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Sincerely,

[signature of POI or CPM]

NOTE TO INSPECTORS: This letter may also be used as the Letter of Investigation to initiate enforcement action against a certificated operator.

RESERVED. Paragraphs 6-1381 through 6-1395.

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VOLUME 10 AIR TRANSPORTATION OVERSIGHT SYSTEM

CHAPTER 1 GENERAL

Section 5 Acronyms, Abbreviations, Terms, and Definitions

10-78 Acronyms and Abbreviations. The following acronyms/abbreviations and definitions apply to the Air Transportation Oversight System (ATOS):

Figure 10-9. Acronyms and Abbreviations

Acronym/Abbreviation	Definition
AC	Advisory Circular
ACAT	Air Carrier Assessment Tool
ACEP	Air Carrier Evaluation Process
ACOP	Air Carrier Oversight Profile
ADI	Assessment Determination and Implementation
AFS	Flight Standards Service
AFS-1	Director of Flight Standards Service
AFS-40	Flight Standards Quality Assurance
AFS-500	Flight Standards Training Division
AFS-900	Flight Standards National Field Office
AQP	Advanced Qualification Program
ASA	Aviation Safety Assistant
ASAP	Aviation Safety Action Program
ASIAS	Aviation Safety Information Analysis and Sharing
ASI	Aviation Safety Inspector
ASI-AD	Aviation Safety Inspector – Aircraft Dispatcher
ASI-AV	Aviation Safety Inspector – Avionics
ASI-CS	Aviation Safety Inspector – Cabin Safety
ASI-MX	Aviation Safety Inspector – Maintenance
ASI-OP	Aviation Safety Inspector – Operations
AST	Aviation Safety Technician
ATOS	Air Transportation Oversight System
AW	Airworthiness
CAD	Continuous ATOS Development
CAP	Comprehensive Assessment Plan
CAR	Civil Aviation Regulation
CAS	Continuing Analysis and Surveillance
CATT	Corrective Action Tracking Tool
CD	Air Carrier Dynamics
CFR	Code of Federal Regulations
CHDO	Certificate-Holding District Office
CMO	Certificate Management Office
CMT	Certificate Management Team
ConDOR	Constructed Dynamic Observation Report
CPD	Certification Process Document
CPM	Certification Project Manager

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Acronym/Abbreviation	Definition
CPT	Certification Project Team
CSI	Cabin Safety Inspector
CSOP	Certification Services Oversight Process
CTL	Certification Team Leader
DA	Design Assessment
DCT	Data Collection Tool
DEPM	Data Evaluation Program Manager
DP	Designated Person
DOD	Department of Defense
DOR	Dynamic Observation Report
DQG	Data Quality Guidelines
EC	Environmental Criticality
EFIS	Electronic Flight Information System
eLMS	electronic Learning Management System
EMP	Essential Maintenance Provider
EPI	Element Performance Inspection
ETOPS	Extended Operations
FAA	Federal Aviation Administration
FLM	Front Line Manager
FOIA	Freedom of Information Act
FSAS	Flight Standards Automation System
FSDO	Flight Standards District Office
GPS	Global Positioning System
HAZMAT	Hazardous Materials
ICAO	International Civil Aviation Organization
IEP	Internal Evaluation Program
InFO	Information for Operators
MEL/CDL	Minimum Equipment List/Configuration Deviation List
MIS	Mechanical Interruption Summary
MNPS	Minimum Navigation Performance Specification
MSL	Mean Sea Level
NTSB	National Transportation Safety Board
OAG	Official Airline Guide
OpSpecs	Operations Specifications
OPT	Oversight Prioritization Tool
ORA	Operations Research Analyst
OS	Operational Stability
OST	Office of the Secretary of Transportation
PA	Performance Assessment
PAC	Preapplication Checklist
PASI	Preapplication Statement of Intent
PH	Performance History
PI	Principal Inspector
PMT	Project Management Tool
PTRS	Program Tracking and Reporting Subsystem
RMP	Risk Management Process

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Acronym/Abbreviation	Definition
RVSM	Reduced Vertical Separation Minimums
SAFO	Safety Alert for Operators
SAI	Safety Attribute Inspection
SASO	System Approach for Safety Oversight
SAT	System Analysis Team
SDR	Service Difficulty Reporting Subsystem
SPAS	Safety Performance Analysis System
SRR	Specific Regulatory Requirement
TC	Team Coordinator (SAI)
U.S.C.	United States Code
VDRP	Voluntary Disclosure Reporting Program
eVID	Enhanced Vital Information Database

10-79 Terms and Definitions. The following terms and definitions apply to ATOS.

Figure 10-10. Terms and Definitions

Term	Definition
Acceptable Risk	The level of risk that is allowed to persist after controls are applied. Risk is acceptable when further efforts to reduce it would degrade the probability of success of the operation, or when a point of diminishing returns has been reached.
Aging Aircraft	An aircraft of any make or model that is 15 years old or older.
All-Cargo Operations	Any operation for compensation or hire that is other than a passenger-carrying operation. If passengers are carried, they are only those specified in Title 14 of the Code of Federal Regulations (14 CFR) part 121, § 121.583(a).
Air Carrier Assessment Tool (ACAT)	The ACAT documents a systematic review of the air carrier system elements using the risk indicators to identify conditions that may be creating hazards.
Air Carrier Configuration Checklist	A checklist provides the principal inspector (PI) or certification project manager (CPM) with series of questions to answer that pertain to the air carrier's or applicant's type of operation, types of aircraft and equipment, facilities, personnel, and other operations specifications (OpSpecs).
Air Carrier Dynamics	Aspects of the organization and environment that the air carrier directly controls and could enhance system stability and safety.
Air Carrier Maintenance Provider	Any person whom the air carrier has made arrangements with for the accomplishment of any of its maintenance, preventive maintenance, or alterations.
Air Carrier Oversight Profile (ACOP)	A tailored list of elements and Data Collection Tool (DCT) questions that apply to a specific air carrier or applicant.
Air Carrier Programs and Procedures	The subsystem (3.1) by which an air carrier ensures compliance with its programs and procedures for functioning within its operating environment.

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Term	Definition
Air Carrier System	A group of interrelated processes that are a composite of people, procedures, materials, tools, equipment, facilities, and software operating in a specific environment to perform a specific task or achieve a specific purpose, support, or mission requirement for an air carrier. For the purposes of new certification and continued oversight, seven air carrier systems have been defined, including: 1.0 Aircraft Configuration Control 2.0 Manuals 3.0 Flight Operations 4.0 Personnel Training and Qualifications 5.0 Route Structures 6.0 Airman and Crewmember Flight, Rest, and Duty Time 7.0 Technical Administration
Aircraft	The subsystem (1.1) by which an air carrier ensures that its aircraft meet airworthiness and operational safety requirements.
Aircraft Configuration Control	The system (1.0) by which an air carrier maintains the physical condition of the aircraft and associated components.
Airman and Crewmember Flight, Rest, and Duty Time	The system (6.0) that prescribes time limitations for air carrier employees.
Airman and Crewmember Limitations	The subsystem (6.1) by which an air carrier ensures that airmen or crewmembers meet the regulatory time limitations.
Air Transportation Oversight System (ATOS)	The system the Federal Aviation Administration (FAA) uses to provide regulatory oversight of part 121 air carriers.
Applicant	An individual, group, or organization seeking new operating authority or, in the case of an existing air carrier, a modification to their operating authority.
Approved Routes/Areas	The subsystem (5.1) by which an air carrier ensures that it maintains the facilities to support its approved routes and areas of operation.
Aviation Safety Information Analysis and Sharing (ASIAS)	A facility for the integration, analysis, and sharing of aviation safety data and information.
Authority Attribute	A clearly identifiable, qualified, and knowledgeable person with the authority to establish and modify a process.
Baseline Date	The date automatically generated from the Certificate Management Team's (CMT) initial Comprehensive Assessment Plan (CAP). It is updated when the bottom-line assessment, with appropriate action, is documented for Design Assessments (DA) and Performance Assessments (PA).
Certificate Management Team (CMT)	This team is responsible for the oversight functions of a specific air carrier. The CMT develops and executes a CAP tailored to a specific air carrier.
Certification Process Document (CPD)	An electronic document with work instructions to be accomplished during the certification process.

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Term	Definition
Certification Project Manager (CPM)	The CPM is the primary FAA spokesperson throughout the Air Transportation Oversight System (ATOS) initial certification process. The CPM is responsible for ensuring that all certification job functions are complete.
Certification Project Team (CPT)	This team is responsible for the oversight functions of a specific applicant during initial certification. The CPT develops and executes a CAP (CAP tailored to an applicant's proposed operation).
Comprehensive Assessment Plan (CAP)	The applicant or air carrier-specific assessment plan developed by the CPT or CMT during initial certification or at the annual planning meeting. The CAP documents the planned assessments for the applicant or air carrier at the system element level.
Constructed Dynamic Observation Report (ConDOR)	The ConDOR allows data collection activities to be requested or assigned with instructions to inspect and report on specific areas of immediate concern outside of the normal assessment schedule.
Contract Maintenance	Any maintenance, preventive maintenance, or alterations accomplished by an "air carrier maintenance provider."
Control Attribute	Checks and restraints that are designed into a process to ensure a desired result.
Corrective Action Tracking Tool (CATT)	This tool is used to track corrective actions required of the certificate holder that result from DAs and PAs, or other oversight functions that are not required to be tracked by another system. The CATT cannot be used to replace documentation requirements specified in other guidance.
Crewmember and Dispatch Qualifications	The subsystem (4.3) by which an air carrier ensures that crewmembers and dispatchers are qualified.
Criticality	The likelihood that a failure of an air carrier system, subsystem, or element could lead to an unsafe condition.
Data Collection Tool (DCT)	DCTs are tools such as Element Performance Inspections (EPI), Safety Attribute Inspections (SAI), ConDORs, and Dynamic Observation Reports (DOR) that support DAs and PAs.
Data Evaluation Program Manager or Data Reviewer	The CPT or CMT member responsible for reviewing inspection reports and records to ensure they meet data quality guidelines (DQG).
Design Assessment (DA)	The ATOS function that measures an applicant's or air carrier's operating systems at the element level for compliance with the full intent of regulations and safety standards, including the requirement to provide service at the highest level of safety in the public interest.
Due Date	The required or expected completion date for DAs or PAs.
Dynamic Observation Report (DOR)	The DOR allows inspectors to record certain observations outside the comprehensive assessment planning process. These observations may involve any part 121 air carrier at any location, at any time.
Data Quality Guideline (DQG)	These guidelines help determine the acceptable levels of data quality during the evaluation of inspection records. Refer to Volume 10, Chapter 2, Section 6, Table 10-1, Specific Data Requirements, and Table 10-2, Data Dimensions Table.

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Term	Definition
Essential Maintenance	Essential maintenance encompasses any Required Inspection Item (RII) accomplished on wing after any maintenance or alteration. This maintenance, if done improperly or if improper parts or materials were used, would result in a failure effect that would endanger the continued safe flight and landing of the airplane. Essential maintenance is the accomplishment of the air carrier designated inspection item on wing. Essential maintenance does not encompass any off-wing maintenance.
Essential Maintenance Provider (EMP)	An EMP is a maintenance provider who is used by the part 121 air carrier to accomplish the inspection portion of an on-wing RII.
Element	One or more interrelated actions completed to support an air carrier subsystem. Elements are the level that design and performance is assessed for all part 121 carriers.
Element Performance Inspection (EPI) Data Collection Tool (DCT)	The ATOS tool designed to collect data to help the CPM or PI determine if an air carrier adheres to its written procedures and controls for each system element, and that the established performance measures for each system element are met.
En Route Inspection	An inspection of the in-flight operations of a certificate holder within the total operational environment of the air transportation system.
Environmental Criticality (EC)	Aspects of the air carrier's surroundings that could lead to or trigger a failure in one of its systems, subsystems, or elements, and potentially create an unsafe condition.
Flight Operations	The system (3.0) that pertains to aircraft movement.
Front Line Manager (FLM)	FLMs provide first-level supervision to subordinate employees and manage the activities of one operating unit, project, or program area. FLMs report to middle or senior managers.
Gate	A set of prerequisites to proceed to the next step.
Ghost Icon	This symbol (commonly referred to as a "Ghost Icon") represents a DA that was scheduled in a previous quarter, but not resourced, and this element should compete for resources in the current quarter. This symbol will appear to the right of the green line and on the due date of the "missed" assessment meaning at the end of the quarter, not 30 days later. The symbol appears only in Draft and Final versions of the CAP and does not appear in history or in reports. When the cursor is placed over the symbol, the date of the missed assessment appears. The ghost icon has no other automation functionality.
Ghost Icon	This ghost icon symbol represents a PA that was scheduled in a previous quarter, but not resourced, and this element should compete for resources in the current quarter. This symbol will appear to the right of the green line and on the due date of the "missed" assessment, meaning at the end of the quarter, not 30 days later. The symbol appears only in the Draft and Final versions of the CAP and does not appear in history or in reports. When the cursor is placed over the symbol, the date of the missed assessment appears. The ghost icon has no other automation functionality.

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Term	Definition
Hazard	A condition, event, or circumstance that could lead or contribute to an unplanned or undesired event.
High Criticality	A high likelihood that a failure in this element could lead to an unsafe condition.
Human Factors	The relationship between people and their operating environment (e.g., people, procedures, materials, tools, equipment, facilities, and software).
Identified Risk	A level of risk that is identified through various analysis techniques.
Information for Operators (InFO)	An InFO message contains valuable information for operators that should help them meet administrative requirements or certain regulatory requirements with relatively low urgency or impact on safety. InFOs contain information or a combination of information and recommended action to be taken by the respective operators identified in each individual InFO.
Interfaces Attribute	The air carrier identifies and manages the interactions between processes.
Job Task Item (JTI)	JTIs are bulleted items below many DCT questions to detail the tasks that may be performed to properly answer the question. The inspector is required to answer the higher-level EPI or SAI question and should use the attached JTIs as guidance only.
Key Personnel	The subsystem (7.1) by which an air carrier ensures that qualified management and technical personnel with operational control are in place and conducting operations at the highest level of safety.
Low Criticality	A low likelihood that a failure in this element could lead to an unsafe condition.
Maintenance Organization	The subsystem (1.3) by which an air carrier ensures the continuous airworthiness and servicing of aircraft in accordance with its approved procedures.
Maintenance Personnel Qualifications	The subsystem (4.1) by which an air carrier ensures maintenance personnel are properly certificated and authorized to perform assigned duties.
Manual Management	The subsystem (2.1) by which an air carrier prepares and maintains the manuals for the use of and guidance to its personnel.
Manuals	The system (2.0) for controlling the information and instruction that defines and governs air carrier activities.
Medium Criticality	A moderate likelihood that a failure in this element could lead to an unsafe condition.
Mitigate	Action is needed to reduce the level of risk.
Monitor	The risk level is within accepted limits and no action is required beyond the normal planning cycle.
Off Hour	Activities that occur outside of normal FAA duty hours, including weekends.
Operations Research Analyst (ORA)	The ORA is responsible for assisting the CMT in collecting and analyzing air carrier data.
Operational Control	The exercise of authority over initiating, conducting, or terminating a flight.

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Term	Definition
Operational Release	The subsystem (3.2) by which an air carrier ensures all activities required for safe dispatch and continuation of a flight to its destination.
Operational Risk	An identified risk that has the potential to affect the operations of the air carrier.
Operational Stability	Aspects of the air carrier's organization and environment that they do not directly control and when managed effectively, could enhance system stability and safety.
Operations Specifications (OpSpecs)	Legal and binding contract between an air carrier and the FAA that documents specifically how the air carrier operation is conducted.
Other Programs	This subsystem (7.2) is used to determine if the operator's Safety Program (Ground and Flight) meets all applicable requirements of 14 CFR, incorporates the safety attributes, and identifies any shortfalls in the operator's procedures (Ground and Flight).
Outsourcing	The practice of contracting out internal air carrier programs, processes, and traditional air carrier functions, such as maintenance, training, and ground handling to external, independent vendors, suppliers, and contractors. Oversight for the quality of the overall process remains with the air carrier.
Oversight Prioritization Tool (OPT)	Use of the OPT is optional. Only one OPT is required for each air carrier when the PI chooses to use the OPT. It is advisable that the PI utilize the OPT or their normal risk-based prioritization methodology. When the PI utilizes the OPT for planning surveillance, it can assist in: 1) Prioritization of air carrier maintenance providers to determine specific data collection requirements, 2) Identifying areas of concern or criticality, and 3) Providing data that allows the PI to target resources toward maintenance providers with the highest risk.
Passenger-Carrying Operation	Any aircraft operation carrying any person, unless the only persons on the aircraft are those identified in § 121.583(a). An aircraft used in a passenger-carrying operation may also carry cargo or mail in addition to passengers.
Preapplication Statement of Intent (PASI)	The completed PASI is a document used in initial certification that denotes an intent by the applicant to initiate the certification process and which allows the FAA to plan activities and prepare to commit resources.
Performance Assessment (PA)	The ATOS function that measures an applicant's or air carrier's operating systems at the element level to confirm that the air carrier is following its procedures and that they are producing the intended result.
Performance History	The results of the air carrier's operations over time.
Performance Measure	A description of the desired outcome of an air carrier element process. It is used to determine whether the desired results of that process were achieved.
Personnel Training and	The system (4.0) by which air carrier personnel are trained and

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Term	Definition
Qualifications	qualified.
Principal Inspector (PI)	The PI is the primary FAA spokesperson and decision maker for his or her specialty in all applications of ATOS.
Procedures Attribute	Documented methods for accomplishing a process.
Process	Policies and procedures designed to produce a desired result or end product for an air carrier.
Process Measurement Attribute	The air carrier measures and assesses its processes to identify and correct problems or potential problems.
Ramp Inspection	An inspection of a certificate holder's operation while the crewmembers and aircraft are on the ground. A ramp inspection is an effective method for evaluating a certificate holder's ability to prepare both the aircraft and crew for a flight to be conducted.
Random Inspections	Random inspections are unplanned cockpit en route inspections, cabin en route inspections, ramp inspections, or spot inspections. With management authorization, ATOS 1.2-trained part 121 air carrier inspectors may perform these inspections on any part 121 air carrier at any location, at any time.
Records and Reporting Systems	The subsystem (1.2) by which an air carrier manages the records used to show that the aircraft are airworthy, reflect the air carrier's use of its procedures, and ensure the issuance of required reports.
Responsibility Attribute	A clearly identifiable, qualified, and knowledgeable person who is accountable for the quality of a process.
Risk	An expression of the severity of potential consequences and the likelihood of their occurrence that could result if a hazard is not addressed or corrected.
Risk Analysis	The injury and damage potential of the events related to the hazards in terms of the likelihood of occurrence and the severity of resulting consequences.
Risk Assessment	The process by which the results of risk analysis is used to make decisions.
Risk Factors	The risk factors identify what must be fixed or controlled in order to reduce the level of risk.
Risk Indicator	A grouping of safety- and/or performance-related data that reflects an area of potential risk that is expected to have sufficient data or justification to calculate a representative value for a particular air carrier system, subsystem, or element.
Risk Likelihood Values	Frequent—Continuously experienced. Probable—Will occur often. Occasional—Will occur several times. Remote—Unlikely, but can reasonably be expected to occur.
Risk Management (RM)	An interactive management activity dedicated to assuring that risk is identified, documented, eliminated, or controlled within defined program risk parameters.
Risk Management Process (RMP)	This process is the ATOS function that identifies hazards and ensures that the air carrier either eliminates the hazards or controls the associated risk at acceptable levels. This process also allows the FAA to manage resources in accordance with

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Term	Definition
	risk-based priorities.
Risk Severity Values	High—Loss (or breakdown) of an entire system or subsystem, accident, or serious incident. Medium—Potential moderate damage to an aircraft, partial breakdown of an air carrier system, or violation of regulations or company rules. Low—Potential poor air carrier performance or disruption of the carrier's operations.
Route Structures	The system (5.0) by which an air carrier maintains facilities on approved routes.
Safety	The state in which the risk of harm to persons or property damage is reduced to, and maintained at or below, an acceptable level through a continuing process of hazard identification and RM. The quality of a system that allows the system to function under predetermined conditions with an acceptable level of risk.
Safety Alert for Operators (SAFO)	A SAFO is an information tool that alerts, educates, and makes recommendations to the aviation community. This community includes air carrier certificate holders, fractional ownership program managers, and 14 CFR part 142 training centers.
Safety Attributes	The qualities of a system, (e.g., authority, responsibility, procedures, controls, process measurements, and interfaces) that should be present in well-designed air carrier systems and processes.
Safety Attribute Inspection (SAI) Data Collection Tool (DCT)	The ATOS tool used to collect data about regulatory compliance in order to assess the adequacy of the design of the processes associated with each system element for an air carrier. The tool is organized in accordance with six safety attributes.
SAI Team	The team of inspector(s) or a single inspector assigned to accomplish an SAI for a specific CPT or CMT.
Scope of Operation	Description of an applicant or air carrier's activities in air commerce.
Show Cause Order	In determining the "fitness" of an applicant for air carrier authority, the Office of the Secretary of Transportation (OST) examines four areas of the applicant's business: managerial competence, operating and financial plans, the compliance record, and ownership structure.
Spot Inspection	Inspect in-progress maintenance operations for compliance with specific methods, techniques, and practices in the certificate holder's inspection and maintenance programs.
System	A group of interrelated processes which are a composite of people, procedures, materials, tools, equipment, facilities, and software operating in a specific environment to perform a specific task or achieve a specific purpose, support, or mission requirement for an air carrier.
System Analysis Team (SAT)	A team that includes participants from the CMT, the air carrier, other FAA organizations, and other non-FAA entities (e.g., the manufacturer) to accomplish further analysis and determine root causes of system deficiencies.

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Term	Definition
System Approach	The structured, safety-driven means by which the FAA certifies and conducts oversight activities on elements that are designed to interact predictably within the air carrier's systems and subsystems.
System Reconfiguration	The air carrier may be required to modify its system, or the FAA may modify its authorizations.
System Safety	The application of special technical and managerial skills to identify, analyze, assess, and control hazards and risks associated with a complete system. System safety is applied throughout a system's entire life cycle to achieve an acceptable level of risk within the constraints of operational effectiveness, time, and cost.
System Stability	The state of balanced constancy and safety that results when an air carrier is able to effectively manage both the aspects of their organization and their environment—those that they control directly and those over which they have no direct control.
Technical Administration	The system (7.0) for addressing all other aspects of air carrier certification and operations.
Training Program	The subsystem (4.2) by which an air carrier ensures that personnel are trained to perform assigned duties in accordance with the air carrier's approved programs.
Transfer	To reassign the risk to another entity that has the authority to address the risk.
Unacceptable Risk	Risk that cannot be tolerated by the managing activity. It is a subset of identified risk that must be eliminated or controlled.

RESERVED. Paragraphs 10-80 through 10-94.

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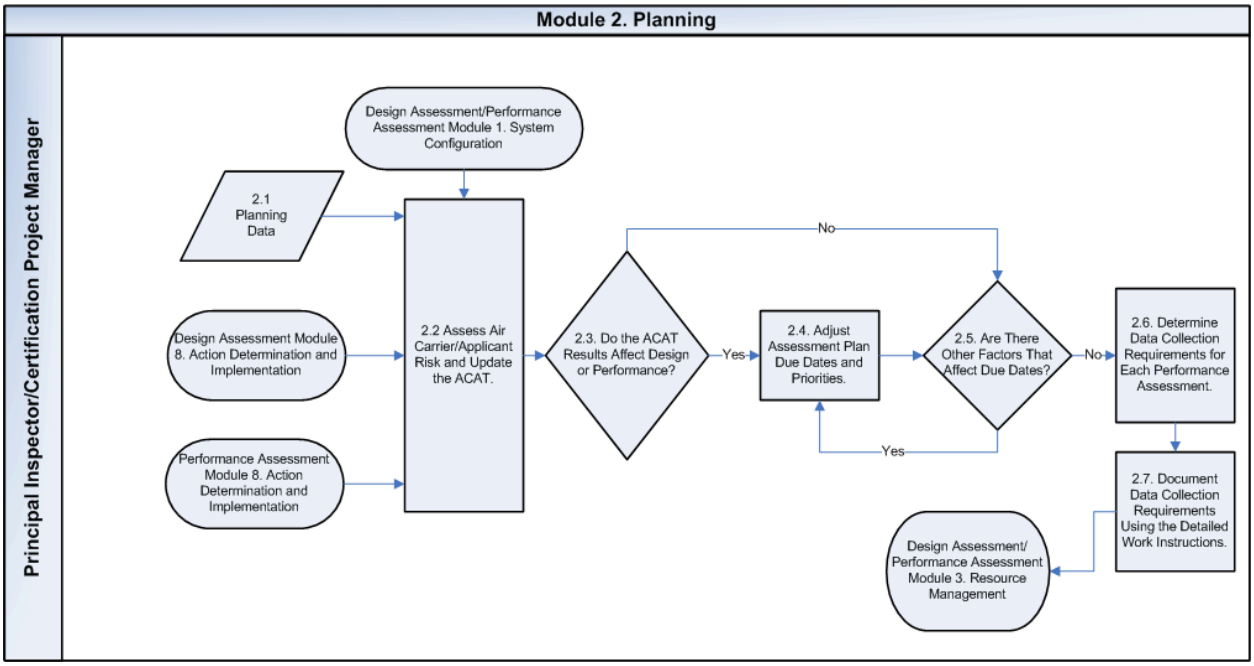
VOLUME 10 AIR TRANSPORTATION OVERSIGHT SYSTEM

CHAPTER 2 PROCEDURES FOR DESIGN AND PERFORMANCE ASSESSMENT

Section 2 Design and Performance Assessment Planning

Figure 10-15. Module 2: Planning



10-117 INTRODUCTION. The planning process develops a risk-based data collection plan to support Design Assessments (DA) and Performance Assessments (PA).

A. Assess the System and Operating Environment. The first step in this process is to assess the air carrier's or applicant's systems and operating environment for indications of hazards or conditions that may create hazards. This process helps to highlight any area on which to focus special oversight attention, and is used to prioritize the elements. The 28 risk indicators contained in the Air Carrier Assessment Tool (ACAT) help determine the special focus areas. (See Figure 10-16, Risk Indicator Quick Reference Guide.)

B. Use the Comprehensive Assessment Plan (CAP). The CAP is a tool for planning, documenting, and tracking DAs and PAs. The principal inspector (PI) or certification project manager (CPM) uses the CAP to adjust priorities and due dates of assessments, and to record the reasons for making adjustments.

10-118 PLANNING DATA. The PI or CPM assembles a design or performance planning data package from the Safety Performance Analysis System (SPAS) and other sources. The Operations Research Analyst (ORA) assists, as required. The planning data packages provide information to consider when assessing an air carrier's or applicant's systems and operating environment for hazards. The data are used to update the ACAT and CAP during the annual planning meeting and quarterly planning review. Refer to the Risk Indicator Report for the risk

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indicator score, the percentage of increase above baseline, and the CAP priority at https://avssharepoint.faa.gov/afs/AWP/ATOS. The PI or CPM should consider the percentage of increased of risk when prioritizing the work program in the CAP. The data are organized by risk indicator and by system, subsystem, and element. (See flowchart process step 2.1.)

A. Source of Planning Data. Another important source of planning data is input from the Certificate Management Team (CMT) or Certification Project Team (CPT) members.

B. Data Reports Systems.

1) The PI, CPM and other assigned aviation safety inspectors (ASI) must use the information from the following sources during their annual planning meeting and quarterly planning reviews:

- Safety Performance Analysis System (SPAS) Voluntary Disclosure Reporting Program (VDRP) Query and Browse function,
- SPAS Air Transportation Oversight System (ATOS) Data Package,
- The Commercial Aviation System Profile (CASP) Report, and
- InFOs or SAFOs applicable to the air carrier or applicant.

2) The SPAS ATOS Data Package and SPAS VDRP Query and Browse function are accessible through the SPAS database. (Future enhancements are planned for the SPAS VDRP Query and Browse function.) The CASP Report consists of aggregate level information that is published on a quarterly basis. It includes current status and trended historical data. Inspectors can compare the aggregate CASP Report data to carrier-specific data accessible through the SPAS performance measures, profiles, and reports.

NOTE: The CASP Report is available at: https://employees.faa.gov/org/linebusiness/avs/offices/afs/divisions/hq_region/afs20/media/CASP.pdf.

C. Concern Status. If any SPAS flags are in the concern status, the PI should determine what led to the flag being in this status and what information is necessary to understand the concern status. The PI or CPM makes a determination regarding any action needed to address the issues raised by the concern status flag. In some cases, the PI may be aware of circumstances that led to the concern status, while in other cases a review of underlying data, other performance measures, or additional information may be required.

D. Initial Certification Planning Meeting. The CPT holds an initial planning meeting following the formal application meeting to assess the applicant's systems and operating environment. During the meeting, the CPT completes the initial ACAT and CAP using the application package and other data.

E. Annual Planning Meeting. The CMT holds an annual planning meeting to assess the air carrier's systems and operating environment using the ACAT, review the CAP, and conduct recurrent training as necessary. This team-based approach provides checks and balances. Other important goals for this meeting include building and improving team skills, establishing team

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norms, communicating CMT expectations, and sharing information. All CMT members should participate in the annual planning meeting whenever circumstances permit. Some members of the CMT may have to meet more often if they need to retarget planned data collection or collaborate on other oversight issues. Document attendance at the annual planning meeting in a manner acceptable to the office manager.

F. Quarterly Planning Review. PIs conduct a quarterly planning review that determines if a changed condition for the air carrier can impact the ACAT or the CAP. The air carrier's performance history, including the results of recent DAs and PAs, is accessible through ATOS data packages and the Assessment Determination and Implementation (ADI) Tool. PIs must also consider applicable InFOs or SAFOs that were published during the quarter.

10-119 ASSESS AIR CARRIER/APPLICANT RISK AND UPDATE THE ACAT. PIs and CPMs use a series of risk indicators to identify conditions in an air carrier's or applicant's systems or operating environment that may create hazards. The risk indicators contain inspector consideration word pictures and a risk scale that guides the PI in completing the tool. The PI uses the results of the ACAT as an input to determine the priority and planned due date of DAs and PAs in the CAP. (See flowchart process step 2.2.)

A. Risk Indicators. Risk indicators are groupings of safety- and/or performance-related data that reflect areas of potential hazards and prioritize air carrier oversight plans.

1) Risk Indicator Categories. The two major categories for risk indicators (System Stability and Operational Risks) reflect the notion that internal and external events affect air carrier systems. Two subject areas further subdivide the categories. These subject areas focus the indicators on the operational, performance, and environmental risks most likely to impact an air carrier's systems.

a) The System Stability category is divided into Operational Stability and Air Carrier Dynamics.

1. Operational Stability—Organizational and environmental factors the air carrier cannot control directly, but can effectively manage to improve system stability and safety.

2. Air Carrier Dynamics—Organizational and environmental factors the air carrier can directly control to improve system stability and safety.

b) The Operational Risks category is divided into Performance History (PH) and Environmental Criticality (EC).

1. PH—Measures the results of the air carrier's operations over time.

2. EC—Aspects of the air carrier's operating environment that may lead to or trigger a systemic failure.

2) Risk Indicator Format. All risk indicators use a standard format. Each risk indicator contains a condition statement and background material, inspector consideration word

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pictures, a risk scale, references, possible data sources, and suggestions for determining the impact of that indicator on air carrier systems, subsystems, and elements. The complete set of risk indicators is at the end of this section.

3) Inspector Considerations. The inspector considerations are word pictures for each risk indicator to provoke thought and aid assessment; they are neither exhaustive nor conclusive. A rating scale corresponds to the word pictures. On the rating scale, the number one represents the lowest level of concern, while number seven represents the highest level of concern. If the indicator does not apply, the lowest level of concern is assigned.

B. ACAT. The ACAT is an automated tool used to record the PI's or CPM's assessment of elements using the risk indicators and calculate a risk score. The risk score is used to prioritize elements for planning certification and oversight activities.

1) ACAT Frequency. The ACAT is completed during initial certification and updated when the air carrier certificate is issued. After that, the ACAT undergoes an annual update, quarterly review, and a revision when there are any major changes to the risk indicators.

2) ACAT Comments. CMT members may review and comment on the ACAT at any time throughout the year. During each quarterly review, the PI should consider CMT member comments.

3) Completing the ACAT. The PI or CPM reviews the risk indicators to determine if any of the conditions apply to the air carrier or applicant. The PI or CPM selects the appropriate word picture and risk value after determining that the condition exists and that the risk indicator applies to one or more of the air carrier elements. An alternative way to complete the ACAT is to review each element and determine if any of the risk indicators apply to a particular element. Either way, the PI or CPM should explain the rationale for a selection in the "Element Notes" text box on the ACAT. The PI or CPM can complete this review in one sitting or save the ACAT as a draft and return to it after reviewing and gathering more data. After completing the initial ACAT, the PI or CPM revises only those risk indicator values that have changed. After making the necessary changes, the PI or CPM finalizes and saves the ACAT.

10-120 DETERMINE IF THE RESULTS OF THE ACAT AFFECT DESIGN OR PERFORMANCE. See flowchart process step 2.3.

A. DA. The PI or CPM should evaluate the results of a modified ACAT to determine the impact on the air carrier's system design. If the ACAT results affect DA, the PI or CPM determines whether the assessment plan baseline dates or priorities need adjustment.

NOTE: The following only pertain to initial certification.

1) Elements Related to Federal Aviation Administration (FAA)-Approved Programs or Operations Specifications (OpSpecs). Elements that pertain to FAA-approved manuals, programs, or that are related to OpSpecs are assigned the highest priority. Instructions for these Safety Attribute Inspections (SAI) will state that the CPT must verify the supplied data for each question.

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2) Additional High-Priority Elements. The CPM may select additional elements that were identified as high priority in the CAP. Instructions for these SAIs will state that the CPT must verify applicant-supplied data.

3) Remaining Elements. At a minimum, instruction for all remaining elements will require verification of the following:

- Applicant self-audited SAI data for the procedure questions (section 1), and
- Any questions related to specific regulatory requirements.

B. PA. If the ACAT results do not affect design, the PI or CPM determines if the ACAT results affect performance. If so, the PI or CPM should follow the process for planning PA. If the ACAT affects neither design nor performance, adjusting the plan baseline dates or priorities may not be necessary.

10-121 ADJUST ASSESSMENT PLAN DUE DATES AND PRIORITIES. The PI or CPM can adjust the DA and PA plan due dates and priorities based on the results of the ACAT or other factors. (See flowchart process step 2.4.)

A. The CAP. The CAP is a 5-year plan that for each element contains a planned DA and a planned PA using audit-based intervals to determine when an assessment is due.

1) Baseline Intervals.

a) DA. The baseline interval for all DAs is once every 5 years. Once the initial DA for an element is complete, the PI or CPM must schedule and complete all ATOS DAs in a 5-year frequency, unless the PI or CPM documents in the ATOS database a risk-based rationale for not doing so.

b) PA. The baseline interval for PAs is once every 6 months for high-criticality elements, once a year for medium-criticality elements, and once every 3 years for low-criticality elements. After completing the initial PA for an element, the PI or CPM must schedule another assessment within the applicable baseline intervals.

2) Baseline Dates.

a) DA. Baseline dates are automatically generated 5 years after the quarter in which the previous DA was completed. The DA is complete when the PI or CPM reviews the collected data and documents the bottom-line assessment with the appropriate action.

b) PA. Depending on the element's criticality, baseline dates are automatically generated 6 months, 1 year, or 3 years after the quarter in which the previous PA was completed. After the PI or CPM collects and reviews the PA data and documents the appropriate action of the bottom-line assessment, the PA is complete.

3) Due Dates. The due date and the baseline date are the same unless the PI or CPM makes a manual adjustment to the due date based on ACAT results or other factors. The PI or

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CPM must provide an explanation for adjusting the due date. Changing due dates may extend or reduce the interval between assessments.

4) Priority. The CAP initially sorts and displays all of the applicable elements based upon their ACAT risk score value from highest to lowest. Each applicable element also receives a priority number starting at one (for the highest priority). The PI or CPM can manually adjust the priority of any element. The PI or CPM must provide an explanation for manually adjusting an element priority.

B. Initial Certification. The initial CAP for an applicant contains a planned DA and PA for each applicable element. The CPM uses the following guidance to develop the initial CAP.

1) Finalizing the CAP. When the CPM initially finalizes the CAP, all DAs and PAs will have a due date in that quarter. During the certification, the CPM manually adjusts the dates based on the applicant's schedule of events. The baseline assessment plan for the CMT should divide assessments equally among the four quarters of each year.

a) DA. After the applicant has been certified, the new CMT needs to establish a plan that balances the DA activities over a 5-year period. The PI should plan to complete DAs for about one-fifth of the applicable elements each year.

b) PA. PAs are balanced over a 3-year period. The PI should plan to complete PAs for high-criticality elements within 6 months, within 1 year for medium-criticality elements, and should plan to complete about one-third of the low-criticality elements each year.

2) Adjustments to CAP Priorities. The initial CAP displays the elements sorted by the risk score derived from the ACAT starting with the element that has the highest potential risk. The CPM adjusts the DA priorities and enters an explanation for the adjustment, based on the following factors:

a) DA.

1. Air Carrier Programs Requiring FAA Approval or Acceptance. The CPM assigns the highest priority to, and the CPT accomplishes elements associated with, air carrier programs that specifically require documentation in FAA-approved or FAA-accepted manuals.

2. DAs Completed by the Applicant. The applicant must complete a self-audit using the SAI. In addition to the DAs required by paragraph 10-120, the CPM determines which additional applicant self-audited elements the CPT completing the DA will verify. The CPT will review and accept all other elements.

b) PA Air Carrier Programs Requiring Demonstration. The CPM assigns the highest priority to the air carrier programs with elements that specifically require demonstration in tabletop exercises, simulated evacuations, and proving tests. The CPT accomplishes reviews of such demonstrations.

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C. Continued Operational Oversight. The CAP for an air carrier contains a planned DA and PA for each applicable element. The PI uses guidance in subparagraph 10-121D to adjust the CAP.

D. Adjustments to CAP Due Dates or Priorities.

1) Explanation of Reason for Adjustment. The PI can adjust the DA due date or priority for any element with an explanation of the reason for the adjustment.

2) Adjusting the CAP. The PI may adjust the CAP due to the following:

a) The results of a bottom-line assessment for that element.

b) The status of the element in relation to the 6-month, 1-year, or 3-year PA review cycle, or the 5-year DA cycle.

c) Any increase or decrease in the risk score over time. Refer to the Risk Indicator Report to review the percentage of increase above baseline and CAP priority at https://avssharepoint.faa.gov/afs/AWP/ATOS.

d) Assignment of DA completion dates based on the highest risk.

e) New elements added because of major changes to air carrier operations.

f) Unassigned work in the previous planning cycle that may have a higher priority level for the current planning cycle.

NOTE: A fundamental principle of ATOS is that PAs and DAs with the highest risk-based priorities should always have resources assigned to them. This principle primarily applies to PAs and/or DAs that are due within the current planning quarter. It does not require adjusting due dates from the future quarters based solely on the ranking of an element.

10-122 OTHER FACTORS THAT AFFECT DUE DATES. If a DA or PA displays a ghost icon for an element in the draft and final versions of the CAP, refer to https://avssharepoint.faa.gov/afs/AWP/ATOS to access "ACAT Risk Indicators." This SharePoint site contains "reports" for each carrier and will provide the percentage of increased risk above baseline for the element and may be a reason for priority adjustments. The PI or CPM should consider any other factor that may affect the plan due dates and priorities. (See flowchart process step 2.5.) Upon determining that such a factor exists, the PI or CPM may adjust either the priority or the due date and include an explanation. The PI or CPM uses his or her knowledge and experience in making this assessment. Examples include:

- The PI knows that a planned change to a program is coming in a future quarter; and
- National guidance directs the CMTs to perform a focused DA or PA.

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10-123 DETERMINE THE DATA COLLECTION REQUIREMENT FOR EACH PA. After considering all factors that affect performance, the PI or CPM determines the data collection requirements for each PA. (See Figure 10-15, Module 2: Planning.)

A. Element Performance Inspections (EPI). The EPI Data Collection Tool (DCT) is for PAs. The PI or CPM needs to determine how many EPI DCTs to complete to obtain the data needed in order to assess air carrier performance for each element. Typically, an inspector has only one EPI assigned for a specific PA. He or she may complete multiple activities as part of that single EPI. PIs or CPMs may assign EPIs to more than one inspector in a PA. For example, PIs or CPMs may want to assign EPIs to different inspectors for each aircraft fleet, for certain geographic areas, or for different training programs.

B. Oversight Prioritization Tool (OPT). Use of the OPT is optional. Only one OPT is required for each air carrier when the PI chooses to use the OPT. It is advisable that the PI utilize the OPT or their normal risk-based prioritization methodology. When the PI utilizes the OPT for planning surveillance, it can assist in:

1) Prioritization of air carrier maintenance providers to determine specific data collection requirements,

2) Identifying areas of concern or criticality, and,

3) Providing data that allows the PI to target resources toward maintenance providers with the highest risk.

C. Off-Hour Decision Aid. The PI is required to know when to initiate the use of the Off-Hour Surveillance Decision Aid and how to process the results. There does not need to be an hour-for-hour correlation between the amounts of work the air carrier does during FAA off hours and the off-hour surveillance. The emphasis needs to be on identifying potential issues related to the air carrier's management of its processes.

1) Off-Hour Decision Aid. The Off-Hour Decision Aid (see Volume 10, Chapter 5, Section 1) instructs the user to match the capabilities of the air carrier to manage its off-hour activities or programs with a series of word pictures that address several dimensions (see Volume 10, Chapter 1, Section 5, Figure 10-10, Terms and Definitions, for a definition of off hour). Each dimension results in a score that, when taken together, produces a scoring range that indicates the effectiveness of the operator's off-hour activities. To complete the decision aid properly, the CMT will need to apply his or her knowledge of the carrier along with their assessment as to the prevalence and magnitude of the issues. The decision aid is designed to assist in these assessments and subsequent action planning.

2) Useful Data. Examples of useful data may include the use of EPI 1.3.7 maintenance providers and/or EPI 1.3.4, Required Inspection Items (RII), and include in the PI instructions the requirement to identify the amount and type of activities going on during off hours at the repair station (or other air carrier maintenance providers). If the PI needs more specific information about the hazard or risk, he or she may use a Constructed Dynamic Observation Report (ConDOR). The PI may also contact the specific air carrier for information regarding their off-hour activities. This may include the types of activities occurring during

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off hours, location of off-hour activities, management and supervision of off-hour activities, and interface with air carrier maintenance providers and other contracted activities.

10-124 DOCUMENT DATA COLLECTION REQUIREMENTS USING THE DETAILED WORK INSTRUCTION. The PI or CPM documents the data collection requirements using detailed work instructions after considering all the factors that affect design or performance. For PA, instructions help to ensure that timely, high-quality data collection focuses on the areas the PI or CPM determines. (See flowchart process step 2.7.)

A. Instructions Help Ensure Timely, High-Quality Data. The CAP provides PIs with a plan tailored to the current oversight requirements for a specific air carrier.

B. Instructions Prioritize Activities and Set Timelines for the Start and Completion of the Activities by Certain Dates. The data collection period should be before the assessment due date to allow time for the PI or CPM to review the data and make an assessment.

C. Resource Requirements. PIs and CPMs should provide specific instructions to assist the Front Line Manager (FLM) in making assignments, including any special expertise, training, or background the inspectors assigned to the activity should have.

D. DA. The PI or CPM determines if a team or individual inspector should complete the SAI.

E. PA. Instructions ensure that PIs or CPMs obtain the data they need to assess the element. Timely, high-quality data are focused in the areas that the PI or CPM determines. PIs should provide specific instructions to ensure that activities are performed at appropriate locations and times for comprehensive and timely response to the questions. PIs or CPMs can use instructions to supplement or clarify DCT questions.

F. Other Relevant Information That the Instructions May Include:

- Location of the air carrier system documentation.
- Focused area of assessment.
- Type of fleet if there are program differences.
- Distressed air carrier, labor unrest, or other risk indicator information.
- Information obtained from the ADI tool.
- Any supplementary information the principal needs to make the assessment.

G. Examples of Quality Work Instruction.

1) DA. This Safety Attribute Inspection (SAI) will start on or about [date]. Perform at (airline name) headquarters (HQ) and the certificate management office. Complete a comprehensive review of the Data Collection Tool (DCT) and the applicable (airline name) policy and procedures. The team coordinator (TC) will schedule and conduct a meeting to discuss coordination of activities. Determine the (airline name) point of contact (POC) before starting the assessment. Complete and save to the master record by April 30, 2005.

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2) PA. This Element Performance Inspection (EPI) will start on or about [date]. Complete a comprehensive review of the Data Collection Tool (DCT) and review the previous Safety Attribute Inspection (SAI) to become familiar with the applicable (airline name) policy and procedures. Perform activities at a minimum of five locations including Chicago O'Hare International Airport (ORD) and Orlando International Airport (MCO). Complete and save to the master record by (date).

10-125 OTHER DATA COLLECTION REQUIREMENTS. It is possible that a DA or PA is not required, but that some additional data are necessary either to aid the decisionmaking process or to update the SAI question responses and comments. When appropriate, consider ConDORs along with other planned oversight. The ConDOR may be appropriate in the following instances:

A. Evaluation. To evaluate program, policy, or regulatory changes.

B. Unique Situations. To address focused or unique situations in response to local, regional, or national requirements.

C. Targeted Data Collection. To collect targeted data for specific areas of immediate concern.

D. As an Action Item. As an action item in the risk management process (RMP) action plan.

E. Document Small Changes. To document minor changes to the air carrier's system (e.g., changes to the individual identified by the certificate holder as having responsibility and/or authority over the process).

F. Substitute for the DA. If the air carrier presents a revision to a manual that only changes a reference, a DA may not be necessary. The PI or CPM can generate a ConDOR instead of planning for a DA if a DA has already occurred.

10-126 RETARGETED CAP. Throughout the year, the CMT collects, reviews, reports on, and analyzes performance data and environmental factors so that PIs can make timely and consistent adjustments to the CAP.

A. Continual Monitoring and Adjustment. CMTs must obtain and continually monitor data for air carriers experiencing growth, financial distress, personnel reductions, labor unrest, and other organizational changes. The office manager or PI should not wait for formal notification of a problem before acting on identifying potential hazards and their associated risks. Reports such as the quarterly published CASP, accessible on the SPAS homepage; and VDRP data and ATOS national rollup data reports available through the ATOS database in the "News and Documentation" section may assist with this determination.

B. Use Financial Condition and Growth Decision Aids. If performance data or environmental factors indicate that the air carrier is experiencing significant changes in the operating environment that may affect its ability to balance resources, size, and organizational structure with operational requirements, then the CMT must use the Financial Condition

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Assessment Decision Aid and the Growth/Downsizing Assessment Decision Aid located in the inspector's handbook to determine if it is necessary to retarget DAs or initiate the ATOS RMP.

C. The Importance of Retargeting Oversight. Retargeting oversight is an integral part of the dynamic CAP. The PI determines any oversight retargeting requirement when oversight or external data identify problems. Retargeting does not automatically delete or remove any information contained in the current CAP. It is not negative, nor does it mean the original CAP has flaws. It is normal for a CMT to retarget oversight several times a year based on the analysis of data or changing circumstances.

1) Analysis of Collected Data. Retargeting oversight allows for continuous update of the plan based on the analysis of data the CMT members collect. This should not be a response to CMT internal considerations such as staffing or budget constraints.

2) Retargeting Oversight on a Calendar Basis. The PI can retarget CAP oversight as often as necessary, but should not retarget on a calendar basis to close out a planning cycle. Continuously retargeting oversight to the same elements within a CAP upon identifying performance deficiencies is ill advised. Deficiencies warrant conducting a DA for those elements.

3) Focusing Additional Resources. If oversight retargeting is appropriate to focus additional resources in an area of concern, the PI must determine which elements of the ACAT are related to the area of concern. The PI can retarget oversight for the entire air carrier or for selected systems, subsystems, and elements.

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Figure 10-16. Risk Indicator Quick Reference Guide

Risk indicators are a first step to identifying hazards that should be addressed by the air carrier.		
Environmental Criticality (EC)—Aspects of the air carrier's surroundings that may lead to or trigger a systemic failure with the potential of creating an unsafe condition.		
EC-01	Age of Fleet	The age of an air carrier's fleet can impact its systems.
EC-02	Varied Fleet Mix/Configuration	A varied fleet mix and/or mixed fleet configuration can significantly alter an air carrier's safety profile and the potential for failure in its systems.
EC-03	Change in Aircraft Complexity	Changes to the complexity of an air carrier's fleet can significantly affect an air carrier's safety and the potential for failure in its systems.
EC-04	Outsource (Maintenance, Training, Ground Handling)	The use of independent vendors, suppliers, and contractors, depending on a number of factors, could heighten the risks associated with various air carrier operations. Effective management of these contract arrangements is a must.
EC-05	Seasonal Operations	Short-term operations may present their own unique risk(s) and may require attention and preparation by the air carrier.
EC-06	Relocation/Closing of Facilities	Relocating or closing a facility may adversely affect operational and system stability at an air carrier.
EC-07	Lease Arrangements	Aspects of lease arrangements may be sources of risk at air carriers and must be effectively managed.
EC-08	Off-hours Activity	Air carrier management of off-hour (i.e., as outside normal FAA hours, including weekends) activity can be prone to risk.
Performance History (PH)—Results of the air carrier's operations over time.		
PH-01	Enforcement Actions	Enforcement actions can help identify the air carrier's safety profile and any area of risk in its systems.
PH-02	Accidents/Incidents/ Occurrences	Data regarding accidents, incidents, and occurrences may provide insights into areas of risk at an air carrier.
PH-03	Department of Defense Audits	Department of Defense (DOD) audit findings help to identify hazards and their associated risks. Audit data may provide insights into systemic problems in the design and performance of an air carrier's systems.
PH-04	Voluntary Disclosures	The type and content of an air carrier's self disclosures, and the effectiveness of the air carrier's corrective actions, can assist in risk assessment.
PH-05	Safety Hotline/Complaints	Excessive or repetitive safety hotline and other complaints against an air carrier may assist in identifying and isolating areas of risk. Complaints can aid the air carrier in managing and controlling corrective and followup actions.
PH-06	Voluntary Programs Data	Air carrier voluntary program data may be useful for hazard or risk identification. Such data can aid the air carrier in managing corrective and followup actions.
PH-07	Surveillance Indicators	Surveillance data from the Safety Performance Analysis System (SPAS), Program Tracking and Reporting Subsystem (PTRS), applicable Information for Operators (InFO) and Safety Alerts for Operators (SAFO), and the Air Transportation Oversight System (ATOS) help to identify trends in air carrier performance and can assist with identifying risks in an air carrier's system design.

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Operational Stability (OS)—Organizational and environmental factors the air carrier cannot directly control, but can manage effectively to improve system stability and safety.		
OS-01	Key Management SPAS Indicators	Changes in key management personnel can significantly impact an air carrier's system and operational stability.
OS-02	Financial Conditions	Air carriers that experience adverse financial conditions may have higher risk.
OS-03	Change in Air Carrier Management	Changes in management personnel other than key management can significantly impact an air carrier's system and operational stability.
OS-04	Turnover in Personnel	A high turnover of operations or maintenance personnel can dramatically increase the potential for risk in an air carrier's systems.
OS-05	Reduction in Workforce	A reduction in the air carrier's workforce can dramatically increase the potential for failure in an air carrier's systems.
OS-06	Rapid Growth/Downsizing	Times of significant change such as rapid expansion or downsizing can impact air carrier operations due to the possible misalignment of resources and operational requirements.
OS-07	Merger or Takeover	Air carriers must effectively manage mergers or takeovers to ensure continued compliance and safe operating practices.
OS-08	Labor–Management Relations	A poor or deteriorating labor–management relationship can create risk.
Air Carrier Dynamics (CD)—Organizational and environmental factors that the air carrier can directly control to improve system stability and safety.		
CD-01	New/Major Changes to Program	Safety issues may develop from new or changed programs and may increase the potential for noncompliance with existing processes and controls.
CD-02	Continuing Analysis and Surveillance System (AW Only)	Air carriers with a poorly functioning Continuing Analysis and Surveillance System (CASS) can overlook and improperly manage increased levels of risk.
CD-03	Safety Management	Air carriers who do not have a Safety Management System (SMS) may not understand or adequately control hazards to operational safety.
CD-04	Relationship with the FAA	The air carrier's relationship with its assigned FAA personnel may provide insights into the air carrier's compliance posture and safety culture.
CD-05	Human Factors	Risk may exist due to human lapses in the air carrier's design and/or performance.

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Figure 10-17. EC-01 Age of Fleet

Condition: The age of an air carrier's fleet can impact its systems.

Background: Currently, the average jet in the U.S. commercial fleet is 13 years old. From the FAA's perspective, aging aircraft are defined as aircraft of any make or model that are 15 years or older. Many aircraft of the current U.S. commercial fleet are considered aging aircraft. The age of the fleet must be considered for developing a surveillance plan.

Risk Score	Inspector Considerations
1–2	The air carrier does not have an aging fleet. The air carrier's procedures, controls, interfaces and process measurements appear to adequately address the requirements of an aging fleet.
3–5	Concern exists regarding the air carrier's ability to manage an aging fleet due to considerations such as: Inadequate management of operational risk associated with aging aircraft. Inadequate aging aircraft identification process. Ineffective internal and/or external communications flow regarding the maintenance and operational requirements of an aging fleet. Inadequate corrective action plan (CAP). Air carrier maintenance program and related infrastructure inadequate to meet the enhanced requirements associated with aging aircraft. The air carrier has aircraft just approaching the timeline for aging aircraft and dealing with aging aircraft is a new or unknown component of its profile.
6–7	Concern exists that the air carrier does not have a process to identify and evaluate the aging aircraft in its fleet. The air carrier has not demonstrated appropriate or effective management of the situation. Concern exists that the air carrier's processes to manage an aging aircraft fleet appear to be inadequate at most levels.

Guidance References (current editions): Not applicable.

Data Sources: Aircraft Evaluation Group (AEG), operations specifications (OpSpecs), air carrier and industry fleet lists, Aviation Safety Information Analysis and Sharing (ASIAS), and Safety Performance Analysis System (SPAS).

Impact on ATOS System, Subsystem, and Elements: ATOS systems contain elements that may pertain to aging aircraft, particularly in the airworthiness systems, subsystems, and elements. Focus on the area of concern and attempt to relate it to the affected elements in these systems. Remember to consider interfacing and supporting elements in the maintenance system as applicable.

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Figure 10-18. EC-02 Varied Fleet Mix/Configuration

Condition: A varied fleet mix and/or mixed fleet configuration can significantly alter an air carrier's safety profile and the potential for failure in its systems.

Background: A varied and/or mixed fleet exists when an air carrier fleet includes: a variety of different aircraft types; a mix of models and/or series of the same type within the same fleet; multiple types within the same fleet; and a number of different configurations of the same make and model within the same fleet.

Many established air carriers have long operated a varied fleet mix and/or mixed fleet configurations. The implications for operating this type of fleet may be more significant for new entrant air carriers, where resources and infrastructure may be a major consideration.

Risk Score	Inspector Considerations
1–2	The air carrier does not have a varied fleet mix and/or mixed fleet configuration. The impact of varied fleet mix and/or mixed fleet configuration appears to be effectively managed by the air carrier's procedures, controls, and process measures. Any adverse impact appears negligible.
3–5	Concern exists regarding the impact of the varied fleet mix and/or mixed fleet configuration on the air carrier due to considerations such as: Inadequate management structure to handle the impact of a varied fleet mix and/or mixed fleet configuration; Potential for adverse impact on the air carrier's maintenance program; Potential for adverse impact on the air carrier's operations program; Potential for adverse impact on the air carrier's training program; The air carrier lacks the necessary system controls for the varied fleet mix and/or mixed fleet configuration; and The air carrier has little or poor performance history with varied fleet mix and/or mixed fleet configuration.
6–7	Concern exists that the air carrier does not have the overall infrastructure in place to support a varied fleet mix and/or mixed fleet configuration. The air carrier has not demonstrated appropriate or effective management.

Guidance References (current editions): FAA Order 8900.1, Volume 10, Chapter 6, Section 3, Aircraft Configuration Control Document.

Data Sources: Operations specifications (OpSpecs), company manuals, air carrier and industry fleet listing, Enhanced Vital Information Database (eVID) data, past surveillance findings, internal audit findings, human factor indications (identified weaknesses of the controls attribute during surveillance of an element), Mechanical Interruption Summary (MIS), and air carrier crewmember irregularity reports.

Impact on ATOS System, Subsystem, and Elements: Operating this type of fleet can cut across all aspects of an air carrier's operations: training, maintenance, human factors, ground-handling operations, etc. When considering the impact on the ATOS model, consider the operational area of the concern and tie it to the ATOS system(s), subsystem(s), and element(s) most closely related with the concern. Also consider related training manuals and management areas, and the risk impact of the varied/mixed fleet on these areas.

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Figure 10-19. EC-03 Change in Aircraft Complexity

Condition: Changes to the complexity of an air carrier's fleet can significantly affect an air carrier's safety and the potential for failure in its systems.

Background: Complex aircraft generally incorporate more sophisticated technology. Innovative technology can increase or decrease the potential for noncompliance with existing processes and controls. A change in aircraft means that the carrier may need processes and procedures to support differences in both manual and automated complexities and technology. New aircraft technology can impact the air carrier infrastructure because of additional requirements for training, operations, and maintenance.

Risk Score	Inspector Considerations
1–2	The air carrier is not currently experiencing a change in aircraft complexities or technologies. The impact of aircraft complexity and technology appears to be effectively managed by the air carrier's procedures, controls, and process measures. Any adverse impact appears negligible to nonexistent.
3–5	Concern exists regarding the impact of change in aircraft complexity due to inadequate infrastructure considerations such as: Controls and process measures may be inadequate to manage the changes in operations and maintenance. Air carrier personnel and others have little experience with the new technologies and/or the operational environment. Dramatic changes in operating environment due to changed aircraft complexity. Ineffective or no air carrier safety audits to assess the effectiveness of the air carrier's training programs and operation within the air carrier environment. Equipment/logistical support for new technology may be lacking. Air carrier has little or poor performance history with incorporating complex aircraft.
6–7	Concern exists about adverse impact on system design or performance due to the change in aircraft complexity. The air carrier has not demonstrated appropriate or effective management of the situation.

Guidance References (current editions): FAA Order 8900.1, Volume 6, Chapter 2, Section 18, Evaluation of Air Carrier's Management of Significant Changes.

Data Sources: Aircraft Evaluation Group (AEG), aircraft manufacturer Type Certificate Data Sheets (TCDS), Flight Standardization Board (FSB) reports, Continuing and Analysis Surveillance (CAS) reports, Mechanical Interruption Summary (MIS) reports/Service Difficulty Reports (SDR), reliability reports, training records, line checks, and Air Carrier Delay Summaries.

Impact on ATOS System, Subsystem, and Elements: Aircraft configuration control, flight operations, and personnel training and qualifications. ATOS systems all contain elements that may pertain to changes in aircraft complexity. Focus on the area of concern and attempt to relate it to the affected elements in these systems. Remember to consider interfacing and supporting elements in the Technical Administration and Manual systems, as applicable.

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Figure 10-20. EC-04 Outsource (Maintenance, Training, Ground Handling)

Condition: The use of independent vendors, suppliers, and contractors, depending on a number of factors, could heighten the risks associated with various air carrier operations. Effective management of these contract arrangements is a must.

Background: The aviation industry increasingly has made arrangements for the accomplishment of traditional air carrier functions to independent contractors. These arrangements have developed to the point where multiple levels of contractors could be involved in providing the service. Contract arrangements might include maintenance, ground handling, and training.

Risk Score	Inspector Considerations
1–2	The air carrier does not outsource. The air carrier's oversight staffing and audit functions appear to be adequate to include the outsourced functions. The contractor(s) effectively meet the training requirements of the air carrier and are qualified for the contract arrangement(s). The air carrier effectively manages impacts of outsourcing.
3–5	Concern exists regarding the impact of outsourcing due to considerations such as: The contract personnel are utilized by numerous air carriers, increasing the possibility of non-adherence to procedures; The contract personnel training records are inaccurate; Adverse Department of Defense (DOD) findings against the contractor; Contractor qualifications and abilities (maintenance, training, and/or ground handling) are in question; The air carrier frequently changes contractors based on economics; and/or The use of outsourcing for all or particular functions is relatively new at the carrier; therefore, lack of historical data is a major consideration.
6–7	Concern exists about the impact of outsourcing because the air carrier does not have an effective safety audit function to monitor the performance of the contractors. Concern exists because the contractor's performance history indicates multiple, repeated safety violations.

Guidance References (current editions): FAA Order 8900.1, Volume 3, Chapter 42, Evaluate Part 121/135 (10 or More) Contract Maintenance Program, Contract Agreements, and Contracted Work; Volume 10, Air Transportation Oversight System; Safety Attribute Inspection (SAI) 1.3.11; Element Performance Inspections (EPI) 1.3.11, SAI 1.3.7 AW; EPI 1.3.7 AW; SAI 4.2.9 OP; and EPI 4.2.9 OP.

Data Sources: Contractor enforcement history, training records, initial operating experience (IOE) records, Safety Performance Analysis System (SPAS) repair station reports, DOD audit findings, and air carrier past performance including element 1.3.7 AW and/or 4.2.9 OP.

Impact on ATOS System, Subsystem, and Elements: Evaluate if the risk identified is related directly to the dedicated ATOS elements 1.3.7 AW and/or 4.2.9 OP. Compare the contract arrangements with the structure of the ATOS air carrier system, subsystem, and element model. Choose the element(s) whose performance measures and design most closely match the contracted work functions where risk has been identified. Evaluate impact across systems for elements where associated risk may also be present.

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Figure 10-21. EC-05 Seasonal Operations

Condition: Short-term operations may present their own unique risk(s) and may require attention and preparation by the air carrier.

Background: Air carriers perform seasonal operations during a particular season or time of year to satisfy a short-term need. Seasonal operations, while limited in nature, require as much or more preparation and attention to the quality and safety of the services provided as regular operations. (For example, air carriers who normally operate in a warm environment may engage in seasonal operations that occur during the winter months when flying to and from ski resort areas. They must be prepared to manage aircraft deicing, training, and all of the associated requirements. If the air carrier does not normally fly this route, deicing may not be part of its regular operations.) Understanding the type and scope of the seasonal operation, as well as the impact on the air carrier's systems, is critical in rating this indicator.

Risk Score	Inspector Considerations
1-2	The air carrier does not conduct seasonal operations. Procedures, controls, and process measures appear to effectively manage the impact of seasonal operations on the infrastructure of the air carrier systems. Any adverse impact appears to be negligible to nonexistent.
3–5	Concern exists regarding the air carrier's ability to conduct seasonal operations due to considerations such as: Air carrier has no past experience with seasonal operations. The air carrier's procedures, controls, and process measures do not effectively manage the impact of seasonal operations on its infrastructure. Air carrier has encountered problems with seasonal operations in the past. Air carrier does not conduct safety audits of its seasonal operations. Incomplete integration of air carrier's core business functions to the seasonal operation.
6–7	Concern exists that the air carrier is unable to manage the risks associated with the temporary change in its operational environment due to the seasonal operation, and controls and procedures do not support the operation or do not exist at all. The air carrier has not demonstrated appropriate or effective management of the situation.

Guidance References (current editions): FAA Order 8900.1, Volume 3, Chapter 18, Section 8, Amendment, Surrender, and Suspension of OpSpecs, paragraph 3-1031A2); Volume 6, Chapter 2, Section 38, Evaluate a Part 121/135.411(a)(2) Operator Aircraft Storage Program; and Advisory Circular (AC) 120-27, Aircraft Weight and Balance Control.

Data Sources: Operation specifications (OpSpecs); Safety Performance Analysis System (SPAS) data; ATOS Data Repository; and discussion with air carrier personnel.

Impact on ATOS System, Subsystem, and Elements: Based upon the scope and type of seasonal operation(s) conducted and the inspector assessment of possible location(s) for risk, identify corresponding ATOS system(s), subsystem(s), and element(s) that relate to that risk. Consider other system(s) that support the seasonal operation and might be burdened. Focus also on the elements dealing with training and management support for these areas.

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Figure 10 22. EC-06 Relocation/Closing of Facilities

Condition: Relocating or closing a facility may adversely affect operational and system stability at an air carrier.

Background: Air carrier change to facilities could include adding a new facility, closing a facility, and/or moving an existing facility to another site. A misalignment of resources to requirements surrounding the change should be of concern and may indicate safety risk.

Risk Score	Inspector Considerations
1–2	The air carrier has not experienced any changes/relocation of facilities. Air carrier changes/relocations of facilities do not appear to disrupt or adversely impact the quality and safety of ongoing operations. The air carrier's system, process measures and controls, are both effective and undertaken correctly. The air carrier has demonstrated appropriate and effective management of events.
3–5	Air carrier changes/relocations of facilities may not be effectively managed. Concern exists due to considerations such as: Air carrier already has poor past performance history with regard to the relocation and closing of facilities. Air carrier has not effectively managed changes to its facilities Rate and pace of change is inappropriate. Change is not steady, not implemented over time, and not accompanied by appropriate training, documentation, and manual changes. Air carrier may not have adequate resources and training to support the change. Background and experience of personnel at new facility in question.
6–7	Concern exists due to adverse impact of air carrier changes/relocations of facilities which may disrupt the quality and safety of ongoing operations. The air carrier has not demonstrated appropriate or effective management of the event(s).

Guidance References (current editions): FAA Order 8900.1, Volume 2, Chapter 2, Section 5, Evaluate Applicant's Refueling Procedures and Facilities (Parts 121, 125, and 135); Volume 3, Chapter 27, Section 1, General; Volume 6, Chapter 2, Section 24, Station Facilities Inspections for Part 121 and 135 Air Carriers (PTRS Code 1635); Volume 6, Chapter 2, Section 26, Inspect Program Manager/Operator's Maintenance Facility for Parts 91 Subpart K, 121, and 135; and ATOS elements 1.3.3, 5.1.1, 1.3.16, and 1.3.18.

Data Sources: ATOS Data Repository and discussion with air carrier personnel.

Impact on ATOS System, Subsystem, and Elements: If root cause(s) and/or failure of event(s) is generally known and validated, consider the system(s), subsystem(s), and element(s) in the ATOS structure that relate to the failure or root cause. Consider also the ATOS Training and Technical Administration systems. If the air carrier has not effectively and appropriately managed the events, consider also the ATOS Manuals and Technical Administration systems.

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Figure 10-23. EC-07 Lease Arrangements

Condition: Aspects of lease arrangements may be sources of risk at air carriers and must be effectively managed.

Background: A lease is any agreement by a person (the lessor) to provide an aircraft to another person (the lessee) who will use the aircraft for compensation or hire purposes. These arrangements are increasingly used to meet market demands and seasonal operations. The variety of leasing arrangements an air carrier enters into can have a significant impact on its maintenance, training, and operations programs and its overall safety (wet lease, dry lease, interchange agreements). Interchange agreements can have a major impact on normal air carrier operations; therefore, special attention during surveillance may be warranted when an air carrier is a party to this type of arrangement.

Risk Score	Inspector Considerations
1–2	The air carrier is not presently involved in any lease arrangements. The impact of any lease arrangements appears to be effectively managed by the air carrier's procedures, controls and process measures. The air carrier has demonstrated appropriate and effective management of any events.
3–5	Concern exists about the impact of the lease arrangements due to considerations such as: Perceived difficulty of exercise of operational control. Air carrier audit functions fail to account for special circumstances of lease agreement. Changes to flight and ground crew training to support the lease arrangement are broad. Lack of sound controls and interfaces in new procedures required by lease agreement.
6–7	Concern exists regarding high adverse impact of the lease arrangement on air carrier systems, subsystems and elements. In the event of a wet lease arrangement, air carrier loss of operational control may be a concern. The air carrier has not demonstrated appropriate or effective management of the situation.

Guidance References (current editions): FAA Order 8900.1, Volume 3, Chapter 13, Section 1, Evaluate Aircraft Lease/Interchange Agreement; Volume 3, Chapter 46, Evaluate 14 CFR Part 121/135 10 or More Leased Maintenance Program Authorization: U.S. Registered Aircraft; and Volume 12, 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.

Data Sources: Lease agreement contract, air carrier promotional materials, and operations specifications (OpSpecs).

Impact on ATOS System, Subsystem, and Elements: Lease agreements can affect most operational areas. Based on the nature of the lease arrangement and the concerns assessed, associate the corresponding ATOS system(s), subsystem(s), and element(s).

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Figure 10-24. EC-08 Off-Hours Activity

Condition: Air carrier management of off-hour (i.e., outside normal FAA hours, including weekends) activity can be prone to risk.

Background: Oversight of 14 CFR part 121 air carriers requires insight into the entire range of activities performed by the air carrier. Because much of that activity is conducted during times that are not normal duty hours for FAA inspectors, the Certificate Management Team (CMT)/certificate holding district office (CHDO) must make a conscious effort to ensure that the air carrier has the means and methods to ensure that procedures are being followed and that the air carrier continues to be in regulatory compliance at all times. Potential factors that could contribute to problems during off hour activities include the possibility of diminished FAA presence; less than effective air carrier managerial oversight; unavailability of expert advice or other supporting resources (help desks, vendor support, etc.); incomplete exchange of information during shift change; personnel fatigue; and a range of other potential problems.

The Off-Hour Surveillance Decision Aid is designed to assist in identifying risk. Consider that while some components of the decision aid scoring are primarily geared toward airworthiness activities, an assessment can also be made for flight/ground operations in conjunction with the decision aid. An example of off-hour air carrier activity in the air carrier flight/ground operations arena might be training that is conducted during off hours (midnight shift) or flight operations primarily conducted outside of normal FAA duty hours (e.g., overnight cargo operations).

Risk Score	Inspector Considerations
1–2	Off-hours activity appears to be effectively managed by the air carrier's procedures, controls, and process measures. Any adverse impact appears to be negligible to nonexistent; and/or Off-Hour Surveillance Decision Aid score of 57–80.
3–5	Concern exists about air carrier management of components of its off-hour activity for considerations such as: • Adequacy of any training for off-hours personnel. • Effectiveness of change-over procedures. • Amount of off-hours activity performed; and/or Off-Hour Surveillance Decision Aid score of 41–56.
6–7	Concern exists regarding the air carrier's ability to manage off-hours activity on a system level; and/or Off-Hour Surveillance Decision Aid score of 8–40.

Guidance References (current editions): FAA Order 8900.1, Volume 10, Chapter 5, Section 1, Off-Hour Surveillance Air Carrier Oversight Process.

Data Sources: Off-hour Surveillance Decision Aid, Comprehensive Assessment Plan (CAP) notes, interviews with air carrier management and personnel, company maintenance records, flight schedules, employee duty and rest records, and Civil Aerospace Medical Institute (CAMI) Human Factors reports.

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Impact on ATOS System, Subsystem, and Elements: Based upon the notes that indicate the CMT's collection of type and amount of off-hour activity accomplished at the air carrier, associate the appropriate ATOS system, subsystem, and element structure with the risk concern(s) identified. If the Off-Hour Surveillance Decision Aid was used, focus on the components of the aggregate scoring with the most adverse scores, and relate them to the ATOS system, subsystem, and element model.

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Figure 10-25. PH-01 Enforcement Actions

Condition: Enforcement actions can help identify the air carrier's safety profile and any area of risk in its systems.

Background: Enforcement actions are the reported results of any administrative and/or legal enforcement that the FAA has taken against an air carrier and/or certificated personnel in response to regulatory noncompliance. A trend analysis is an important factor in assessing this risk indicator, as it can identify deteriorating systems and programs.

Risk Score	Inspector Considerations
1–2	The air carrier has no recent enforcement activity. The air carrier's enforcement history does not appear to indicate failure in system controls and/or an adverse change in the safety profile. Any enforcements have been low-criticality and not of a repetitive nature.
3–5	The air carrier's enforcement history may indicate stresses in system controls and/or an adverse change in its safety profile. Concern exists due to considerations such as: • Enforcements in critical areas. • Enforcements are repetitive in nature. • Enforcements appear to identify a negative trend. • Air carrier failure to initiate adequate corrective action and followup processes.
6–7	The air carrier's enforcement history appears to indicate failure in system controls and/or a rapid and large-scale deterioration in the safety profile. The air carrier has not demonstrated appropriate or effective management of the event(s). Concern exists due to enforcements of high criticality, or multiple enforcements in repeated areas, or across the air carrier's systems.

Guidance References (current editions): FAA Order 2150.3, FAA Compliance and Enforcement Program; FAA Order 8900.1, Volume 11, Chapter 3, Section 1, Program Overview; Volume 7, Chapter 7, Conduct Violation Investigation; Volume 14, Chapter 2, Section 1, Compliance and Enforcement Special Considerations; and Volume 12, 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.

Data Sources: Safety Performance Analysis System (SPAS), Aviation Safety Information Analysis and Sharing (ASIAS), and Enforcement Information System (EIS).

Impact on ATOS System, Subsystem, and Elements: Consider the area(s) of the air carrier's operation where the regulatory noncompliance(s) caused the enforcement action(s). Review the ATOS system, subsystem, and element structure for any related risk(s). Consider related training and management issues that may also contribute to root cause, as well as failures in interfacing systems. If it is determined that air carrier followup and corrective action for enforcements have been ineffective, evaluate the Key Personnel and/or Manual Management subsystem(s).

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Figure 10-26. PH-02 Accidents/Incidents/Occurrences

Condition: Data regarding accidents, incidents, and occurrences may provide insights into areas of risk at an air carrier.

Background: To be most effective, these data should be analyzed in conjunction with the air carrier's response, corrective action planning, and ongoing followup activities. Collectively, this information may provide a point-in-time measurement of the air carrier's performance. Repeated events could be an indication of management and an air carrier systems' inability to resolve issues and implement corrective actions appropriately.

Risk Score	Inspector Considerations
1–2	The air carrier has not experienced any accidents, incidents, or occurrences. Any occurrences/incidents were minor. The air carrier has demonstrated appropriate and effective management of any events.
3–5	Concern exists regarding the air carrier's accident/incident occurrence history due to considerations such as: • Repeated events in interfacing areas. • Increasing number of events. • Criticality of event(s). • Root cause(s) of the event(s) or inadequate analysis of root cause. • Inadequate air carrier controls. • Inadequate air carrier followup to event(s).
6–7	Concern exists because the air carrier has experienced accident(s) or incident(s) that appear to indicate a negative trend with an escalation in severity. The air carrier has not demonstrated appropriate or effective management of the event(s).

Guidance References (current editions): FAA Order 8900.1, Volume 7, Chapter 1, Section 1, Accident Investigations; Volume 7, Chapter 1, Section 2, Incident Investigations and Occurrences; and Volume 8, Chapter 5, Section 6, Process Service Difficulty Report.

Data Sources: Safety Performance Analysis System (SPAS) data packages, FAA Accident Investigation Records, Investigation of Pilot Deviation Reports, Accident/Incident Corrective Action Records, Aircraft Accident/Incident Preliminary Notices, National Transportation Safety Board (NTSB) findings/reports, Mechanical Interruption Summary (MIS) reports, Service Difficulty Reports (SDR), and Data Collection Tool (DCT) 1.2.4.

Impact on ATOS System, Subsystem, and Elements: If root cause(s) and/or failure of event(s) is generally known and validated, consider the system(s), subsystem(s), and element(s) in the ATOS structure that relate to the failure or root cause. Consider also the ATOS Training and Technical Administration systems. If the air carrier has not effectively and appropriately managed the events, consider also the ATOS Manuals and Technical Administration Systems.

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Figure 10-27. PH-03 Department of Defense Audits

Condition: Department of Defense (DOD) audit findings help to identify hazards and their associated risks. The audit data may provide insights into systemic problems in the design and performance of an air carrier's systems.

Background: The DOD Air Carrier Survey and Analysis Team monitors certificate holders that do business with the DOD. The DOD regulations, directives, and Commercial Air Carrier Quality and Safety requirements form the basis for the DOD surveillance auditing process. The audit is conducted every 2 years and is documented on a structured Air Carrier Operations Survey Checklist. While the structure of the DOD surveillance auditing process varies from the FAA process, the results provide a unique view of the air carrier, as the DOD is often an airline's largest customer and the audits are a requirement of the contract between the DOD and the certificate holder.

Risk Score	Inspector Considerations
1–2	The air carrier is not a DOD air carrier. There are no significant adverse DOD findings against the air carrier.
3–5	The DOD has placed the air carrier on Close Watch program for safety issues or has indicated other concerns for safety issues and/or the DOD has recently recertified the air carrier after temporary non-use status; or Timing interval since the last complete DOD survey is longer than the standard 2 years and/or scope of that survey not complete.
6–7	Air carrier is currently removed from the DOD list of qualified air carriers. Air carrier is currently on temporary non-use status for safety issues.

Guidance References (current editions): FAA Order 8900.1, Volume 3, Chapter 2, Section 1, Exemptions, Deviations, Waivers, and Authorizations, paragraph 3-39.

Data Sources: Safety Performance Analysis System (SPAS), DOD inspection reports, DOD liaison, air carrier personnel, and air carrier's operations specifications (OpSpecs).

Impact on ATOS System, Subsystem, and Elements: Inspector should evaluate and focus on those ATOS elements that correspond or are related to the areas of adverse DOD findings. Determine which aspects of the systems are affected by the adverse DOD findings. Further determine what these impacts might mean in terms of additional surveillance requirements.

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Figure 10-28. PH-04 Voluntary Disclosures

Condition: The Voluntary Disclosure Reporting Program (VDRP) provides incentives for/encourages regulated entities themselves (e.g., airlines, repair stations) to voluntarily report instances of regulatory noncompliance. The FAA's policy of forgoing civil penalty actions when one of these entities detects violations, promptly discloses the violations to the FAA, and takes prompt corrective action to ensure that the same or similar violations do not recur is designed to encourage compliance with the FAA's regulations, foster safe operating practices, and promote the development of Internal Evaluation Programs (IEP).

Background: The design of the VDRP policy to encourage certificate holders to voluntary disclose their own violations, while preventing the erosion of compliance that might result from abuses of such self-reporting. The protections against legal enforcement action under the VDRP will only apply to violations determined by the FAA to be inadvertent. It does not apply to violations that indicate a lack, or reasonable question, of qualification of a certificate holder.

Voluntary disclosures must be submitted in a timely fashion, as specified in current VDRP guidance, and the certificate holder must take immediate action, satisfactory to the FAA, to cease the conduct that resulted in the violation. Companies submitting a voluntary disclosure under the VDRP are obligated to develop and schedule implementation satisfactory to the FAA. The comprehensive fix includes a followup self-audit to ensure that the action taken corrects the noncompliance. Repeat violations of the same regulation may be accepted under the VDRP.

Based upon the facts and circumstances surrounding the repeated violation, the FAA will determine on a case-by-case basis whether a repeated violation will be covered and that they otherwise meet the acceptance criteria of the program.

Except for certificate holder violations initially identified in an Aviation Safety Action Program (ASAP) report, or discovered in the course of a joint audit, the VDRP does not accept violations that have already been detected by the FAA.

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Risk Score	Inspector Considerations
1–2	Voluntary disclosures appear to have been effectively handled as an integral air carrier system component and the corrective action has augmented the air carrier's safety profile. Root causes have been accurately identified and corrective actions are effective.
3–5	Concern exists due to considerations such as: • Inability to effectively define root cause, ineffective voluntary disclosure process at the air carrier. • Poorly documented procedures at the air carrier for self-disclosure process. • Management does not encourage use of self-disclosure process. • Voluntary disclosure process has not reduced problems or violations. • Corrective actions were inadequate or the implementation of corrective actions was not effective as evidenced by repeated violations. • Company employees unaware of self-disclosure process. • The air carrier does not actively participate in the voluntary disclosure program.
6–7	Concern exists because: There are multiple repeated voluntary disclosures in high-criticality areas having the same root cause and continued failure on the part of the carrier in implementing corrective and followup action of the same root cause. It appears that the air carrier set performance goals that reflect a desire to drive down the number of voluntary reports submitted.

Guidance References (current editions): Advisory Circular (AC) 00-58, Voluntary Disclosure Reporting Program; FAA Order 8900.1, Volume 11, Chapter 1, Voluntary Disclosure Reporting Program; http://av-info.faa.gov/vdrp; Report of the Independent Review Team, "Managing Risks in Civil Aviation: A Review of the FAA's Approach to Safety"; Annex 6 to the Convention on International Civil Aviation, Operation of Aircraft; International Civil Aviation Organization (ICAO) Document 9859, ICAO Safety Management Manual; ICAO Document 9734 Safety Oversight Manual; FAA Order 8000.369, Safety Management System Guidance; FAA Order VS 8000.367, Aviation Safety (AVS) Safety Management System Requirements; and AC 120-92, Safety Management Systems for Aviation Service Providers.

Data Sources: Service provider outputs from the Safety Management System (SMS), FAA records, air carrier self-disclosure packages, and Safety Performance Analysis System (SPAS).

Impact on ATOS System, Subsystem, and Elements: Inspectors must abide by the rules describing VDRP to ensure compliance within applicable regulations. Focus on the subject area and nature of the self-disclosure(s). Drill down to the root cause(s) if possible, and relate it to the system, subsystem, and element structure of the ATOS model. Ensure that the air carrier has completed a Root Cause Analysis (RCA) of the event(s) that lead to voluntary disclosure. Check that the air carrier implements a corrective action and that they follow up to determine if the corrective action was effective. Evaluate interfacing and supporting systems, such as training or personnel. If the risk concern includes the lack of effectiveness of the air carrier's corrective action, consider focusing also on the Manual Management and Key Personnel subsystems.

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Conduct regular audits of the disclosures and acceptances to validate adherence to program policy. Depending on the underlying root causes, repeat disclosures could indicate a failure to implement effective or comprehensive fixes.

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Figure 10-29. PH-05 Safety Hotline/Complaints

Condition: Excessive or repetitive safety hotline and other complaints against an air carrier may assist in identifying and isolating areas of risk. Complaints can aid the air carrier in managing and controlling corrective and followup actions.

Background: This indicator considers recorded charges of dissatisfaction brought by consumers, employees, vendors, other air carriers, and members of Congress against the air carrier. Complaints received by these entities, which are related to the air carrier or aircraft operations, maintenance, quality, stability, compliance, or safety, may affect surveillance planning. Any type of complaint information, and actions taken as result of a complaint, provides an external view of how consumers and industry peers perceive the air carrier. This perspective may be of value during risk assessment and surveillance planning.

Risk Score	Inspector Considerations
1–2	There have been no safety hotline/complaints against the air carrier. Any complaints have been relatively minor and do not appear to point to system weakness or human factors issues.
3–5	Concern exists due to considerations such as: • Multiple complaint data points in same area(s). • Single complaint in highly critical area of the air carrier's operation. • Air carrier complaint resolution history has indicated that the air carrier does not have a strong corrective action plan (CAP) and process for assessing, categorizing and handling complaints.
6–7	Concern exists because there are multiple, repeated complaints in the same area revealing risk in a system, subsystem, or element that appear to indicate a negative trend with escalation in severity. The air carrier has not demonstrated appropriate or effective management of the event(s).

Guidance References (current editions): FAA Order 8900.1, Volume 7, Chapter 7, Conduct Violation Investigation; Volume 11, Chapter 3, Section 1, Program Overview; Volume 11, Chapter 3, Section 2, Responsibilities and Procedures; and Volume 11, Chapter 3, Section 3, Complaint Processing.

Data Sources: FAA safety hotline data, Congressional inquiries and/or other complaints lodged against the carrier, Department of Transportation (DOT) complaint statistics, comparable surveillance data, Safety Performance Analysis System (SPAS), Program Tracking and Reporting Subsystem (PTRS) reporting source codes for hotline and whistleblower programs.

Impact on ATOS system, Subsystem, and Elements: Focus on the subject area and nature of the complaint(s). Drill down to the root cause(s), if possible, and relate it to the system, subsystem, and element structure of the ATOS model. Also evaluate interfacing and supporting systems, such as training or personnel. If the risk concern includes the lack of effectiveness of the air carrier's corrective action, consider focusing on the Manual Management and Key Personnel subsystems.

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Figure 10-30. PH-06 Voluntary Programs Data

Condition: Air carrier voluntary program data may be useful for hazard or risk identification. Such data can aid the air carrier in managing corrective and followup actions.

Background: The FAA encourages air carrier participation in voluntary programs. Many of these programs provide unparalleled data opportunities, and therefore more effective opportunities for risk identification and control. The FAA will pursue harmonization of these programs and their integration with ATOS. These programs include but are not limited to Internal Evaluation Programs (IEP), Aviation Safety Action Programs (ASAP), Flight Operational Quality Assurance (FOQA), or Independent Flight Safety programs such as the Commercial Aviation Safety Team (CAST), www.cast-safety.org.

Properly managed, these programs help move safety management from the reactive mode to a data-driven, proactive mode that continuously searches for accident precursors. Data-sharing and open communication optimize the functioning of the oversight system and leverage resources to advance safety. If the air carrier does participate in one or more of these programs in this indicator, please consider the actual data from any internal risk management (RM) program(s) (IEP, ASAP, etc.), and how it relates to the ongoing identification and management of risk. Voluntary Disclosure Reporting Program (VDRP) information is protected from Freedom of Information Act (FOIA).

Risk Score	Inspector Considerations
1–2	The air carrier participates in voluntary programs. Data derived from the air carrier's voluntary programs indicates apparent risk is well managed by air carrier systems. Root causes have been accurately identified and corrective actions are effective.
3–5	Concern exists from the data derived from the air carrier's voluntary program(s) due to considerations such as: • Inability to effectively define root cause, ineffective voluntary disclosure process at the air carrier. • Poorly documented procedures at the air carrier for voluntary disclosure process. • Management does not encourage use of any voluntary program. • Voluntary programs have not reduced problems or violations. • Corrective actions were inadequate or the implementation of corrective actions was not effective, as evidenced by repeated violations. • Company employees do not understand or use voluntary programs. • Concern exists because data from air carrier voluntary programs appear to indicate a rapid degradation of the air carrier's critical systems, and apparent air carrier failure to address the associated risks. • Concern exists because the air carrier's voluntary programs data appear to indicate a negative trend with escalation in severity. • The air carrier does not actively participate in voluntary programs.

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Risk Score	Inspector Considerations
6–7	Concern exists because data from air carrier voluntary program(s) appear to indicate a rapid degradation of the air carrier's critical systems, and apparent air carrier failure to address the associated risks. Concern exists because air carrier's voluntary programs data appear to indicate a negative trend with escalation in severity.

Guidance References (current editions): FAA Order 8900.1, Volume 3, Chapter 44, Assess Continuing Analysis and Surveillance System for Parts 121 and 135; Volume 6, Chapter 2, Section 30, Monitor Continuing Analysis and Surveillance Program/Revision for Part 121/135 Operators and Part 91 Subpart K Program Managers; Volume 11, Chapter 2, Section 1, Aviation Safety Action Program; Volume 11, Chapter 2, Section 2, Flight Operational Quality Assurance (FOQA); ATOS; Safety Attribute Inspection (SAI) 1.3.11; Element Performance Inspection (EPI) 1.3.11; Advisory Circular (AC) 120-79, Developing and Implementing an Air Carrier Continuing Analysis and Surveillance System; AC 120-59, Air Carrier Internal Evaluation Programs; AC 120-66, Aviation Safety Action Programs (ASAP); and https://av-info.faa.gov/vdrp/.

Data Sources: Data from any internal risk management (RM) program(s) (IEP, Continuing Analysis and Surveillance (CAS), VDRP, ASAP, etc.)

Impact on ATOS System, Subsystem, and Elements: Associate the data that causes concern with the ATOS system, subsystem, and element model. Consider element(s) that might be affected, and/or element(s) relating to root causes. Ensure that the air carrier has completed a Root Cause Analysis (RCA) of the event(s) that lead to voluntary disclosure. Check that the air carrier implements a corrective action and that they follow up to determine if the corrective action was effective.

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Figure 10-31. PH-07 Surveillance Indicators

Condition: Surveillance data from Safety Performance Analysis System (SPAS), Program Tracking and Reporting Subsystem (PTRS), and ATOS help to identify trends in air carrier performance and can assist with identifying risks in an air carrier's system design.

Background: Data from ATOS- and SPAS/PTRS-based surveillance provides inspectors with insight into ongoing and new areas of risk in the air carrier's performance. Continued adverse findings should lead to corrective action, but may also indicate risk that has yet to be fully mitigated. Inspector experience and judgment concerning areas of repeated or ongoing difficulty would also bear some level of equivalency as a data source when assessing this indicator.

Risk Score	Inspector Considerations
1–2	Insufficient data exist for the purpose of this risk indicator as defined above to make a determination. ATOS/SPAS data trends for the air carrier do not indicate any area(s) or trend(s) of apparent risk, or indicated risk currently being mitigated by other means.
3–5	Concern exists in ATOS/SPAS data trends for considerations such as: • Decline in air carrier performance on reported surveillance. • Repeated items of concern in the same area(s) in data. • Failure to implement applicable Information for Operators (InFO) or Safety Alerts for Operators (SAFO) into the air carrier's system.
6–7	Concern exists because ATOS/SPAS data trends indicate major deviation from the baseline in critical operational and/or maintenance area(s). Air carrier is not addressing the associated risk(s). Concern exists because ATOS/SPAS trending appears to indicate a negative trend with escalation in severity. Concern exists because oversight in this area has been postponed due to lack of FAA resources.

Guidance References (current editions): FAA Order 8900.1, Volume 6, Chapter 2, Section 2, Reporting on Surveillance for Parts 121, 135, and 91 Subpart K; Volume 10, Chapter 1, Section 2, Introduction to ATOS Business Process and Tools; Volume 10, Chapter 2, Procedures for Design and Performance Assessment; and ATOS Automation User Guide, System Data Analysis Guide.

Data Sources: ATOS database, SPAS, and inspector observation/knowledge of performance history.

Impact on ATOS System, Subsystem, and Elements: For negative SPAS trends related to PTRS surveillance findings, associate the problem area(s) with the corresponding ATOS system(s), subsystem(s), and element(s). For negative ATOS data trends, focus on the element(s) that are the source of the adverse trend. Consider also the related manuals, training, and personnel systems that support the element(s) adversely affected.

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Figure 10-32. OS-01 Key Management SPAS Indicators

Condition: Changes in key management personnel can significantly impact an air carrier's system and operational stability.

Background: The Safety Performance Analysis System (SPAS) management indicator incorporates the SPAS performance measures related to changes in the following key management personnel: chief executive officer (CEO), chief inspector, chief pilot, Director of Maintenance (DOM), Director of Operations (DO), Director of Safety (DOS), general manager. Consider the size of the air carrier. The impact of SPAS indicators on small air carriers or a new entrant may be greater than on large, established air carriers. Key management personnel at a small air carrier may play multiple roles. High key-management turnover could significantly impact the air carrier's operational stability if no processes are in place to manage the change. Regardless of the number of years an air carrier has been in operation, the changes reflected in the SPAS indicators should be considered in light of their potential impact on system and operational stability.

Risk Score	Inspector Considerations
1–2	The air carrier has not experienced a change in its key management personnel. There may have been changes in key management personnel, but SPAS flag state is expected.
3–5	Concern exists due to considerations such as: • SPAS flag states are at the concern or advisory threshold. • Changes in key management personnel appear to have adversely affected the air carrier's programs, regardless of SPAS flag state.
6–7	Concern exists because of rapid and widespread changes in key management in nearly all departments and operational areas.

Guidance References (current editions): FAA Order 8900.1, Volume 3, Chapter 34, Section 1, Air Carrier Mergers and Acquisition of Air Carrier Operational Assets; Volume 10, Chapter 4, Section 1, The Air Carrier Evaluation Process.

Data Sources: SPAS, air carrier interviews, labor unions, air carrier press releases, and air carrier regulatory notifications.

Impact on ATOS System, Subsystem, and Elements: When concern exists regarding a change in key air carrier management positions required by regulation, focus on the corresponding and interfacing ATOS element(s) for these positions. Consider also the impact on other ATOS system(s), subsystem(s), and element(s) depending upon the position jurisdiction and safety purview related to the changed position.

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Figure 10-33. OS-02 Financial Conditions

Condition: Air carriers that experience adverse financial conditions may have higher risk.

Background: When an air carrier experiences financial instability, the possibility for risk may increase due to a number of complex and interrelated causes, factors, and results. These may directly or indirectly impact various aspects of the air carrier's system, subsystem, element structure, and may overlap with other risk indicators, or become a causal factor for the generation of risk in other areas. FAA Order 8900.1, Volume 6, Chapter 2, Section 18, Evaluation of Air Carrier's Management of Significant Changes, discusses in detail the issues of risk management (RM) for air carriers. Figure 6-29, Financial Condition Assessment Decision Aid, of Volume 6, Chapter 2, Section 18 includes a decision aid for scoring risk as it relates to financial condition. This decision aid should be utilized to arrive at periodic assessments at the air carrier. Adverse findings on the decision aid for an ATOS carrier lead to Air Carrier Assessment Tool (ACAT) changes or the risk management process (RMP). If the inspector arrives at adverse scoring, he or she should consider this risk indicator, as well as other associated risk indicators that are alluded to in the scoring components for the Financial Condition Assessment Decision Aid.

Risk Score	Inspector Considerations
1–2	Financial Condition Assessment Decision Aid Score of 72–90.
3–5	Financial Condition Assessment Decision Aid Score of 46–71.
6–7	Financial Condition Assessment Decision Aid Score of 9–45.

Guidance References (current editions): FAA Order 8900.1, Volume 6, Chapter 2, Section 18, Evaluation of Air Carrier's Management of Significant Changes.

Data Sources: Periodic meetings between the FAA principal inspectors (PI) and air carrier management, conversations with knowledgeable air carrier personnel, documentation received from the air carrier or other appropriate agencies (Security and Exchange Commission, courts, banks, creditors, etc.), press, industry publications, Aviation Safety Information Analysis and Sharing (ASIAS), etc.

Impact on ATOS System, Subsystem, and Elements: This particular risk indicator has a potentially close association with other risk indicators. When associating this indicator with the ATOS system, subsystem, and element model, keep in mind that problems identified here may also have similar impact for other risk indicators as the risk indicator evaluation continues. Direct linkage might be possible between poor financial condition and the ATOS system, subsystem, and element model. Consider any element(s) where budget cuts might have adverse impact.

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Figure 10-34. OS-03 Change in Air Carrier Management

Condition: Changes in management personnel other than key management can significantly impact an air carrier's system and operational stability.

Background: Middle management at a small air carrier may be primarily responsible for the quality of the air carrier's systems, and any major changes could be significant. A large air carrier may have additional resources that can be relied upon when air carrier middle management personnel change. Regardless of size, the significance of the change in air carrier management should be assessed to determine the potential impact on the air carrier's system and operational stability. The air carrier management may include personnel in the air carrier's safety, quality assurance (QA), engineering, operations, and maintenance departments. Changes in middle management in any of the air carrier's major lines of business should be considered. Changes in administrative management should also be considered though they may not have the same level of impact.

Risk Score	Inspector Considerations
1–2	There have been no changes in air carrier middle management. Changes in middle management are not of high concern as there appears to be little to no impact on the air carrier's system and operational stability. The air carrier has demonstrated appropriate and effective management of any events.
3–5	Concern exists for adverse impact at the air carrier due to change in middle management due to considerations such as: • Change in middle management is sudden and due to employee dissatisfaction. • Change in middle management does not appear to be a controlled change. • High change in middle management within the maintenance and/or operations organizations. • New or remaining staff is being retrained or cross-trained to perform the new or expanded functions. • Air carrier has not experienced change in middle management in its prior history.
6–7	Concern exists for adverse impact because of rapid and widespread changes in middle management in nearly all departments and operational areas. The air carrier has not demonstrated appropriate or effective management of the event(s).

Guidance References (current editions): FAA Order 8900.1, Volume 6, Chapter 2, Section 18, Evaluation of Air Carrier's Management of Significant Changes; and Volume 10, Chapter 4, Section 1, The Air Carrier Evaluation Process.

Data Sources: Air carrier information, labor information, and consultation with the air carrier or use of industry data may be helpful in identifying such changes and assessing their impact.

Impact on ATOS System, Subsystem, and Elements: Evaluate the organizational areas that the changed middle management positions oversee. Consider the impact of such dislocations on air carrier stability and operations, and focus on the ATOS system(s), subsystem(s), and element(s) corresponding to the changed middle manager's oversight responsibilities. Evaluate whether and how the changes might also adversely impact the training and technical administration system(s).

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Figure 10-35. OS-04 Turnover in Personnel

Condition: A high turnover of operations or maintenance personnel can dramatically increase the potential for risk in an air carrier's systems.

Background: Turnover in personnel may affect only the maintenance or operations organizations, or there may be a significant loss of key personnel throughout the entire organization. Maintenance personnel include staff members directly involved in ensuring the quality of the maintenance organization. Operations personnel include staff members directly involved in ensuring the quality of air carrier operations, including crewmembers (pilots and Flight Attendants (F/A)), dispatch, and training staff.

Risk Score	Inspector Considerations
1–2	The air carrier has not experienced significant turnover in personnel. Any turnover in personnel is minor and/or the air carrier has demonstrated appropriate and effective management of any events.
3–5	Concern exists for adverse impact at the air carrier due to turnover in personnel because of such considerations including: • Turnover of personnel is sudden and due to employee dissatisfaction. • Turnover of personnel does not appear to be a controlled change. • High turnover in personnel within the maintenance and/or operations organizations. • New or remaining staff is being retrained or cross-trained to perform the new or expanded functions.
6–7	Concern exists for adverse impact due to widespread and rapid personnel turnover in safety-sensitive areas with very high impact on critical systems. The air carrier has not demonstrated appropriate or effective management of the event(s).

Guidance References (current editions): FAA Order 8900.1, Volume 6, Chapter 2, Section 10, Operator Trip Records Inspections (PTRS Code 1628); Volume 6, Chapter 2, Section 18, Evaluation of Air Carrier's Management of Significant Changes; and Volume 3, Chapter 34, Section 1, Air Carrier Mergers and Acquisition of Air Carrier Operational Assets.

Data Sources: Direct queries of company management, union announcements, company newsletters, bulletins, etc.

Impact on ATOS System, Subsystem, and Elements: Evaluate the areas of the company's operation that is losing personnel. Match the diminished job function(s) to the ATOS system, subsystem, and element model to assess impact. Consider also the impact on training, manual, and technical administration systems. If inspector concern is centered upon retraining, or cross-training of employees, focus on the personnel training and qualification system.

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Figure 10-36. OS-05 Reduction in Workforce

Condition: A reduction in the air carrier's workforce can dramatically increase the potential for failure in an air carrier's systems.

Background: Workforce reductions, layoffs, or buyouts may or may not impact safety and the potential for noncompliance; it depends on how and why they occur, and who is involved.

Risk Score	Inspector Considerations
1–2	The air carrier has not experienced reduction in workforce. There has been little reduction in workforce and/or the air carrier has demonstrated appropriate and effective management of any events.
3–5	Concern exists for adverse impact at the air carrier due to reduction in workforce due to considerations such as: • Reduction of personnel does not appear to be a controlled change, pace and rate of reduction is abrupt, haphazard, uncoordinated, or occurring over very short timeframe. • Reduction in personnel within the maintenance and/or operations organizations. • Reduction affected most experienced personnel and/or of quality, safety, or training personnel. • Air carrier has not experienced a comparable reduction in workforce in its prior history.
6–7	Concern exists for adverse impact at the air carrier due to widespread and rapid personnel reduction in safety sensitive areas with very high impact on critical systems. The air carrier has not demonstrated appropriate or effective management of the event(s).

Guidance References (current editions): FAA Order 8900.1, Volume 6, Chapter 2, Section 18, Evaluation of Air Carrier's Management of Significant Changes.

Data Sources: Direct queries of company management, union announcements, company newsletters, bulletins, etc.

Impact on ATOS System, Subsystem, and Elements: Evaluate the areas of the company's operation that is losing personnel. Match the diminished job function(s) to the ATOS system, subsystem, and element model to assess impact. Consider also the impact on training, manual, and technical administration systems.

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Figure 10-37. OS-06 Rapid Growth/Downsizing

Condition: Times of significant change such as rapid expansion or downsizing can impact air carrier operations due to the possible misalignment of resources and operational requirements.

Background: Growth may be quite apparent in the addition of new aircraft, routes, and employees. It may also be less apparent; growth may be in the form of the addition of new programs or business practices. (For example: the addition of a repair station certificate or an increase in aircraft utilization.) Downsizing may also be apparent in the reduction of aircraft, routes and employees, or in less apparent operational areas. It is also possible for an air carrier to simultaneously experience rapid change in the areas of growth and downsizing. (For example, an air carrier's business plan could include a dramatic reduction in workforce with a simultaneous expansion in routes.) If organizational structures and support resources do not keep pace with the tempo of operations and the changes, safety problems can occur.

Risk Score	Inspector Considerations
1–2	The air carrier is not presently experiencing rapid growth or downsizing. Rapid growth or downsizing appears to be effectively managed by the air carrier's procedures, controls, and process measures. Any adverse impact appears to be negligible to nonexistent; and/or Rapid Growth/Downsizing Assessment Decision Aid score between 43 and 60.
3–5	The air carrier may not have properly implemented its rapid growth/downsizing plan. Concern exists due to considerations such as: • Delay, cancellation and reliability rates. • Minimum equipment lists (MEL) carried daily. • Turn times between flights and/or ground time for maintenance, crew rest requirements, misallocation of resources. • Adequacy of training and training department personnel; and/or • Rapid Growth/Downsizing Assessment Decision Aid score between 25 and 42 related to growth, downsizing, or simultaneous combination.
6–7	Concern exists since the air carrier is not using any projected business plan to govern the growth or downsizing; and/or Rapid Growth/Downsizing Assessment Decision Aid score between 6 and 24 related to growth, downsizing or simultaneous combination.

Guidance References (current editions): FAA Order 8900.1, Volume 6, Chapter 2, Section 18, Evaluation of Air Carrier's Management of Significant Changes.

Data Sources: Air carrier programs, operations specifications (OpSpecs), discussion with air carrier personnel, performance history of risk management (RM) programs, and Data Collection Tools (DCT).

Impact on ATOS System, Subsystem, and Elements: Since rapid expansion, growth, or downsizing virtually affects the whole operation of an air carrier, it can be difficult to pinpoint specific areas in the operation that may present a risk. If the Rapid Growth/Downsizing Assessment Decision Aid (FAA Order 8900.1, Volume 6, Chapter 2, Section 18, Figure 6-30, Rapid Growth/Downsizing Assessment Decision Aid) was used, focus on the word pictures where the individual scoring was low, and consider any corresponding ATOS element(s).

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Figure 10-38. OS-07 Merger or Takeover

Condition: Air carriers must effectively manage mergers or takeovers to ensure continued compliance and safe operating practices.

Background: A merger or takeover may include a combination of divergent corporate and organizational structures and safety cultures. Some merger or takeover transactions may simply be a name change or may occur at a level that does not alter or impact safety-sensitive operations. In these cases, the impact on system or operational stability may be minimal.

Risk Score	Inspector Considerations
1–2	The air carrier has not experienced a merger or takeover. The air carrier appears to be effectively managing the risk associated with the merger or takeover. Adherence to new processes, procedures, and programs appears to be adequate. Any adverse impact is negligible to nonexistent, or unrelated to safety-sensitive issues.
3–5	Concern exists for adverse impact at the air carrier due to considerations such as: • The impact of a merger or takeover may not be effectively managed by the air carrier's procedures, controls, and process measures. • The air carrier's key personnel and others have little to moderate experience with the new type and complexity of the operation. • Evidence of inadequate interface between processes, procedures, and programs across departments. • Evidence of inadequacies in adherence to new processes, procedures, and programs.
6–7	Concern exists for adverse impact because the air carrier has no transition plan in place for accomplishing the merger or acquisition. The air carrier's key personnel and others have no experience with the new type and complexity of the operation. The air carrier has not demonstrated appropriate or effective management of the event(s).

Guidance References (current editions): FAA Order 8900.1, Volume 5, Chapter 3, Section 1, Application Phase—ATP Applicants Engaged in Operations Under Title 14 CFR Part 121, 135, or 91 Subpart K (Part 91K)—Airplanes and Helicopters; Volume 3, Chapter 34, Section 1, Air Carrier Mergers and Acquisition of Air Carrier Operational Assets; and Volume 3, Chapter 34, Section 2, Major Changes in Operating Authority.

Data Sources: Office of the Secretary of Transportation (OST), media, air carrier personnel, labor unions, Data Collection Tools (DCT), and Safety Performance Analysis System (SPAS).

Impact on ATOS System, Subsystem, and Elements: Look at system(s), subsystem(s), and element(s) associated with the risk by evaluating where the largest changes/program differences or most serious lack of interface could exist. Consider focusing also on the ATOS elements dealing with training and technical administration/management support for these areas of concern.

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Figure 10-39. OS-08 Labor–Management Relations

Condition: A poor or deteriorating labor–management relationship can create risk.

Background: Good labor–management relations are critical to the system and operational stability of the air carrier. A threatened or actual shutdown in operations can have an adverse economic impact on an air carrier and can greatly affect the stability of an air carrier's systems. Areas to consider include the status of the bargaining agreements between air carrier labor and management, job function(s) of employee groups in adversarial relationship with management, and the potential effect(s) on the air carrier's systems, subsystems, and elements.

Risk Score	Inspector Considerations
1–2	The air carrier appears to have no adverse labor–management relations issues at this time. The air carrier has demonstrated appropriate and effective management of any labor–management issues or events.
3–5	There appear to be difficulties in the air carrier's labor–management relations. Concern exists due to considerations such as: • Informational picketing is being conducted by employees against the air carrier. • Newspaper advertisements, billboards, or other methods that describe lack of contract negotiations or bargaining has been purchased by either the employee groups or management of the air carrier. • Cross-utilization of employees in safety-sensitive areas due to the unrest (e.g., management working line functions in addition to their normal managerial responsibilities). • Requests for employee concessions by management and/or lower than industry average compensation and benefits.
6–7	Concern exists regarding direct adverse impact of poor labor–management relations on safety. Employee group(s) actively conducting a work stoppage due to labor unrest at the air carrier. The air carrier has not demonstrated appropriate or effective management of the event(s).

Guidance References (current editions): FAA Order 8900.1, Volume 7, Chapter 1, Section 1, Accident Investigations; Volume 7, Chapter 1, Section 2, Incident Investigations and Occurrences; and Volume 8, Chapter 5, Section 6, Process Service Difficulty Report.

Data Sources: Safety Performance Analysis System (SPAS) data packages, FAA Accident Investigation Records, Investigation of Pilot Deviation Reports, Accident/Incident Corrective Action Records, Aircraft Accident/Incident Preliminary Notices, National Transportation Safety Board (NTSB) findings/reports, Mechanical Interruption Summary (MIS) reports, Service Difficulty Report (SDR), Data Collection Tool (DCT) 1.2.4 Mechanical Interruption Summary Reports.

Impact on ATOS System, Subsystem, and Elements: If root cause(s) and/or failure of event(s) is generally known and validated, consider the system(s), subsystem(s) and element(s) in the ATOS structure that relate to the failure or root cause. Consider also the ATOS Training and Technical Administration systems. If the air carrier has not effectively and appropriately managed the events, consider also the ATOS Manuals and Technical Administration Systems.

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Figure 10-40. CD-01 New/Major Changes to Program

Condition: Safety issues may develop from new or changed programs and may increase the potential for noncompliance with existing processes and controls.

Background: New or changed programs at an air carrier should be assessed to determine if and how they affect the air carrier's operations, training, and maintenance system. Some program changes are significant enough to require an operations specification (OpSpec) amendment, such as Extended Twin-Engine Operations (Extended Operations (ETOPS)), but some new or changed programs are less apparent. For example, a sales and marketing initiative adding additional destinations might drive a program change to increase fleet utilization, and cause a reduction in ground time and aircraft servicing, which may induce safety-related risks. Any new program or program change that affects the air carrier's systems could have a significant impact on the air carrier's safety profile.

Risk Score	Inspector Considerations
1–2	There are no new or major changes to air carrier programs. There are well-established and maintained system controls, with fully documented procedures, which have allowed the air carrier to absorb new programs or program changes without affecting quality or safety. The air carrier has demonstrated appropriate and effective management of the situation.
3–5	Concern exists regarding adverse impact of new/major changes at an air carrier due to considerations such as: • Major changes to programs are inadequately described and documented. • Major changes are motivated by cost-cutting • The affected department(s)'s system control(s) do not have the sufficient degree of strength and comprehensiveness to support the new/changed program. • Air carrier's staff size and capabilities do not meet the requirements of the changed program and/or are not sufficiently trained, and/or air carrier past performance history with new/changed programs.
6–7	Concern exists because air carrier infrastructure supporting the safety related aspects of the new or changed program does not exist at all. The controls in place no longer support the changed program or no controls exist for a new program. The air carrier has not demonstrated appropriate or effective management of the event(s) and concern exists for extremely adverse impact.

Guidance References (current editions): Not applicable.

Data Sources: Notifications by carrier, OpSpecs revisions, validation flight results, training program revisions, and air carrier performance history.

Impact on ATOS System, Subsystem, and Elements: Identify the operational area where the change has taken place. In some cases, the new/changed program will correspond exactly with an ATOS element. Some examples include ETOPS, reduced vertical separation minimums authorizations, lower landing minimums, and exit seating. Remember to consider the interfacing ATOS systems, such as the training, manual, and Technical Administration systems. In other cases, the new/major change to program will not have a direct parallel with a specific element. In these cases, focus on the operational context of the change and look for the element(s) that would most likely be impacted. Also consider supporting manual, training, and Technical Administration systems.

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Figure 10-41. CD-02 Continuing Analysis and Surveillance System (Airworthiness only)

Condition: Air carriers with a poorly functioning Continuing Analysis and Surveillance System (CASS) can overlook and improperly manage increased levels of risk.

Background: A CASS provides the air carrier with an internal diagnostic and evaluation tool (audit and surveillance) for continuously monitoring and correcting deficiencies in its maintenance program through a system of ongoing data collection, data analysis, and trend reporting. When implemented and maintained within an environment that includes clear definition of responsibilities, process independence; management commitment; continuity; scheduled evaluation, corrective action and followup, and clear, concise, and available documentation, CASS can provide the air carrier with one critical means of ensuring management control over the maintenance organization. The CASS is an integral piece of an air carrier's comprehensive maintenance and inspection program. As such, it requires consistent oversight not only by the carrier's responsible personnel but also by the principal inspectors (PI). It is incumbent on the Certificate Management Team (CMT) to monitor this program and identify and request corrective action of any shortcomings in the CASS.

Risk Score	Inspector Considerations
1–2	The air carrier appears to have an effective CASS in place and is using the data generated therein to continuously monitor and correct deficiencies in its maintenance program. The air carrier has demonstrated appropriate and effective management of any events.
3–5	Concern exists regarding the air carrier's ability to manage a comprehensive CASS due to considerations such as: • Recurring findings after the issues have been mitigated by CASS. • Continuing Analysis and Surveillance (CAS) corrective actions result in new problem(s). • Recurring CASS findings are associated with the same ATOS subsystem(s). • CASS results are inconsistent with other outside audit results, such as those conducted by the FAA and Department of Defense (DOD). • There is no internal audit system of CASS; e.g., Safety Audit Program. • Air carrier has no CASS performance history.
6–7	Concern exists that the carrier does not have a functioning CASS in place as indicated by an Internal Evaluation Program (IEP), safety program, or other equivalent program(s). The air carrier has not demonstrated appropriate or effective management of the situation.

Guidance References (current editions): FAA Order 8900.1, Volume 3, Chapter 43, Section 1, Evaluate a Part 121 and Part 135 Continuous Airworthiness Maintenance Program; Volume 3, Chapter 44, Section 1, Evaluating an Air Carrier's CASS; Volume 6, Chapter 2, Section 30, Monitor Continuing Analysis and Surveillance System/Revision for Part 121/135 Operators and Part 91 Subpart K Program Managers; Advisory Circular (AC) 120-16, Air Carrier Maintenance Programs; AC 120-59, Air Carrier Internal Evaluation Programs; AC 120-79, Developing and Implementing an Air Carrier Continuing Analysis and Surveillance System; ATOS Safety Attribute Inspection (SAI) 1.3.11 and Element Performance Inspection (EPI) 1.3.11.

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Data Sources: Periodic reliability reports, monthly CASS meetings, surveillance reports from both Safety Performance Analysis System (SPAS) and the ATOS database, DOD findings, and air carrier past performance including element 1.3.11.

Impact on ATOS system, Subsystem, and Elements: In addition to the actual ATOS element dedicated to CASS (1.3.11), consider how the deficiencies identified in the CASS may impact other ATOS system(s), subsystem(s) and element(s).

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Figure 10-42. CD-03 Safety Management

Condition: Air carriers who do not have a Safety Management System (SMS) may not understand or adequately control hazards to operational safety.

Background: An SMS is essentially a business management approach to controlling risk. A risk management (RM) system provides the company's management with a detailed roadmap for monitoring safety-related processes. RM systems may incorporate one or more voluntary programs such as an Aviation Safety Action Program (ASAP), and Internal Evaluation Program (IEP). Both of these programs have a strong relationship to the functions of safety assurance and safety promotion. Air carriers are encouraged to consider integrating these programs into their comprehensive approach to safety management. Safety management concentrates more on the control of processes rather than efforts targeted toward extensive inspection and remedial actions on end products. A good system will include safety quality policy, safety RM, safety assurance, and safety promotion.

Risk Score	Inspector Considerations
1–2	The air carrier appears to have an effective SMS in place and is utilizing the data generated therein to continuously monitor and correct deficiencies in its critical programs to adapt to the air carriers' changing environment. The air carrier has demonstrated appropriate and effective management of the situation.
3–5	Concern exists regarding the air carrier's ability to manage a risk due to considerations such as: • The air carrier does not have policies and procedures that define a method by which risk is managed. • The air carrier does not have a RM process to monitor the critical programs. • The carrier does not have a safety assurance process; this is equivalent to an IEP. • The carrier does not promote safety—safety culture must allow for communication and a means for employees to report safety deficiencies without fear of reprisal.
6–7	Concern exists that the air carrier does not have a SMS or an equivalent method to assess and mitigate safety risk. It does not have an effective method of monitoring its safety-critical programs to ensure it is adapting to the air carrier's changing environment.

Guidance References (current editions): FAA Order 8900.1, Volume 3, Chapter 24, Section 2, Evaluate and Accept a Maintenance Human Factors Training Program; Volume 3, Chapter 44, Section 1, Evaluating an Air Carrier's CASS; Volume 6, Chapter 2, Section 30, Monitor Continuing Analysis and Surveillance System/Revision for Part 121/135 Operators and Part 91 Subpart K Program Managers; ATOS Safety Attribute Inspection (SAI) 1.3.11; Element Performance Inspection (EPI) 1.3.11; Advisory Circular (AC) 120-79, Developing and Implementing an Air Carrier Continuing Analysis and Surveillance System; AC 120-59, Air Carrier Internal Evaluation Programs; AC 120-66, Aviation Safety Action Programs (ASAP); and AC 00-58, Voluntary Disclosure Reporting Program.

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Data Sources: Periodic reliability reports, monthly CAS meetings, surveillance reports from Safety Performance Analysis System (SPAS) and the ATOS database, Department of Defense (DOD) audit findings, shared information and data collected from Voluntary Disclosure Reporting Programs (VDRP).

Impact on ATOS System, Subsystem, and Elements: If weakness in a critical program has been identified, concentrate on the area(s) the critical program manages. Relate those area(s) to corresponding ATOS system(s), subsystem(s), and element(s). Consider also focusing on manuals and key personnel subsystems.

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Figure 10-43. CD 04 Relationship with the FAA

Condition: The air carrier's relationship with its assigned FAA personnel may provide insights into the air carrier's compliance posture and safety culture.

Background: Strong communication, a high level of trust, and a good working relationship between air carrier personnel and FAA personnel assigned to monitor the air carrier can have a positive impact on quality and safety. Conversely, a weak communications infrastructure and a lack of trust between parties can have a negative impact on air carrier operations, quality, and safety. This, in turn, can affect the stability of the air carrier's systems, and may be an indication of risk.

Risk Score	Inspector Considerations
1–2	The air carrier appears to have a cooperative relationship with assigned FAA personnel.
3–5	Concern exists regarding the air carrier's relationship with the FAA due to considerations such as: • Little or no history of strong two-way communication between the air carrier and assigned FAA personnel. • Recent indications of unwillingness to share data and findings with assigned FAA personnel on the part of the air carrier. • FAA recommendations and suggestions not welcomed by the air carrier.
6–7	Concern exists due to apparent failure of cooperation with assigned FAA personnel in critical air carrier areas. The air carrier has not demonstrated appropriate or effective management of this situation.

Guidance References (current editions): FAA Order 8900.1, Volume 10, Chapter 1, Section 2, Introduction to ATOS Business Process and Tools.

Data Sources: FAA personnel assigned to the air carrier, meetings with air carrier personnel, written correspondence between air carrier and Certificate Management Team (CMT)/certificate holding district office (CHDO).

Impact on ATOS System, Subsystem, and Elements: Consider which subsystem(s) and element(s) are directly affected by the perceived lack of cooperation and/or communication. (For example, if the company department/personnel overseeing Flight Attendants (F/A) are not cooperative with the FAA, consider which ATOS system(s), subsystem(s), and element(s) may have associated adverse impact and risk due to that lack of cooperation.)

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Figure 10-44. CD-05 Human Factors

Condition: Risk may exist due to human lapses in the air carrier's design and/or performance.

Background: "Human factors" is an umbrella term for the myriad effects of human interaction with a system. When humans act within established parameters, the system functions as designed. When humans deviate from established parameters, the system is degraded and moves into areas of unknown levels of risk and accidents and incidents occur. To achieve the level of safety desirable in high-consequence operations such as airlines, an organization's systems must function in a variety of circumstances without degradation. Standard operating procedures (SOP) and controls can be introduced into the system to lessen the potential for human variability or increase the system's tolerance for human variability. A certificate holder's failure to develop and implement effective SOPs and controls could increase the level of risk in the system and processes.

Risk Score	Inspector Considerations
1–2	There were no observed human factors lapses at the air carrier. Any human factors lapses were minor. The air carrier has demonstrated appropriate and effective management of any events.
3–5	Concern exists that the air carrier has inadequate human factors design or performance due to considerations such as: • Human factors not integrated into air carrier's training program. • Human factors not integrated into air carrier's safety systems. • Air carrier's process does not address root cause of human factors problems such as employee ownership, incentive contracts, and other financial incentives. • Air carrier system controls are ineffective. • Substantial number and/or type of human factors performance errors have occurred at the air carrier.
6–7	Concern exists due to repeated and critical human factors performance errors that remain uncorrected and appear to indicate a negative trend with escalation in severity. The air carrier has not demonstrated appropriate or effective management of the event(s).

Guidance References (current editions): FAA Order 8900.1, Volume 3, Chapter 24, Section 2, Evaluate and Accept a Maintenance Human Factors Training Program; Volume 11, Chapter 4, Human Factors Involved in Inspection and Repair in a Heavy Maintenance Environment; and FAA Order 9550.8, Human Factors Policy.

Data Sources: ATOS Data Collection Tools (DCT), particularly Safety Attribute Inspection (SAI) controls section and Element Performance Inspection (EPI) performance measures; Safety Performance Analysis System (SPAS) and Program Tracking and Reporting Subsystem (PTRS) data; Aviation Safety Information Analysis and Sharing (ASIAS) database; and National Transportation Safety Board (NTSB) database.

Impact on ATOS System, Subsystem, and Elements: Human factors issues could potentially impact every air carrier system as all systems involve human input and interaction with the system. Lapses in human factors design may exist in manual management, maintenance

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organization, and training program. Consider the location of the concern. Focus on elements with past negative findings in SAI controls attribute and/or EPI performance measures. Consider if training and technical administration design or performance also contributes to the risk.

RESERVED. Paragraphs 10-127 through 10-141.

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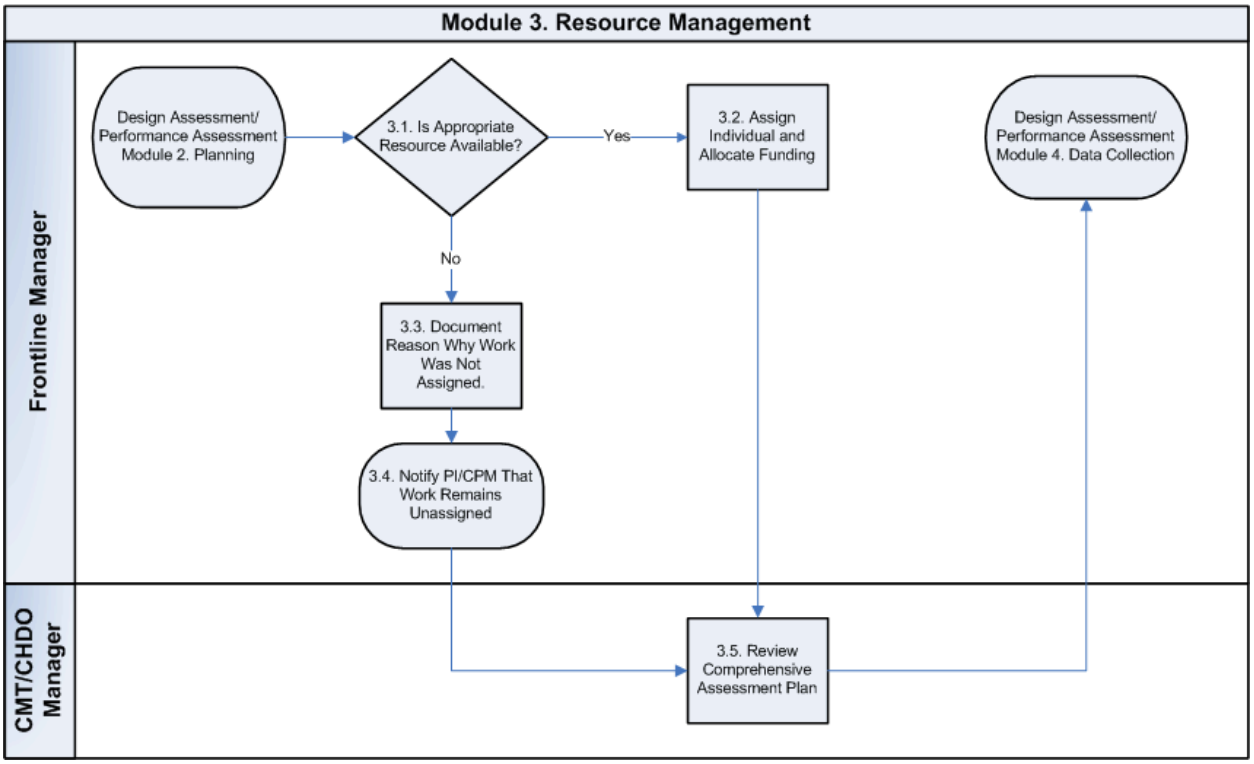
VOLUME 10 AIR TRANSPORTATION OVERSIGHT SYSTEM

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 inspectors. 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

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resources are available to complete all the work, the Front Line Manager (FLM) uses the CAP to establish priority when making assignments.

10-143 AVAILABILITY OF APPROPRIATE RESOURCE. 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 Office (RO) 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) Certificate Program Office, and regional and national specialist availability (e.g., resource pilot support). (Refer to flowchart process step 3.1.)

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 operator 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. (Refer to paragraph 10-144 for baseline requirements.)

2) Nonqualified Members. Active, nonqualified members assigned to the CMT or CPT that have not completed baseline training requirements. (Refer to paragraph 10-144 for baseline requirements.)

3) Inactive Members. Inactive members are no longer assigned or available to the CMT or CPT.

NOTE: In the case of an FLM of shared resources who only assigns work, the Air Carrier-Specific Familiarization Briefing is not a requirement. If the FLM performs data review functions or conducts Safety Attribute Inspections (SAI), Element Performance Inspections (EPI), or Constructed Dynamic Observation Reports (ConDOR), then the Air Carrier-Specific Familiarization Briefing is required.

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 inspector resources to the highest safety priorities for a given quarter.

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2) FLM(s). FLMs directly supervise, assign, and review the work of CMT members.

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 air carrier inspector. 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 RO.

5) Aviation Safety Inspectors (ASI). All ASIs assigned to the air carrier certificate are members of the CMT. ASIs are generally located at the CHDO or certificate management office (CMO), but more than one CMT can share them. 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 ASI-Cabin Safety (CS), and one Aircraft Dispatcher (AD) (required position). 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.

a) Shared ASIs. The CMT office manager may approve the use of shared ASIs. Management should not assign an ASI to more than four CMTs. Shared ASIs report to only one CMT manager and only one FLM, as determined by their RO. The ASI's FLM will make the final decision when there is conflict over work requests.

b) 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 person-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.

6) Operations Research Analyst (ORA). An ORA is assigned to each CMT. Regional or national analysts may provide analytical support.

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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.

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 operator 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 inspectors 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 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 inspector, a maintenance inspector, and an avionics inspector. 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 § 121.583(a). It is a requirement to use an ASI-AD. For each proposed aircraft type, there should be an operations inspector assigned to the team who is qualified in that aircraft type.

10-144 BASELINE TRAINING. An inspector may be assigned to a CMT or CPT before receiving baseline training, but inspectors cannot be assigned a SAI or EPI, or ConDOR until they have received the baseline training. 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 inspector specialty. Baseline training encompasses:

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- All courses of all phases of the initial or transition air carrier training string for the inspector's specialty, including:

  - ATOS 1.2 Interactive Training for ASIs.
  - Safety management course.

- ATOS 1.2 Interactive Training for PIs and Managers (required for all new PIs and managers).
- Other training. (See paragraph 10-146.) CMT Operations and Airworthiness inspectors programmed for their training may perform data collection activities.

NOTE: In the case of an FLM of shared resources who only assigns work, the Air Carrier-Specific Familiarization Briefing is not required. If the FLM performs data review functions or conducts SAIs, EPIs, or ConDORs, then the Air Carrier-Specific Familiarization Briefing is a requirement.

10-145 AIR CARRIER-SPECIFIC FAMILIARIZATION BRIEFING. 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 recommended topics.) The Federal Aviation Administration (FAA) considers inspectors 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. Inspectors 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, 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 recommended programmed hour requirements as directed self-study.

C. Recommended Curriculum. Figure 10-46 contains a standard curriculum. The CMT manager determines which subjects are applicable to the air carrier's operations and determines the amount of lecture and self-study hours.

D. Briefing Presenters. Inspectors 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, electronic Learning Management System (eLMS) courses, Communications Skills to Fast-Track Your Career (PD0133_SKILLSOFT), Available Presentation Resources (comm._05_a03_bs_enus), and Presenting Successfully (comm._05_a01_bs_enus) are available to enhance your presentation skills. Contact your Administrative Officer (AO) if you need assistance enrolling in any of these courses.

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E. Assessment. An open-book, oral, or written quiz determines satisfactory completion of the briefings.

F. 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.

G. Funding. Each CMT is responsible for the costs associated with completing the Air Carrier-Specific Familiarization Briefings.

10-146 OTHER TRAINING.

A. Operations Inspector Initial Training. All CMT Operations inspectors are programmed to receive initial training and a type rating in an aircraft type operated by their assigned air carrier, unless an inspector already holds a type rating for an aircraft type operated by their currently assigned air carrier. CMT Operations inspectors may be programmed to receive recurrent training as required by their assigned responsibilities. CMT Operations inspectors may perform data collection activities if they are programmed for the training.

B. Airworthiness Inspector Initial Training. All CMT Airworthiness inspectors are programmed to receive initial systems training appropriate to their avionics or maintenance specialty in an aircraft type operated by their assigned air carrier. CMT Airworthiness inspectors may perform data collection activities if they are programmed for the training.

NOTE: The provisions of subparagraphs 10-146A or B apply to DEPMs only if they are assigned data collection activities.

C. 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 inspectors 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.

D. Briefing on the CPD. Inspectors 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

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carrier programs as needed (e.g., Advanced Qualification Program (AQP), Aviation Safety/Accident Prevention, and Maintenance Reliability).

10-147 ASSIGN INDIVIDUAL AND ALLOCATE FUNDING. When the appropriate resource is available based on staffing, training, and funding, the FLM assigns the inspector to the appropriate work assignment and allocates funding. (See flowchart process step 3.2.)

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. 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 Inspectors.

1) CAP. The CAP is the only part 121 assessment work program assigned. It is an option to assign work to inspectors 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 and Notice 8900.174, Flight Standards Service Geographic Surveillance Program for 14 CFR Parts 121, 129, and 135-Phase 2.)

2) FLM. The FLM can redirect work assignments from one CMT or CPT member to another.

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 inspector training, experience, qualifications, geographic location, availability, and workload.

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B. DCT-Specific Instructions. Some DCTs may contain specific instructions for additional training, experience, or qualifications that may be helpful in determining inspector assignments. Specific instructions may also include additional references, background information, manuals, or other system document that should be reviewed, as well as suggestions for specific types of activities and/or reporting instructions.

C. Inspector Assignments Can Be Changed Anytime. Assignment changes may include switching from unassigned to assigned or vice versa, and reassigning an assessment from one inspector to another. It is permissible to change inspector 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.

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 inspector. In that case, the inspector 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 inspector 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 inspector 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. Inspectors who have varied backgrounds and experience, and are from different geographic locations can comprise a team. SAI teams should always contain inspectors with a sufficient knowledge base to assess the element accurately. The inspector(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. The FLM assigns work based on the CAP priorities for a given quarter until no resources remain. If appropriate resources are not available to complete the entire CAP, the FLM documents why he or she did not assign the remaining work. This ensures that work that remains unassigned is documented for evaluation in a future planning cycle. (See flowchart process step 3.3.)

10-151 NOTIFY THE PI OR CPM THAT WORK REMAINS UNASSIGNED. The FLM notifies the PI or CPM of any work that remains unassigned. (See flowchart process step 3.4.)

10-152 REVIEW THE CAP. 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.
(See flowchart process step 3.5.)

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

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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 that 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/HER WORK. The FLM will ensure that before an inspector leaves the CMT or CPT, he or she will finalize all work in progress. If the inspector 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.

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Figure 10-46. Air Carrier-Specific Familiarization Briefing Outline of Subjects

General Topics—All Specialties (Recommended Minimum Hours—8)	
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.
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).	**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. 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.

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Figure 10-46. Air Carrier-Specific Familiarization Briefing Outline of Subjects (Continued)

General Topics—All Specialties (continued) (Recommended Minimum Hours—8)	
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. g. Airborne Communications Addressing and Reporting System (ACARS). (1) Weight and balance. (2) Release amendments. (3) Communications.
5. SECURITY AND ACCESS. a. Access to Ramp and Facilities. (1) Site-specific requirements. (2) Air carrier's security coordinators. b. ID Badges. c. Cockpit Keys. d. Security Alerts for Travel Advisories.	
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) AED (defibrillators). 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 (Recommended Minimum Hours—8)	
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. (6) Minimum Navigation Performance Standards (MNPS). (7) Flight Operations Quality Assurance (FOQA). (8) Aviation Safety Action Program (ASAP). (9) Reduced vertical separation minimums (RVSM). (10) Category III Approach (CAT III) procedures.
2. RECORDS AND REPORTING. a. General. (1) Format: paper, microfiche, electronic. (2) Electronic signatures. (3) Security issues. (4) Custody and retention.	

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Figure 10-46. Air Carrier-Specific Familiarization Briefing Outline of Subjects (Continued)

Specific Topics—All Specialties (continued) (Recommended Minimum Hours—8)	
3. STATION FACILITIES. a. Manuals. b. Fueling Equipment and Facilities. c. Maintenance Support. d. Contract Services. e. Passenger and Baggage Screening. f. Cargo. g. Marshalling and Ground Handling.	

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Figure 10-46. Air Carrier-Specific Familiarization Briefing Outline of Subjects (Continued)

Operations and Cabin Safety Topics (Recommended Minimum Hours—8 to 16)	
1. FLIGHT OPERATIONS PROGRAMS a. Flight Planning and Documentation. (1) Performance/operating limits. (2) Operational release. (3) Format of the release package. (4) Supplemental operations. (5) Passenger manifest. (6) Weather. (7) Weight and balance. (8) Documentation transmittal. b. Dispatch and Flight Following. (1) Centralized procedures. (2) Shared procedures. c. MEL/Configuration Deviation List (CDL) System/Deferral Process and Nonessential Equipment and Furnishings (NEF).	**4. CABIN SAFETY.** a. F/A Duties/Cabin. (1) Carriage of passengers specified in 14 CFR part 121, § 121.583(a). (2) Wet lease operations. (3) Reporting discrepancies. (4) Seatbelt discipline. (5) Child restraint. (6) Smoking requirements. (7) Number of required F/As. (8) Briefing requirements. (9) Reporting of mechanical discrepancies. (10) Sterile cockpit. b. Passenger Handling. (1) Interference with crewmember programs. (2) Passengers who may appear intoxicated. c. Carry-On Baggage. (1) Screening. (2) Carry-on baggage program. (3) Regional airline differences. d. Exit Seating. (1) Announcements; briefing cards. (2) Interpreters. e. Gate Agent Procedures. (1) Passenger service. (2) Supplemental operations. f. First Aid and Medical. (1) Medlink procedures. (2) CPR training. (3) Equipment required. (4) Other equipment.
2. TRAINING AND QUALIFICATIONS. a. Overview. (1) Operations specifications (OpSpecs)/specific training requirements. (2) Types of training conducted (wet lease, Advanced Qualification Program (AQP)). b. Training Facilities and Equipment. c. Key Fleet Personnel. d. Documentation of Personnel Requirements and Training. e. Outsource Training.	
3. REST AND DUTY TIME. a. Flightcrew. (1) Records and reporting. (2) Scheduling. b. Cabin Crew. (1) Records and reporting. (2) Scheduling. c. Dispatch. (1) Records and reporting. (2) Scheduling.	

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Figure 10-46. Air Carrier-Specific Familiarization Briefing Outline of Subjects (Continued)

Maintenance and Avionics Topics (Recommended Minimum Hours—8 to 16)	
1. MAINTENANCE SYSTEMS. a. Air Carrier Procedures. (1) General procedures manual. b. Aircraft Parts/Material Control. (1) Site receiving inspection. (2) Scrap parts procedures. c. Ground Handling/Taxi/Run-Up Procedures. d. Calibrated Tools and Test Requirements. e. Maintenance Assessments. f. Required Equipment. (1) Aircraft. (2) Fly-away kit. (3) Maintenance library.	(3) Types conducted. (4) Training facilities/equipment. (5) Key personnel. g. Airworthiness Release. (1) Format of the release package. (2) Supplemental operations. (3) Maintenance releases. h. Weight and Balance. i. MEL/CDL/NEF. (1) Preamble; general; revision status. (2) Deferral and tracking. (3) Coordination with maintenance control. (4) Action required for inoperative items. (5) Interim actions; DENT program. j. Special Programs. (1) ETOPS. (2) AMU. (3) Lower landing minimums. (4) MNPS. (5) ASAP. (6) FOQA. (7) RVSM. (8) Reliability program. (9) Repeat maintenance items. (10) Required inspection items. (11) Continuous Analysis Surveillance. (12) Coordination Agency for Supplier's Evaluation. (13) Corrosion Prevention Control Program (CPCP). (14) Aging aircraft program. (15) Supplemental Inspection Document/Supplemental Structural Inspection Document.
2. RECORDS AND REPORTING. a. Maintenance Logbooks/Recording. b. Aircraft Records/Aircraft Listing. c. Mechanical Interruption Summary. d. Service Difficulty Reports.	
3. OPERATIONS SPECIFICATIONS.	
4. STATION FACILITIES. a. Parts and Equipment. b. Deicing Procedures.	
5. MAINTENANCE ORGANIZATION. a. Maintenance Control. b. Engineering Systems and Forms. c. Internal Evaluation and Quality Assurance. d. Airworthiness Directive Management. e. Maintenance Providers. f. Training Programs. (1) Overview of qualifications and training. (2) OpSpecs/specific training.	

RESERVED. Paragraphs 10-155 through 10-170.

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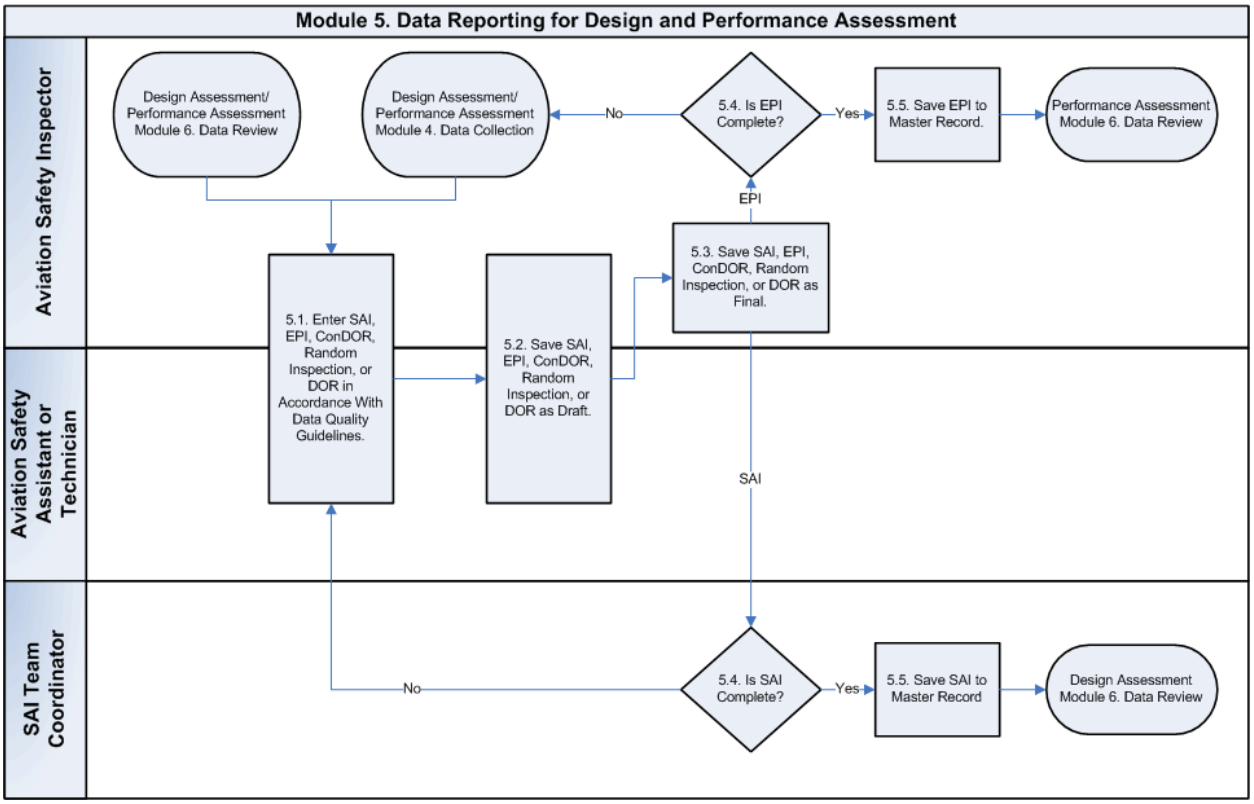
VOLUME 10 AIR TRANSPORTATION OVERSIGHT SYSTEM

CHAPTER 2 PROCEDURES FOR DESIGN AND PERFORMANCE ASSESSMENT

Section 6 Design and Performance Assessment Data Reporting

Figure 10-50. Module 5: Data Reporting for Design and Performance Assessment



10-213 INTRODUCTION. The data reporting process module defines the method for transferring data collected by inspectors into the Air Transportation Oversight System (ATOS) database. Use Safety Attribute Inspection (SAI), Element Performance Inspection (EPI), Constructed Dynamic Observation Report (ConDOR), random inspection, and Dynamic Observation Report (DOR) data to assess air carrier or applicant system design and performance, and identify any safety issues. Inspectors who observe an unsafe condition that could result in an accident, incident, or violation of the regulations must intervene by notifying the appropriate air carrier and principal inspector (PI), or applicant personnel and the certification project manager (CPM).

10-214 ENTER SAI, EPI, CONDOR, RANDOM INSPECTION, OR DOR IN ACCORDANCE WITH DATA QUALITY GUIDELINES (DQG). Report in the ATOS database SAI activity, EPI activity, ConDOR, random inspection, or DOR data. Enter data into the ATOS database within 3 business days of completing an activity, or as soon possible. When entering multiple activities, input activities in chronological order (see Table 10-1, Data Quality

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Guidelines—Specific Data Requirements Table, and Table 10-2, Data Quality Guidelines—Data Dimensions Table). (See flowchart process step 5.1.)

A. Activities Recorded in the ATOS Database. The Certificate Management Team (CMT) or Certification Project Team (CPT) records complete ATOS data collection activities in the ATOS database. Never enter the same data in both the ATOS database and the Program Tracking and Reporting Subsystem (PTRS). If reporting an ATOS activity, enter those data into the ATOS database utilizing SAIs, EPIs, ConDORs, random inspections, and DORs. Use the appropriate system for any followup reporting (e.g., enforcement investigations or self-disclosures).

B. Recording the Use of Federal Aviation Administration (FAA). Refer to the tables below to determine where you should record the Form 8430-13 number. Never record the Form 8430-13 number for the same en route inspection:

- In both the ATOS and PTRS databases, and/or
- In both the random inspection and a DOR.

1) CMT Members for the Air Carrier Operating the Aircraft.

If you are:	Then:	Additional Info:
ATOS 1.2-trained and performing an EPI or ConDOR that requires en route activities.	Record the Form 8430-13 number in the designated field of the EPI.	Do not document the Form 8430-13 information on more than one EPI when performing multiple EPIs concurrently on the same en route inspection. When performing multiple en route inspections for multiple activities within a single EPI, enter a separate Form 8430-13 number for each activity, as defined in Table 10-2.
ATOS 1.2-trained and performing a random inspection or element-based DOR.	Record the cockpit or cabin en route data and the Form 8430-13 number using either a random inspection or element-based DOR unless the surveillance activity is recorded on an EPI or ConDOR.	Only enter the Form 8430-13 number in the designated field of one record. See Table 10-2.
Not ATOS 1.2-trained.	Record the Form 8430-13 number in a PTRS record.	

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2) Other Air Carrier CMT Members (not the air carrier operating the aircraft).

If you are:	Then:	Additional Info:
ATOS 1.2-trained.	Record the Form 8430-13 number in the designated field of a random inspection or ConDOR, if assigned.	
Not ATOS 1.2-trained.	Record the Form 8430-13 number in a PTRS record.	

3) Non-CMT Members.

If you are:	Then:	Additional Info:
ATOS 1.2-trained.	Record the Form 8430-13 number in the designated field of a random inspection, or ConDOR, if assigned.	Only enter the Form 8430-13 number in the designated field of one record.
Not ATOS 1.2-trained.	Record the Form 8430-13 number in a PTRS record.	

C. Data Collection Activities. Data collection may involve a variety of activities over multiple dates at various locations. There should be a sufficient number of activities to answer all the questions and provide data for a thorough assessment by the PI or the CPM.

1) The SAI or EPI Data Collection Tool (DCT) master record comprises all of these individual SAI or EPI activity reports. A general rule of thumb is that any time the "Common Data" field information (e.g., date, location, or aircraft) changes, a new activity begins. Most activities require 1 day to complete.

2) An activity is a snapshot of the air carrier's or applicant's system design or performance at that moment.

3) It is not necessary for inspectors to complete an activity report for each document evaluated; he or she may submit a single activity report for each set of documents at one location for 1 day.

4) Inspectors should only report observed data (what they see), not their interpretation (personal opinion).

D. DOR. DORs record observations outside the comprehensive assessment planning process. These observations may involve any Title 14 of the Code of Federal Regulations (14 CFR) part 121 air carrier at any location, at any time.

1) Using DORs (CMT members). CMT members should use DORs in the following situations:

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a) Single-activity observations unrelated to the ATOS element under assessment.

b) Unplanned observations when there is not an ATOS element or question that addresses the unique situation.

c) Unplanned observations about a certificate holder the inspector is not assigned to inspect.

d) Observations directed by a handbook bulletin or other national directive.

2) Using DORs (non-CMT members). Non-CMT members should use DORs in the following situations:

a) Unplanned observations when there is not an ATOS element or question that addresses the unique situation.

b) Unplanned observations about a certificate holder that the inspector is not assigned to inspect.

c) Observations directed by a handbook bulletin or other national directive.

3) Reporting DORs. Inspectors select the most appropriate format based on the nature of the observations or information he or she is recording. DQG apply to both reporting options.

a) Element-Based Observation. Use this format to record an unplanned observation for an existing element by answering the appropriate DCT questions for that element.

b) Other Observations. Use this format to record data that are not related to existing elements or DCT questions. Inspectors can describe their observations and resulting actions in the "Common Data Field and Text" block.

4) Saving a DOR to Final. A DOR saved as final is immediately available to all PIs and CMT managers and supervisors of the observed air carrier. The inspector sends the DOR to the data reviewer of the observed air carrier, making it available for analysis to all Operations Research Analysts (ORA) and PIs. DORs are available to query along with EPI and SAI data.

E. ConDORs. The ConDOR is a special-purpose DOR constructed by the PI or CPM using DCT questions. The Front Line Manager (FLM) assigns ConDORs to inspectors. The ConDOR contains instructions to inspect and report on specific areas of immediate concern.

F. Reporting Data in ConDORs. Answer all questions using the DQG. When an inspector submits a ConDOR as final, it is immediately available to all PIs and CMT managers and supervisors. The inspector sends the ConDOR to the data reviewer for evaluation, making it available for analysis to ORAs and PIs. ConDORs are available to query along with EPI and SAI data.

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G. Entering Data Collection Activities. The inspector who conducted the data collection activity, or a designated aviation safety assistant (ASA) or aviation safety technician (AST) assigned to the CMT, enters the data into the ATOS database. Automation links all activity records to the reporting inspector. See Table 10-1 for more information on entries into specific data fields.

1) Entering Common Data Field Information. Complete all common data fields that are relevant to the activity. Enter the Form 8430-13 number in the designated field on only one surveillance record. The specific data requirements table at the end of this section provides guidance for each common data field. Access the activity report that displays the element-specific DCT questions for the selected SAI or EPI after entering information in the common data fields. Complete only those questions that can be answered from accomplishing the activity or observation.

2) Inspector Actions Taken. Whenever there is a "No" response to a question, the "Inspector Action Taken" field associated with that specific data reporting tool question is available to use as described below.

a) The originating office tracks any action taken involving an enforcement investigation as prescribed in the current edition of FAA Order 2150.3, FAA Compliance and Enforcement Program. When opening an Enforcement Investigation Report (EIR) prior to saving the DCT to final, document the number in the "Inspector Action Taken" field of the activity report. If you do not have the EIR number prior to saving the DCT to final, document the EIR number in the explanation box of the Assessment Determination and Implementation (ADI).

b) Inspectors should not enter a description of their actions to complete the particular activity they are reporting. The intent of this field is not to capture what records the inspector reviewed or the processes he or she observed.

c) Actions entered in this field include, but are not limited to, notifying the appropriate air carrier or applicant personnel of a potential noncompliance, initiating an enforcement investigation, consulting with air carrier or applicant personnel to effect an action, or notifying the PI or CPM.

3) Record Responses to Questions. Answer SAI DCT questions with "Yes," "No," or "Not Applicable (N/A)." Answer EPI or ConDOR questions "Yes," "No," "N/A," or "Not Observable." Inspectors who are unsure of how to respond to a question should do additional research or conduct another activity to make a definitive determination.

a) "Yes" Response. The FAA formulates the DCT questions so that "Yes" is always a favorable response.

1. SAI "Yes" responses: The "Manual Reference and Other Documentation" field becomes available after selecting a "Yes" response to an SAI question. Inspectors must enter where they found the information in the air carrier's manuals or system documentation for each associated SAI question.

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2. ConDOR SAI "Yes" responses: The "Manual Reference and Other Documentation" field becomes available after selecting a "Yes" response to an SAI question. "Yes" responses require a manual reference; they are optional for "No" responses. Inspectors must enter whether they found the information in the air carrier's manuals or system documentation for each associated SAI question.

3. Comments describe where to find the information in the system documentation of the air carrier or applicant, and how the air carrier or applicant complies with the subject of the question. References should be specific so that another inspector may easily locate them.

4. Comments should be complete and descriptive. Do not use the "Comment" field to capture negative, unsatisfactory, or qualifying (i.e., yes, but) information. A PI Alert checkbox is available for SAI "Yes" responses only. The PI alert allows the aviation safety inspector (ASI) to indicate that he or she requests a PI review. The inspector must enter a comment in the "Comment" box to explain the reason for the alert.

5. Any negative wording in a "Yes" comment is inappropriate and probably indicates that the inspector should have answered the question as "No." The "Comment" field is not a catchall for describing inspection activities.

b) "No" Response. The FAA formulates the DCT questions so that "No" always indicates an unfavorable response. For each "No" response, the inspector must provide an explanation that describes the observations causing the negative response.

1. State the Requirement (e.g., regulation, handbook requirement, or specific authorization).

2. Identify the Nonconformance. Describe the observation that did not meet the requirements.

3. Identify the Objective Evidence. Describe the specific system documentation and/or location of the observations.

NOTE: Explanations must be complete and descriptive so that someone knowledgeable within the air transportation industry can understand the comment without requiring additional information. Read the question through and answer it based on just the performed activity. The intent is not that a single "No" answer necessarily equates to an unsafe condition or a regulatory violation, unless that particular DCT question has a regulatory basis.

4. Airlines for America (A4A) Code. When reporting an SAI or EPI activity "No" response, the ASI should select an A4A code and appropriate four-digit code.

5. Drop-Down Menu. A "No" response requires the inspector to select one or more potential problem areas from a drop-down menu. The inspector must include an explanation in the "No Comments" box for each area selected. If the available choices do not

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adequately describe your observation, select "Other" and provide an explanation in the "Comment" block.

6. "No" Explanations. "No" answers require an explanation of the "who, what, where, and when" that caused the response. "No" responses provide valuable information that, when rolled up and analyzed with other similar data, may lead to an increase in oversight even though the certificate holder did not violate any regulations. The database captures the explanations and analyzes them for trends to determine if the CMT or CPT must take any action. Automation prevents users from saving an activity as final until he or she enters an explanation for each "No" response. Inspectors should write explanations in clear, concise, and complete sentences using proper spelling so that other CMT or CPT members can understand the findings without requiring further information. Enter references to the air carrier's documentation when appropriate.

c) "Not Applicable" Response. Based on the air carrier's oversight profile, the activity reporting screen should only contain questions that are applicable for that air carrier. If the inspector finds a question that does not apply to that air carrier, each SAI question offers an "N/A" response option. Choosing this option is appropriate only for questions that are not applicable due to the types of operations authorized for the particular air carrier or applicant.

NOTE: "N/A" means not at all applicable to air carrier's or applicant's operation. It does not mean the inspector did not observe the elements. If the question is not relevant to the specific activity or observation, the inspector leaves the question unanswered and completes additional activities or observations. Misuse or overuse of "N/A" corrupts the data.

d) "Not Observable" Response. An inspector uses a "Not Observable" answer only on the last activity he or she conducts before saving the EPI activities to the master record. ConDORs are saved "Final," not to the master record, and only have one activity. Use "Not Observable" when you have been unable to observe the situation described by a particular question in any of the activities conducted. Do not routinely use this option in lieu of completing all assigned questions. An explanation in the "Comments" box is optional.

e) If the ASI is unsure whether something observed was unsatisfactory or potentially unsatisfactory, he or she should not answer the question for that activity until after performing additional research and planning another activity to make a definitive determination.

H. Entering Data Provided by Air Carriers. Data collected by air carriers during audits must meet the following:

1) Inspectors may enter into the ATOS database SAI data provided by certificate holders only after qualified FAA personnel appropriately validated the data. Validate all the data for entry into the database.

2) FAA inspectors do not have the authority to require certificate holders to complete SAI or EPI checklists.

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3) FAA inspectors may advise certificate holders that the FAA will review their requests for amended operations specifications (OpSpecs) or expanded scope if the certificate holders voluntarily complete appropriate SAIs as a self-audit to ensure that changes to approved/accepted programs comply with the regulations.

10-215 SAVE SAI, EPI, CONDOR, RANDOM INSPECTION, OR DOR AS DRAFT. Inspectors may save activity reports as draft, and then final, or directly to final. ASTs or ASAs who enter data provided by inspectors must transcribe these observations completely and accurately into the ATOS database. Automation links all inspection records to the reporting inspector. ASTs and ASAs can only save activity reports as draft status.
(See flowchart process step 5.2.)

10-216 SAVE SAI, EPI, CONDOR, RANDOM INSPECTION, OR DOR AS FINAL. Upon deciding that the activity report is complete, accurate, and adheres to the DQG, the inspector saves it in final status. (See flowchart process step 5.3.)

A. Data Entry Validation Checks. As the inspector enters the data, first-level data entry edit and validation checks are applied to the data. Data entry validation in the common data field minimizes data entry errors.

B. Final Status. Only an inspector can save the activity report as final. An inspector can save data to final without having to go through draft status. Once in the final status, no further changes can be made to the activity report.

C. Save the Data. Save data as final within 5 business-days of completing the activity, or as soon as possible.

10-217 IS SAI OR EPI COMPLETE? The reporting inspector reviews all activity reports (SAI and EPI) to ensure he or she followed the DQG and PI instructions.
(See flowchart process step 5.4.)

A. Automation Controls. Automation ensures that all questions on an SAI or EPI record have at least one answer before their submission for data review.

B. Team Coordinator (TC). In the Design Assessment (DA) reporting process, the SAI TC reviews all SAI activity reports the SAI team members submit. The TC ensures that each activity includes, at a minimum, the activity start date, end date, and location.

10-218 SAVE SAI OR EPI TO MASTER RECORD. See flowchart process step 5.5.

A. Saving an SAI. After deciding that the SAI record is complete, the TC saves the data to the SAI master record.

B. Saving an EPI. After deciding the EPI record is complete, the reporting inspector saves the EPI to the master record.

C. SAI or EPI Saved. Once the SAI or EPI is saved to the master record, the entire record is then available to the data reviewer.

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Table 10-1. Data Quality Guidelines—Specific Data Requirements Table

Specific Data Requirements Table		
Field	**DOs and DO NOTs**	**Examples and Explanations**
System (Dynamic Observation Report (DOR))	DO enter the system applicable to the observation.	If your observation relates to an Air Transportation Oversight System (ATOS) system, select the appropriate system from the drop-down list. Example: "1.0 Aircraft Configuration Control."
Subsystem (DOR)	DO enter the subsystem applicable to the observation.	If your observation relates to an ATOS subsystem, select the appropriate subsystem from the drop-down list. Example: "1.3 Maintenance Organization."
Element (DOR*) *Applies only to Element-Based Observation DOR	DO enter the element applicable to the observation.	If your observation relates to an ATOS element, select the appropriate element from the drop-down list. Example: "1.3.1 Maintenance Program."
Air Carrier (DOR, Random Inspection)	DO enter the air carrier applicable to the observation.	The default value for the air carrier is the air carrier to which you are assigned; however, you can submit a DOR for any air carrier. Select the air carrier's name from the drop-down list provided.
Program Tracking and Reporting Subsystem (PTRS) Activity Code (DOR*) *Applies only to Other Observation DOR	DO enter the appropriate PTRS activity code applicable to the observation.	If your observation relates to a PTRS activity code, select the appropriate code from the drop-down list.
Activity Start Date (Safety Attribute Inspection (SAI), Element Performance Inspection (EPI), DOR, Constructed Dynamic Observation Report (ConDOR), Random Inspection)	DO enter the applicable start date. DO enter multiple activities in chronological order.	The date field defaults to the current date. You can select the current date; select the month, day, and year from the drop-down menu; or open the pop-up calendar and select the date. "3/28/2011"
Activity End Date (SAI, EPI, DOR, ConDOR, Random Inspection)	DO enter the applicable date.	The date field defaults to the current date. You can select the current date; select the month, day, and year from the drop-down menu; or open the pop-up calendar and select the date.

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Specific Data Requirements Table		
Field	**DOs and DO NOTs**	**Examples and Explanations**
		"3/28/2011"
Departure Point/Location (SAI, EPI, DOR, ConDOR, Random Inspection)	DO enter an airport identifier in the departure point/location field for all data collection activities.	If you did not conduct the data collection activity on an airport, enter the airport identifier that is closest to the site of the data collection in the "Departure Point/Location" field.
Departure Point/Location and Arrival Point (SAI, EPI, DOR, ConDOR, Random Inspection)	DO enter the three-letter FAA airport identifier for airports within and between the 50 United States using all capital letters. DO enter the 4-letter International Civil Aviation Organization (ICAO) airport identifier for airports outside of the 50 United States using all capital letters. When the city pair involves travel to or from a U.S. airport, that city's four-letter ICAO designation should also be used. DO NOT use OAG or air carrier-created identifiers.	Use "SFO" for San Francisco International Airport. Use "EGLL" for the London-Heathrow airport instead of the "LHR" Official Airline Guide (OAG) identifier. KPIT-CYUL; Pittsburgh, PA to Montreal. This normally applies only outside of the 50 United States. Use "MMMX" for Mexico City instead of the "MEX" OAG identifier. NOTE: If the ATOS database does not list a four-letter airport identifier for a foreign airport, use the three-letter identifier.
Certificated Repair Station's Number (SAI, EPI, DOR, ConDOR, Random Inspection)	DO enter the repair station's certificate number. DO enter the repair station's certificate number even if the repair station subcontracts maintenance.	Select the repair station certificate number from the drop-down menu. ABC Airlines contracts with XYZ Repair Station, (designator XYZR) to perform maintenance. If XYZ Repair Station contracts with John Smith, Airframe and Powerplant (A&P) certificate number 123456, to perform maintenance for XYZ Repair Station, select XYZ Repair Station's certificate number from the drop-down menu.

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Specific Data Requirements Table		
Field	**DOs and DO NOTs**	**Examples and Explanations**
Aircraft Registration Number (SAI, EPI, DOR, ConDOR, Random Inspection)	DO enter an aircraft's full registration number if the activity involves a single aircraft. DO include the registration prefix as part of the entry.	N123DL Some U.S. air carriers may use foreign-registered aircraft. For statistical analysis reasons, it could be important to be able to discern what country holds the aircraft's registration. Valid examples include: • N123DL, United States. • N123AA, United States. • G4321, Great Britain.
Make, Model, and Series (M/M/S) (SAI, EPI, DOR, ConDOR, Random Inspection)	DO enter an M/M/S or a make/model if the activity involved aircraft. DO NOT enter an M/M/S or a make/model if the activity did not involve aircraft.	If a particular aircraft was involved as the subject of the data collection or directly involved in the data collection, enter/select an M/M/S from the drop-down list. If the activity was oriented to a fleet of aircraft that includes several series of like makes and models, enter/select just the make-model from the drop-down list.
Flight Number (SAI, EPI, DOR, ConDOR, Random Inspection)	DO enter the flight number you performed the activity onboard a revenue flight. DO NOT enter a prefix to the flight number.	You may enter maintenance, training, and administrative nonrevenue flight numbers if they are known; however, they are not mandatory. A valid flight number entry for an American Airlines flight could be 1247. An invalid flight number entry for the same American Airlines flight would be AA1247. The automation knows the carrier was American Airlines because the record is associated with the American Airlines Comprehensive Assessment Plan (CAP).

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Specific Data Requirements Table		
Field	**DOs and DO NOTs**	**Examples and Explanations**
Simulator Device ID (SAI, EPI, DOR, ConDOR, Random Inspection)	DO enter the correct "Simulator ID" when a simulator was involved.	You can verify the correct simulator ID by the simulator acceptance/qualification letter posted at the simulator location. You can also verify the simulator ID from the active list located on the National Simulator Program Branch Web site at http://www.faa.gov/about/initiatives/nsp/train_devices/.
FAA Form 8430-13 Number (SAI, EPI, DOR, ConDOR, Random Inspection)	DO enter the Form 8430-13 number in the designated Form 8430-13 number field on an EPI or ConDOR when the purpose of being in the airplane is to collect data for an ATOS assessment. DO NOT enter the same Form 8430-13 number in the designated Form 8430-13 number field of more than one ATOS surveillance activity record. DO enter the Form 8430-13 number on the random inspection if inspectors are ATOS 1.2 trained but are not members of the Certificate Management Team (CMT) for the air carrier operating the aircraft. DO enter the Form 8430-13 number on the random inspection or element-based DOR if inspectors are members of the CMT for the air carrier operating the aircraft, and the data are	If you are not ATOS 1.2 trained, then record the activity in PTRS. Never report the use of Form 8430-13 for the same en route inspections in both the ATOS and PTRS databases or on more than one ATOS surveillance activity record. If you are performing multiple surveillance activities during the same flight, only record the Form 8430-13 number in the designated Form 8430-13 number field of one record. You may record the Form 8430-13 number in the "Comments" field or on the "Local"/"National Use" fields, as necessary, when completing multiple ATOS surveillance activity records.

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Specific Data Requirements Table		
Field	**DOs and DO NOTs**	**Examples and Explanations**
	not recorded on another ATOS surveillance activity record. In addition, use the random inspection if the cockpit or cabin en route inspection is incidental to ATOS data collection (e.g., traveling from one location to another to perform official business).	
"Local/Regional/National Use" Field (SAI, EPI, DOR, ConDOR, Random Inspection)	DO enter, when applicable or directed, data in the "Local/Regional/ National Use" field.	Additional information specific to the inspection activity is occasionally used to track and/or analyze specific requirements.
Off-Hour Button (SAI, EPI, DOR, ConDOR, Random Inspection)	DO use the off-hour button to indicate an inspection activity performed after normal duty hours, to include weekends.	
Response Not Answered (Left Blank) (SAI, EPI)	DO schedule another SAI or EPI activity to observe the element question later, if the question's subject was not observed during the activity and is applicable to the carrier.	If the element question asked, "Were the written procedures adhered to for the Airworthiness Directive Management process?" and you did not observe any procedures, do not select the response and leave the explanation blank.
Not Observable (EPI or ConDOR)	DO use "Not Observable" when you have not been able to observe the situation described by a particular question in any of activities conducted.	For example, you may not observe an intoxicated passenger during an entire passenger-handling EPI. An explanation is optional.
Not Applicable (N/A) (SAI, EPI, DOR*, ConDOR) *Applies only to Element-Based Observation DOR	DO enter "N/A" when a particular question does not apply to the air carrier's operation being evaluated.	"N/A" is an appropriate response if the question does not apply to the air carrier's type of operation, type of aircraft, or area of operation.

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Specific Data Requirements Table		
Field	**DOs and DO NOTs**	**Examples and Explanations**
"N/A" Explanations (SAI, EPI, DOR*, ConDOR) *Applies only to Element-Based Observation DOR	DO explain the reasons for your "N/A" response.	"N/A" is an appropriate response if the air carrier's type of operation, type of aircraft, or area of operation does not apply. Enter a factual statement as to why the response was N/A (e.g., ABC Airlines is not approved in its operations specifications (OpSpecs) to conduct reduced vertical separation minimum operations).
Response "Yes" (SAI, EPI, ConDOR, Random Inspection)	DO enter "Yes" to indicate the certificate holder met the requirements based on what the inspector observed during the activity.	A "Yes" answer always indicates a positive response. Take great care when determining if the response is positive. If you indicate a positive answer using a qualifier (e.g., Yes, but…), this may drive the answer to actually be a "No."
Response "Yes" (SAI, ConDOR)		A "Yes" response indicates the operator complies with observed specific regulatory requirements (SRR) and applicable FAA guidance for that element. A "Yes" response also indicates the applicable safety attributes are incorporated into the operator's system.
Response "Yes" (EPI, ConDOR)		A "Yes" response indicates that the observed system performance measures are accomplished. A "Yes" response indicates the observed procedures approved/accepted for the air carrier are being followed.
Response "Yes"/Manual Reference and Other Documentation (SAI, ConDOR)	For both SAI and ConDOR SAI "Yes" responses, inspectors must input a manual reference in the "Manual Reference and Other Documentation" field. "Yes" comments are optional on EPIs. "Yes" responses associate with each specific question only, not the entire activity. "Yes" responses must meet all current data quality guideline (DQG) dimensions.	Describe how the air carrier complies with the regulatory requirement or FAA guidance. Describe how and where the air carrier documents this requirement in all applicable manuals in their system.

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Specific Data Requirements Table		
Field	**DOs and DO NOTs**	**Examples and Explanations**
Principal Inspector (PI) Alert (SAI, ConDOR)	DO select the "PI Alert" to request a PI review for a "Yes" response. Available only for "Yes" responses for SAI questions and SAI questions in a ConDOR.	Describe the reason for selecting the "PI Alert" in the "Yes" comments.
Response "No" (SAI, EPI, DOR*, ConDOR, Random Inspection) *Applies only to Element-Based Observation DORs	DO enter "No" to indicate the requirements that were not met.	The questions are written so that "No" always indicates a negative response to the question. The significance of a "No" response depends on the specific Data Collection Tool (DCT) question. The intent was never that a single "No" answer would equate to an unsafe condition or a regulatory violation, unless that particular "No" has a regulatory basis and you observed a possible violation or an unsafe condition.
Response "No" (SAI, ConDOR)		A "No" response may indicate the operator either does not comply with observed SRRs and/or applicable FAA guidance for that element, or that the operator's procedures do not incorporate the applicable safety attribute. A "No" response can also mean that system safety procedures are weak in the area under evaluation, or that the operator's approved or accepted procedures are inadequate.
Response "No Change" (N/C) (EPI, DOR*, ConDOR) *Applies only to Element-Based Observation DORs	DO select "N/C" if there have not been changes in personnel or the program that affects the responsibility and/or authority attributes.	
"No" Explanations (SAI, EPI, DOR*, ConDOR, Random Inspection) *Applies only to Element-Based Observation DOR	DO enter an explanation for all "No" responses. DO write your explanation so that it answers the question in a responsive way. DO write your explanation so it is understandable.	Enter an explanation of the "who," "what," "where," and "when" that caused the "No" response. The explanation must be pertinent to the question's intent. The explanation should have a logical, precise relevance to the matter at hand. The explanation should be plain and comprehensible, written in clear, concise language. Abbreviations/acronyms should be commonly understood within the aviation industry.

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Specific Data Requirements Table		
Field	**DOs and DO NOTs**	**Examples and Explanations**
	DO write your explanation so that it is technically correct, reliable, and free of error. DO include references where appropriate. DO make each explanation stand alone. DO state the requirement. DO identify the nonconformance. Describe what you observed that did not meet the requirements. DO identify objective evidence. Describe the specific system documentation and/or location where you made the observations.	Explanations should be complete and descriptive so that someone knowledgeable within the air transportation industry can understand without requiring further information. The explanation should be grammatically correct, without spelling errors, and written in complete sentences that are punctuated and capitalized correctly. Include Codes of Federal Regulations (CFR) and other references in explanations. There is no direct link between the explanation for one question and another. Each explanation must standalone for effective analysis and reader understanding. (e.g., regulation, handbook requirement, specific authorization.)
"No" Explanations (SAI, EPI, DOR*, ConDOR, Random Inspection) *Applies only to Element-Based Observation DOR	DO NOT refer to the explanation for another question. DO NOT use the explanation field to critique the ATOS process. DO NOT enter opinions in the explanation. DO NOT enter the word "None" by itself in the explanation field.	"See above," "Same as question 3," or "Refer to the Tulsa Main Base Report" are all examples of references to avoid. The "Problem Reporting and Feedback" hyperlink is the proper avenue to use for improvement suggestions or critiques. The explanation should be statements of fact or fact-based conclusions. Use of spaces, periods, or other characters by themselves to circumnavigate the requirement for an explanation is not acceptable.
Airlines for America (A4A) Codes (EPI and SAI)	DO select appropriate A4A codes.	A4A codes should reflect the known primary and secondary aircraft systems that were identified as being related to the principal cause of the no response. Otherwise, leave the codes blank.

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Specific Data Requirements Table		
Field	**DOs and DO NOTs**	**Examples and Explanations**
"Comments" field (DOR*, ConDOR, Random Inspection) *Applies only to Other Observation DOR	DO enter actual observations. DO NOT enter what actions you conducted during the course of the observation.	Describe in detail what was observed and include all relative facts (e.g., "who," "what," "where," and "when," as applicable). Entries must be statements of fact, or fact-based conclusions from actual observations. Inspectors should not enter a description of what they did to complete the particular inspection activity.
"Inspector Action Taken" field NOTE: This is an optional field with the exception of documenting an Enforcement Investigation Report (EIR) number when enforcement action is taken. (SAI, EPI, DOR, ConDOR, Random Inspection)	DO record actions you took because of the deficiencies you observed. DO NOT enter a description of what was done during the observation.	Actions may include notifying appropriate air carrier personnel of a potential noncompliance, consulting with air carrier or other FAA officials to obtain additional information, or initiating an enforcement investigation. NOTE: If you have the EIR number prior to saving the DCT to final, document the number in the "Inspector Action Taken" field of the activity report. If you do not have the EIR number prior to saving the DCT to final, document the EIR number in the explanation box of the Assessment Determination and Implementation (ADI). You should not enter a description of what you did to complete the particular inspection activity being reported.
Name (Optional) (ConDOR)	(Optional) DO enter a name that will identify the ConDOR.	Names are limited to letters, numbers, and spaces totaling up to 25 characters.

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Table 10-2. Data Quality Guidelines—Data Dimensions Table

Data Dimensions Table		
Data Dimension	**Definition**	**Measurement Examples**
Accuracy Safety Attribute Inspection (SAI), Element Performance Inspection (EPI), Dynamic Observation Report (DOR), Constructed Dynamic Observation Report (ConDOR), Random Inspection	Data must be technically correct, reliable, and error free.	All explanations and comments should be in complete sentences and spelled correctly. Include Codes of Federal Regulations (CFR) and other references, where appropriate.
Appropriate Amount of Data (EPI)	Principal inspectors (PI) may recommend a minimum number, location, and scope of inspection activities. The number of activities required to assess properly a given element may vary considerably. Perform enough activities to answer accurately the questions on the Data Collection Tool (DCT). It may not be reasonable to perform enough activities to ensure a specific statistical level of confidence. The activities conducted should vary across time and location to obtain sufficient amounts of quality observations to reflect the performance of the system element.	The number of activities required to answer all EPI questions varies depending on the complexity of the air carrier system, the size of the air carrier, and other factors. The reporting inspector must follow specific PI instructions that pertain to the inspection.
Appropriate Amount of Data (SAI)	Answer each SAI question once to evaluate the adequacy of the system design.	SAI team coordinators (TC) should work with team members to plan inspection activities and ensure that each DCT question has at least one response during the course of the inspection. The reporting inspector must follow specific PI instructions that pertain to the inspection. Although multiple activities may be required to complete an SAI, team members should avoid multiple responses to individual SAI questions.
Appropriate Amount of Data (DOR)	Each DOR consists of a single activity observation. If an observation consists of multiple findings related to the same system,	Record a single-activity unplanned observation that is unrelated to the Air Transportation Oversight System (ATOS) element being

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Data Dimensions Table		
Data Dimension	**Definition**	**Measurement Examples**
	subsystem, or element, complete a single DOR. If an observation consists of multiple findings relating to several different systems, subsystems, or elements, complete a new DOR for each separate finding.	inspected. Report a single-activity unplanned observation where there is not an ATOS element or question that addresses the unique situation. Report a single-activity unplanned observation on specific inspection events as directed by a handbook bulletin or other national directive.
Appropriate Amount of Data (ConDOR)	The ConDOR is a special-purpose DOR constructed by PIs with instructions to inspect and report on specific areas of immediate concern.	Follow PI instructions to inspect and report on a specific area of immediate concern. Answer all questions.
Completeness (SAI, EPI, DOR, ConDOR, Random Inspections)	Data must be of sufficient breadth, depth, and scope for the task. Report all necessary and relevant data to show a complete picture of the situation.	Enter all applicable common data field information. At a minimum, every activity must include the activity start date, activity end date, and departure point/location. You must enter the registration number and make, model, and series (M/M/S) if the activity involved an individual aircraft. You must enter the make and model if the activity involved an aircraft fleet. You must enter the arrival point, departure point, flight number, and Form 8430-13 number if the activity involved an aircraft flight. (Flight number is only mandatory for revenue flights.) When you complete more than one element and activity at the same time, only enter the 8430-13 number in the designated field of one record. The other records would NOT have the 8430-13 number entered in the designated field even though the activity involved an enroute

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Data Dimensions Table		
Data Dimension	**Definition**	**Measurement Examples**
		inspection. Explanations must include the "who," "what," "where," and "when," to describe the observation. The observing inspector must report in the "Reporting Inspector Action Taken" text block observations on SAI, EPI, DOR, ConDOR, or random inspections that result in a "No" response due to an unsafe condition or possible regulatory noncompliance. Each "No" explanation must: 1) State the requirement (e.g., regulation, handbook requirement, or specific authorization). 2) Identify the nonconformance. Describe what you observed that did not meet the requirements. 3) Identify objective evidence. Describe the specific system documentation and/or location where you made the observations. Element-based observation DORs must include a response to at least one question with an explanation or comment, if applicable. Answer at least one question in the random inspection for the record to be saved final. Only answer the questions related to the observed activities. Leave the remaining questions unanswered (blank). Other observation DORs must include a complete description of the observed condition in the "Comment" block.

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Data Dimensions Table		
Data Dimension	**Definition**	**Measurement Examples**
		ConDORs must include a response to all questions. An explanation or comment is required for both "Yes" and "No" responses to ConDOR SAI questions.
Consistency (SAI, EPI, DOR, ConDOR, Random Inspection)	The data should be presented in the same format and be compatible with previous data.	EPI/DOR/ConDOR/random inspection: Responses, explanations, and comments within the activity report should not conflict with other responses, explanations, and comments within the same activity report. SAI responses, explanations, and comments within the activity report should not conflict with other responses, explanations, and comments within the same activity report, or any other activity report within the same inspection record.
Ease of Understanding (SAI, EPI, DOR, ConDOR, Random Inspection)	Data must be clear and comprehensible.	All explanations and comments should be written in clear, concise language. Any abbreviations or undefined acronyms used should be commonly understood within the aviation industry. The reviewer must be able to read and understand what the explanation or comment means. Explanations and comments must be complete and descriptive, so that someone knowledgeable within the air transport industry can understand without requiring further information.
Objectivity (SAI, EPI, DOR, ConDOR, Random Inspection)	Data must be unbiased.	Explanations must be statements of fact or fact-based conclusions from actual observations, rather than inspector opinions.
Relevancy (SAI, EPI, DOR, ConDOR, Random Inspection)	The data should be valid and applicable to the observation or question being answered.	The response, explanation, or comment should directly relate to the specific questions asked, and the "Yes," "No," or "N/A" response for that question.

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Data Dimensions Table		
Data Dimension	**Definition**	**Measurement Examples**
		The methodology used to collect the data was appropriate. Explanations and comments should not include administrative information (e.g., "James Doe completed initial operating experience satisfactorily").
Timeliness (SAI, EPI, DOR, ConDOR, Random Inspection)	The age of the data must be appropriate for the task. Do not leave open the inspection record as a means to collect information that may present itself in the future.	Normally, open and close most EPI activities within a day. Due to their wide variation in complexity, SAI activity completion could range from multiple days to weeks. Enter the inspection data into the activity report and save to final status as soon as possible after the activity is complete. Complete SAI, EPI, and ConDOR data collection activities within the timeframes the PI or CPM specified in the Comprehensive Assessment Plan (CAP). Generally complete DORs and random inspections in one day because they record single-activity observations. The reporting inspector should adhere to SAI, EPI, or ConDOR instructions provided by the principal on timelines.
Value Added (SAI, EPI, DOR, and ConDOR, Random Inspection)	Data should be beneficial and provide advantages from their use.	Do not enter the word "None" as an explanation. Each explanation and comment must stand alone and not refer to the response for another question (e.g., "See above or Same as question 3."). Inspectors should not enter a description of what they did to complete the particular inspection activity reported.

RESERVED. Paragraphs 10-219 through 10-233.

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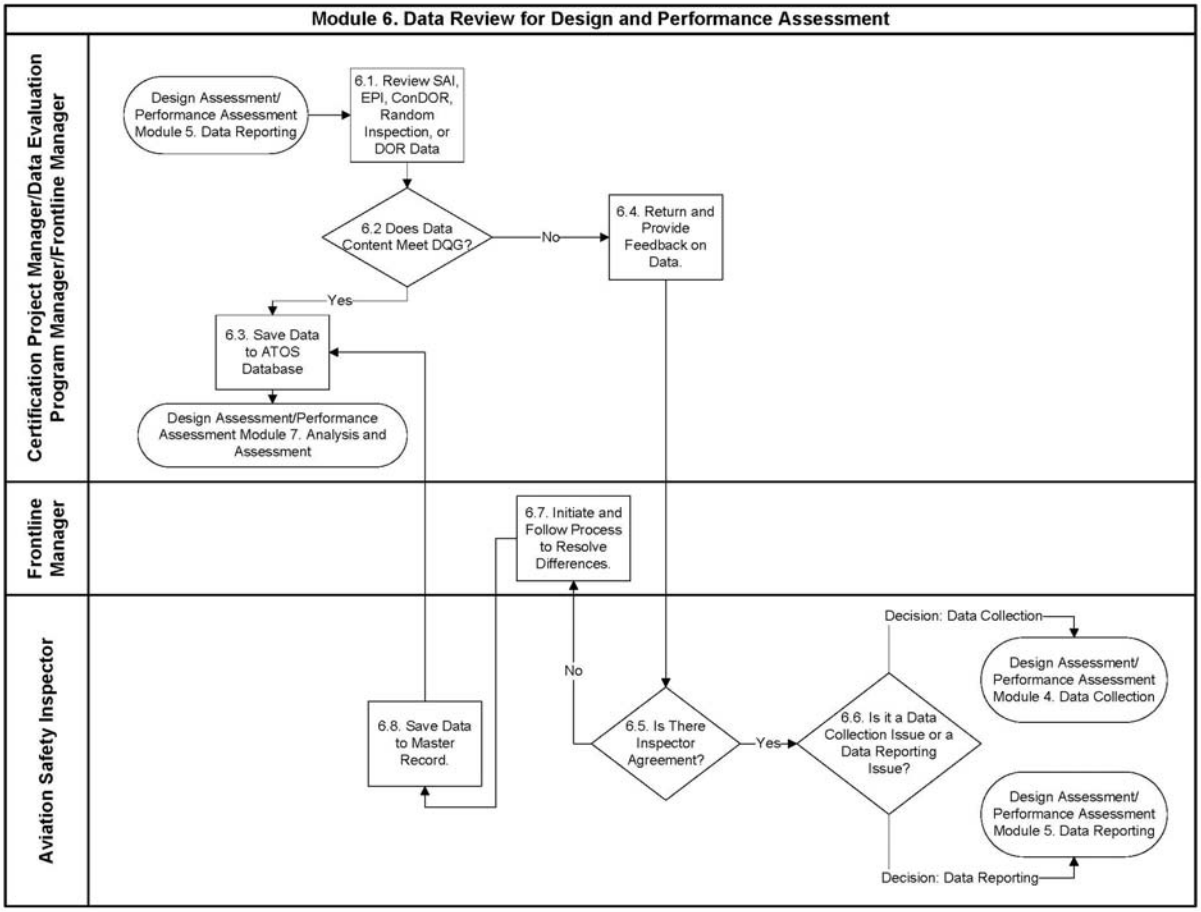
VOLUME 10 AIR TRANSPORTATION OVERSIGHT SYSTEM

CHAPTER 2 PROCEDURES FOR DESIGN AND PERFORMANCE ASSESSMENT

Section 7 Design and Performance Assessment Data Review

Figure 10-51. Module 6: Data Review for Design and Performance Assessment



10-234 INTRODUCTION. The data review process ensures that quality data are entered into the Air Transportation Oversight System (ATOS) database for decisionmaking. The inspector provides the first level of validation by submitting complete, accurate, and quality data that complies with the data quality guidelines (DQGs). The second level of data quality validation is supplied by automation. The data reviewer provides final validation and reviews activity records for the Certificate Management Team (CMT) or Certification Project Team (CPT).

A. Definition of Quality Data. Data are a set of facts that, when compiled, provides information for decisionmaking. Data represent real-world objects. Data that conform to a defined specification and the specification correctly reflects the intended use yields acceptable data quality.

B. Benefits of Quality Data. Quality data provide reliable measurements to assess the design and performance of an air carrier's or applicant's systems. Quality data helps close the gap between the views of the real-world air carrier or applicant system obtained by direct observation, and the view of the air carrier or applicant system obtained through data in the information system.

C. Impact of Poor Quality Data. Poor quality data are incoherent and do not reflect real-world conditions. Even accurate data that are redundant or not interpretable by the user are of little value. Deficient data will be mostly unusable. Poor quality data are costly; its impacts may include increased operational cost, difficulty in setting and executing strategy, and less effective decisionmaking.

D. Inspector Responsibility for Quality Data. Each reporting inspector is responsible for submitting complete, accurate, and quality data.

E. Measuring Data Quality. Commonly used characteristics or dimensions to measure data quality include: accuracy, appropriate amount of data, completeness, consistency, ease of understanding, objectivity, relevancy, timeliness, and validity. As with the attributes in ATOS, interdependencies exist between data dimensions.

1) ATOS controls some data quality dimensions through automation.

2) Inspectors play an important role by incorporating data dimensions in their reporting. Before submitting an activity record, inspectors review the data to reduce the possibility of being returned to the inspector for corrections.

10-235 REVIEW SAFETY ATTRIBUTE INSPECTION (SAI), ELEMENT PERFORMANCE INSPECTION (EPI), CONSTRUCTED DYNAMIC OBSERVATION REPORT (ConDOR), RANDOM INSPECTION, OR DYNAMIC OBSERVATION REPORT (DOR) DATA. The data quality review occurs after SAI activity, EPI, ConDOR, random inspection, or DOR data have been saved as final. (Refer to flowchart process step 6.1.)

A. Data Reviewer. In most cases, data are reviewed by a data evaluation program manager (DEPM) or an alternate DEPM if that position is available for the CMT. For offices without a DEPM, the inspector's Front Line Manager (FLM) conducts the review. During an initial certification of an applicant, if a DEPM has not been assigned, the certification project manager (CPM) or designee reviews the data CPT members collect.

1) Data reviewers must be qualified inspectors who are members of the CMT or CPT and have completed baseline training.

2) As the data reviewer, inspectors should not review their own data.

3) The data reviewer should evaluate any data saved to the master record within 7 calendar-days of its initial availability.

B. Review of Activity Reports. Activity reports are reviewed to determine if the data meet the DQGs. The specific requirements for ensuring that the highest quality data are reported

to the ATOS database can be found in the Specific Data Requirements Table (Table 10-1) at the end of the data reporting section. The standards for data review are located in the Data Dimensions Table (Table 10-2) at the end of the data reporting section. The data reviewer determines the level of review. The reviewer may lessen the depth of review if the data quality level is sufficient. A greater focus should be placed on quality assurance (QA) (sample) versus quality control (QC) (every record) to minimize the depth of data review.

10-236 DATA CONTENT MEETING DQGs. The data reviewer determines if the data meet the DQGs. Data reviewers work with the CMT or CPT, especially principal inspectors (PI) or CPM, to develop, implement, and evaluate office processes to ensure that the activity records meet the ATOS DQGs. Data reviewers should alert the respective PI or CPM immediately if any critical or time-sensitive information is found during the data review. (Refer to flowchart process step 6.2.)

10-237 SAVE DATA TO THE ATOS DATABASE. If the data meet the defined data dimensions and specific data requirements, the data reviewer saves the data to the ATOS database. The data are then ready for analysis and assessment. The data reviewer should evaluate any data saved to the master record within 7 calendar-days of its initial availability. (Refer to flowchart process step 6.3.)

10-238 RETURN AND PROVIDE FEEDBACK ON DATA. If the data reviewer determines that the data do not meet the ATOS DQGs, he or she records specific feedback citing reasons. The data revert to draft status and are returned to the reporting inspector. The data reviewer coordinates a resolution of any data discrepancies in the inspection record with the reporting inspector (Refer to flowchart process step 6.4.)

10-239 INSPECTOR AGREEMENT. The reporting inspector evaluates the returned inspection data and reviewer feedback and decides if he or she agrees with the data reviewer. If the inspector agrees with the feedback, he or she must decide on the appropriate action (e.g., editing the record, conducting additional observations, or taking no action) based on the nature of the issue. If the aviation safety inspector (ASI) and the DEPM/data reviewer disagree, follow step 6.7. (Refer to flowchart process step 6.5.)

10-240 DATA COLLECTION OR A DATA REPORTING ISSUE. It is important to identify the cause of the discrepancies in the data to determine if the issue is insufficient data collection or inaccurate data reporting. (Refer to flowchart process step 6.6.)

A. Data Collection Discrepancy. If the discrepancy is a data collection issue, the inspector collects more data using the appropriate Data Collection Tool (DCT), records the additional data, and saves the record as final using the process described in the Data Collection and Data Reporting sections.

B. Data Reporting Discrepancy. If the discrepancy is a data reporting issue, the inspector corrects the data record and saves the record as final using the process described in the Data Reporting section.

10-241 INITIATE AND FOLLOW PROCESS TO RESOLVE DIFFERENCES. When management changes, deletes, or edits an employee's data due to a professional difference of

opinion, they will annotate the record to reflect who made the change and when. The FLM will access the original record and complete the following actions. (Refer to flowchart process step 6.7.)

- Copy the current record content (comments, explanation, yes/no responses, etc.);
- Annotate the following in the associated comment box: the FLM's name; date; and the content being changed, edited, or deleted;
- Revise or edit the content and make any necessary deletion;
- Copy the revised record showing the changes, edits, or deletions;
- Direct the inspector to save the revised data to the master record; and
- Provide copies of the original record and the revised record to the inspector.

10-242 SAVING DATA TO THE MASTER RECORD.

A. Master Record Saved to the ATOS Database. After the issue is resolved, the SAI or EPI data are saved to the master record. The master record is saved to the ATOS database. Design Assessment (DA) and Performance Assessment (PA) data that have been saved to the ATOS database are available for analysis and assessment by all CMT or CPT members. (Refer to flowchart process step 6.8.)

B. Error Correction. Data may be returned to the DEPM/data reviewer from the ATOS database for the purpose of correcting errors or omissions. The FLM will receive a notification if the Assessment Determination and Implementation (ADI) activity for the returned element has been saved final.

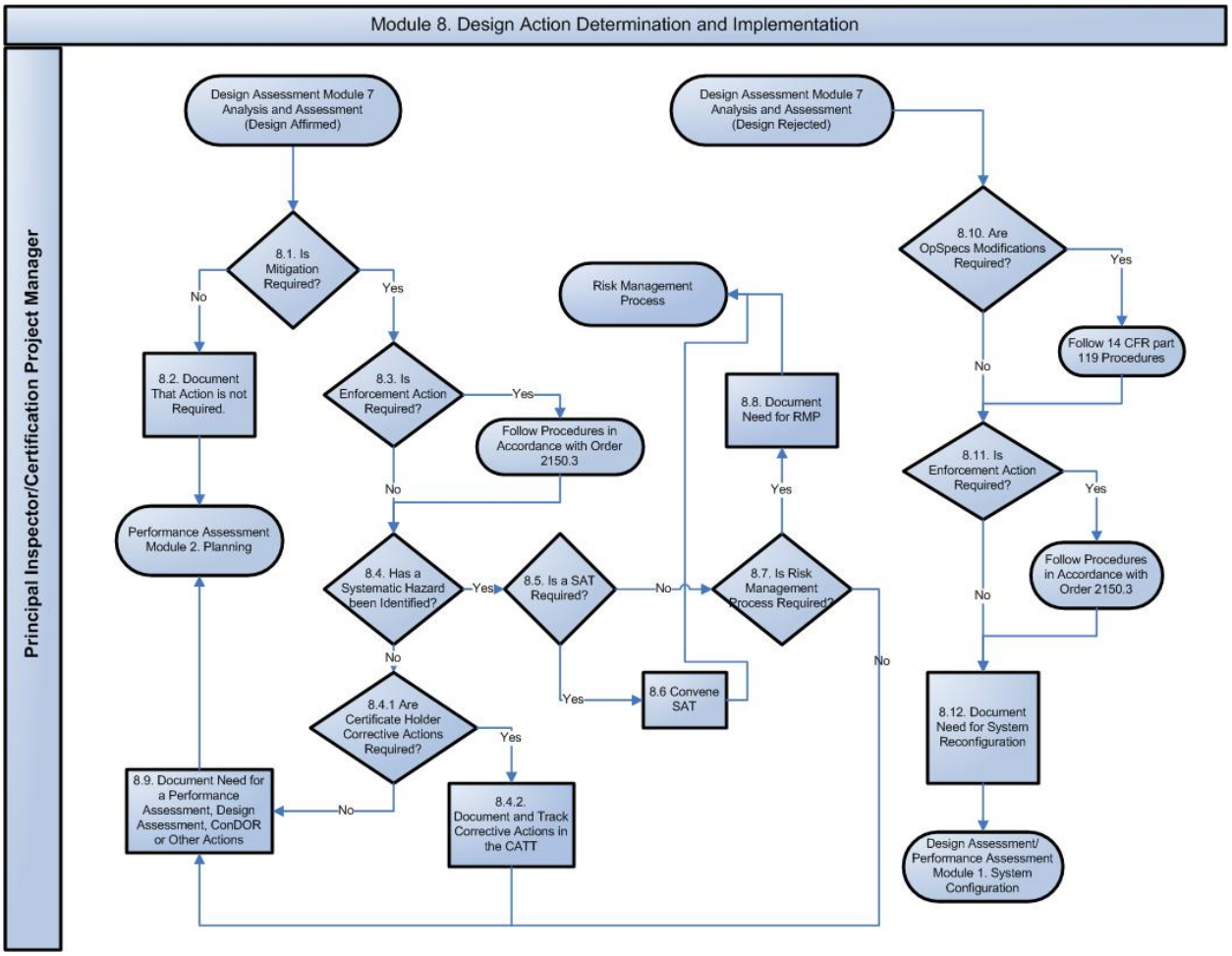
RESERVED. Paragraphs 10-243 through 10-257.

VOLUME 10 AIR TRANSPORTATION OVERSIGHT SYSTEM

CHAPTER 2 PROCEDURES FOR DESIGN AND PERFORMANCE ASSESSMENT

Section 9 Design Assessment Action Determination and Implementation

Figure 10-53. Module 8: Design Action Determination and Implementation



10-279 INTRODUCTION. The action determination and implementation process module requires the principal inspector (PI) or certification project manager (CPM) to determine and document the appropriate course of action in response to the bottom-line Design Assessment (DA). Actions may be required even if the design of the air carrier's system meets the requirements for approval or acceptance. The PI or CPM must take action when the design of the air carrier's system does not meet the requirements for approval or acceptance and is rejected. The PI or CPM may request the involvement of other technical disciplines to help determine the appropriate course of action.

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NOTE: The Corrective Action Tracking Tool (CATT) is the tool that Certificate Management Team (CMT) managers and PIs must use to ensure that certificate holders meet schedules for completing corrective actions that result from DAs, Performance Assessments (PA), or other oversight functions. The CATT documents immediate and long-term, CMT-initiated corrective actions required of certificate holders, including specific followup actions that may be required by guidance elsewhere in this order. The CATT may be used to track other CMT issues; however, it cannot be used to replace documentation requirements specified in other guidance.

10-280 SYSTEM DESIGN ACCEPTED. If the design of an air carrier's system meets all the regulatory and quality requirements and safety standards, the PI or CPM may accept or approve it, as applicable, and take no further action (other than issuing applicable operations specifications (OpSpecs) and approving system documentation).

A. Mitigation. The PI or CPM determines whether he or she can accept or approve the program or system design without mitigation, based on the program or system design meeting regulatory requirements. The air carrier's or applicant's system may be approvable or acceptable, but still have some weakness that concerns the PI or CPM. Acceptance or approval of the system with mitigation might also be appropriate when the system meets the explicit requirements of the regulations, but not their intent. The PI or CPM may determine that additional data collection, monitoring, or other mitigation is necessary. Refer to Volume 10, Chapter 2, Section 8, Table 10-3, Bottom-line Design Assessment Categories for additional information on when action is required for mitigation.

B. Document Action is Not Required. Once the PI or CPM determines that the air carrier's system design meets all the regulatory requirements and safety standards and decides that no action is required, he or she will document their decision. No explanation is required. Refer to Table 10-3 for additional information on when no action is required.

C. Enforcement Action. The PI determines if a potential violation of an FAA regulation is involved that may lead to an enforcement action. Enforcement action is required if an air carrier is, or has been, conducting operations contrary to applicable FAA regulations. The PI follows the procedures outlined in the current edition of Order 2150.3, FAA Compliance and Enforcement Program, if enforcement action is required. If you have the Enforcement Investigation Report (EIR) number prior to saving the Data Collection Tool (DCT) to final, document the number in the "Inspector Action Taken" field of the activity report. If you do not have the EIR number prior to saving the DCT to final, document the EIR number in the explanation box of the Assessment Determination and Implementation (ADI). (Refer to flowchart process step 8.3.)

NOTE: The PI or CPM must ensure that the air carrier has completed a Root Cause Analysis (RCA) of the event(s) that led to the enforcement investigation. The PI or CPM must verify the implementation and effectiveness of the certificate holder's corrective action.

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D. Identifying a Systemic Hazard. Before accepting or approving an air carrier's or applicant's system with mitigation, the PI or CPM must determine the extent of the deficiencies and identify hazards that may exist. (Refer to flowchart process step 8.4.)

1) Some hazards are isolated incidences that can typically be attributed to performance and do not necessarily require system-level changes, but they may be indications of systemic hazards.

2) Systemic hazards indicate defects in the design of the air carrier's processes (e.g., missing procedures, poor controls, lack of attention to interfaces), patterns of repeated noncompliance with procedures, or significant changes in the operating environment. Controlling or eliminating systemic hazards requires modifications to the system design.

E. System Analysis Team (SAT). If the PI or CPM identifies a systemic hazard, he or she determines whether a SAT would be beneficial. The PI or CPM determines whether to form the SAT when further analysis is required to determine the cause of a systemic problem. To perform further analysis and determine cause, the SAT can include participants from the CMT, Certification Project Team (CPT), other FAA personnel, airline and/or manufacturer representatives, and industry personnel. The SAT can be appropriate when the PI or CPM chooses to work jointly with the carrier or industry in identifying system deficiencies. (Refer to flowchart process step 8.5.)

F. Convene SAT.

1) Composition of the SAT. The PI or CPM determines the composition of the SAT depending on the nature of the issue. The PI or CPM should request input from the certificate holder regarding SAT composition.

2) Request for Participation. The PI or CPM contacts personnel from the certificate holder and the FAA to request their participation on the SAT. The certificate holder coordinates the participation with non-FAA participants, such as manufacturer representatives or other industry personnel.

3) SAT Process. The PI or CPM uses the SAT process to develop and execute collaborative action plans to ensure that certificate holders manage their risks. Personnel from the FAA, the certificate holder, and other non-FAA entities work together to determine root causes and recommend solutions. The SAT process ensures that applicable parties receive feedback on any actions taken as part of the information sharing process.

NOTE: The SAT process does not change any existing Flight Standards enforcement policies. The PI or CPM must conduct SATs in a manner that does not compromise FAA enforcement responsibilities.

4) Risk Management Process (RMP). The RMP is the primary developing, reporting, and documenting tool in the SAT process. Throughout the implementation of the RMP, the assigned CMT members perform periodic process checks to monitor the completion and effectiveness of action items. Once the action items are complete, the SAT verifies that the

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overall action plan either eliminated the hazard or reduced the level of risk sufficiently so that no additional action is necessary.

5) Tasks Related to the SAT Process. The following describes the tasks related to the SAT process:

a) Convene a SAT. The PI decides when it is appropriate to convene a SAT.

b) Composition of SAT. The PI or Designated Person (DP) should request input from the certificate holder regarding SAT composition. Depending on the nature of the system problem, the SAT may be comprised of the following:

- CMT members,
- Other FAA personnel,
- Airline representatives,
- Manufacturers' representatives, and
- Other industry personnel.

c) Request for Participation. The PI or DP contacts personnel from the certificate holder and the FAA to request their participation on the SAT. The certificate holder coordinates the participation with non-FAA participants such as manufacturers' representatives or other industry personnel.

d) Followup if Initial Request Not Accepted. If the certificate holder does not accept the initial request to participate on the SAT, the PI should send a written request for participation to the appropriate certificate holder management official. Figure 10-53A, Sample Letter Requesting Participation on a System Analysis Team, provides a sample letter requesting participation on a SAT.

e) Actions if Participation is Declined. If the identified personnel decline participation after a written request, PIs should notify their regional division manager through their certificate-holding district office (CHDO)/certificate management office (CMO) manager. The regional division manager and the CHDO/CMO manager decide the following:

- Contact a higher level of management of the declining organization; or
- Continue the SAT without the initially identified participants.

f) Develop, Implement, and Validate the Results of the RMP. Volume 10, Chapter 3, Section 1, Risk Management Process, describes the policy and procedures for the development, implementation, and validation of the results of an RMP. The PI or DP coordinates with other appropriate parties of the SAT to:

- Determine the approach that the PI or DP will use;
- Develop the RMP action items;
- Coordinate performance of the action items; and
- Determine if the RMP eliminated the hazard or reduced the risk level sufficiently so that no additional action is necessary.

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g) Provide Feedback to Applicable Parties. As part of the information sharing process and after the RMP is complete, the PI, CPM, or DP communicates the results to all applicable parties. (Refer to flowchart process step 8.6.)

Figure 10-53A. Sample Letter Requesting Participation on a System Analysis Team

U.S. Department
of Transportation
Federal Aviation Administration

[Date]

[Air Carrier Address]

Dear [Appropriate Official]

As part of the FAA's Air Transportation Oversight System (ATOS) Implementation [action] process, the FAA may respond to an identified risk via several action plans. One is to convene a System Analysis Team (SAT) whose objective is a collaborative approach whereby the certificate holder, other non-FAA entities, and the FAA work together on significant safety matters to determine the root cause(s) and solutions.

The [Certificate Management Team (CMT)] and [certificate holder] have agreed to convene a SAT to develop an action plan (see attachment) that will set milestone dates, assign the responsible company departments and personnel, and forecast completion dates, with the focus on [describe the problem that the SAT was formed to address].

This meeting is scheduled for [date, time, and location]. FAA participation will include [names and titles of participants from the FAA].

Thanks for your cooperation and this opportunity to effect tangible improvements to safety.

Sincerely,

[Name and title of principal inspector (PI) or manager]

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G. RMP. The PI determines whether it is necessary to initiate the Air Transportation Oversight System (ATOS) RMP to address the specific systemic hazard. The PI or CPM may use the RMP to address any hazard that is significant enough to justify more extensive analysis and tracking. Other possible considerations are the need for a formal action plan, participation of air carrier personnel, timeliness of required actions, regional or national significance, or the output of other tools such as the decision aid used to evaluate air carrier changes. (Refer to flowchart process step 8.7.)

H. Document the Need for RMP. If the PI determines that the RMP is required to address the hazard, he or she will document the decision and explanation. (Refer to flowchart process step 8.8.)

I. Determining the Requirement of Certificate Holder Corrective Actions. The PI or CPM must determine the extent of the deficiencies and if further analysis is required to establish what corrective actions the certificate holder requires. Other possible considerations are the need for a formal action plan, participation of air carrier personnel, timeliness of required actions, regional or national significance, or the output of other tools such as the decision aid used to evaluate air carrier changes. The PI or CPM documents what other action the certificate holder is going to accomplish as part of the mitigation process. (Refer to flowchart process step 8.4.1.)

J. Document the Need for CATT. The PI or CPM must document any corrective actions required of the certificate holder in the CATT. The PI or CPM may also document and track any other items they choose in the CATT. (Refer to flowchart process step 8.4.2.)

K. Document the Need for PA, DA, Constructed Dynamic Observation Reports (ConDOR), or Other Actions. If the PI or CPM has not identified a systemic hazard, or makes a decision to not initiate the RMP (but issues exist), he or she will document the need for a PA, DA, ConDOR, or other actions to monitor the air carrier system or gather additional information. The PI or CPM documents and explains the decision to take this approach. (Refer to flowchart process step 8.9.)

10-281 SYSTEM DESIGN REJECTED. The PI or CPM must take action when the air carrier's or applicant's system design does not meet the requirements for approval or acceptance and the system is rejected. The PI or CPM documents the action taken and the rationale.

A. OpSpecs Modifications. The PI or CPM must take action when the air carrier's or applicant's system design does not meet the requirements for approval or acceptance and the system is rejected. The air carrier may be required to modify its system, or the FAA may modify its authorizations. If changes are required to the OpSpecs issued to the air carrier or applicant, the PI or CPM follows the procedures in Title 14 of the Code of Federal Regulations (14 CFR) part 119. (Refer to flow chart process step 8.10.)

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B. Enforcement Action. The PI determines if a potential violation of an FAA regulation is involved that may lead to an enforcement action. Enforcement action is required if an air carrier is, or has been, conducting operations contrary to applicable FAA regulations. The PI follows the procedures outlined in Order 2150.3 if enforcement action is required. If you have the EIR number prior to saving the DCT to final, document the number in the "Inspector Action Taken" field of the activity report. If you do not have the EIR number prior to saving the DCT to final, document the EIR number in the explanation box of the ADI (Refer to flowchart process step 8.11)

C. Document Need for System Configuration. If the PI or CPM determines that the air carrier's or applicant's system design does not meet the requirements for approval or acceptance, the PI or CPM requires that the air carrier or applicant reconfigure its system design and resubmit its request for a new or updated scope of operation. The PI or CPM documents the action and explanation and notifies the air carrier or applicant. (Refer to flowchart process step 8.12.)

10-282 COMPLETION OF DA. Once the PI or CPM determines and documents the action he or she intends to implement, the DA is complete. If this occurs within 30 calendar-days following the end of the quarter in which the DA is due, the assessment is considered to be complete by the due date. The PI or CPM notifies the air carrier or applicant of the results of the DA. The notification may be verbal or in a closeout letter unless other guidance in this order requires written notification. The PI may also use this letter to notify the air carrier of ongoing DA results that occur in the normal planning cycle.

RESERVED. Paragraphs 10-283 through 10-297.

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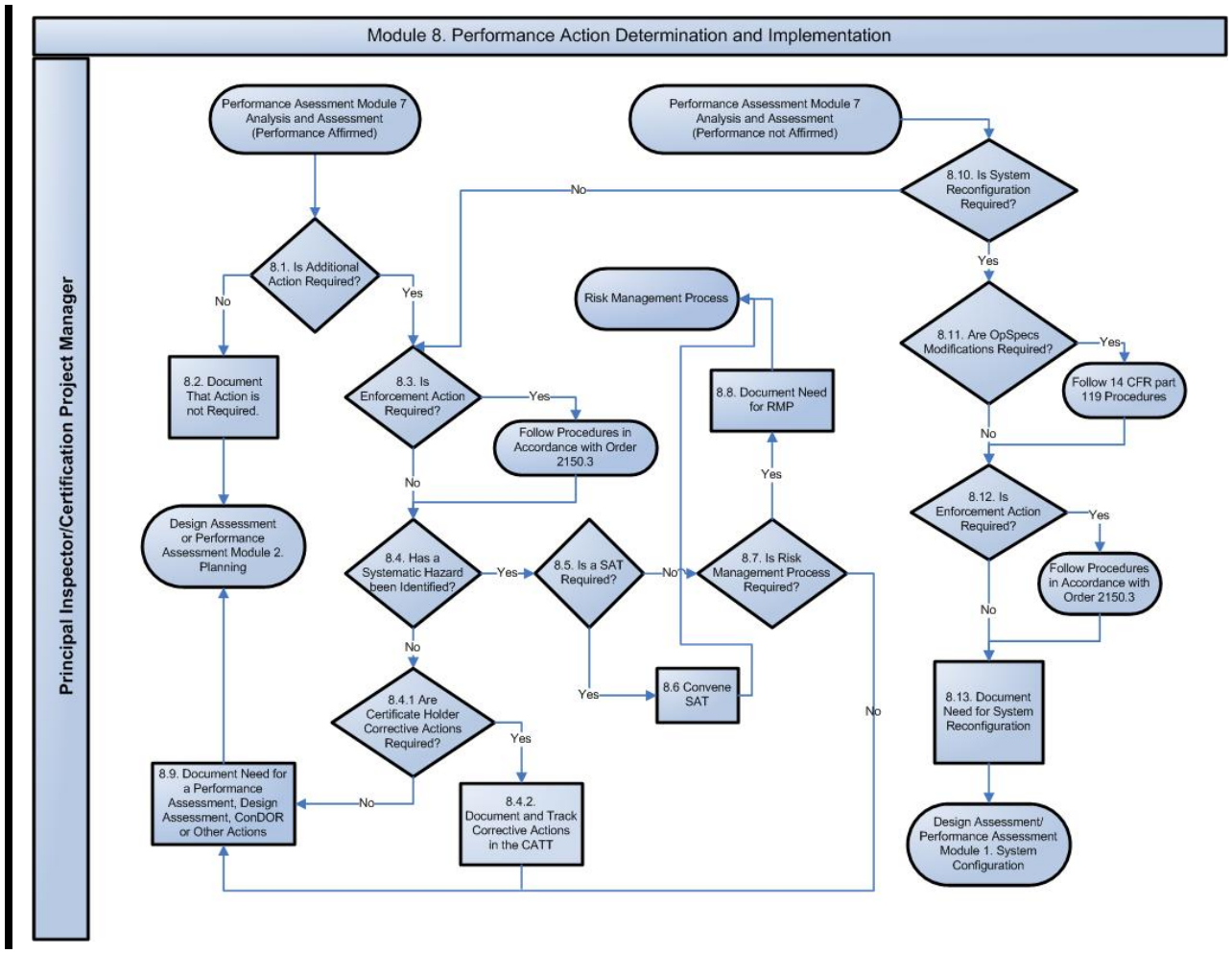
VOLUME 10 AIR TRANSPORTATION OVERSIGHT SYSTEM

CHAPTER 2 PROCEDURES FOR DESIGN AND PERFORMANCE ASSESSMENT

Section 11 Performance Assessment Action Determination and Implementation

Figure 10-55. Module 8: Performance Action Determination and Implementation



10-319 INTRODUCTION. The action determination and implementation process requires the principal inspector (PI) or certification project manager (CPM) to determine and document the appropriate course of action in response to the bottom-line Performance Assessment (PA). Actions may be required even if the performance of the air carrier's system has been affirmed. When the air carrier's system performance is not affirmed, the PI or CPM must take action. The PI or CPM may request the involvement of other technical disciplines to help determine the appropriate course of action.

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NOTE: The Corrective Action Tracking Tool (CATT) is the tool that Certificate Management Team (CMT) managers and PIs must use to ensure that certificate holders meet schedules for completing corrective actions that result from Design Assessments (DA), PAs, or other oversight functions. The CATT documents immediate and long-term CMT-initiated corrective actions required of certificate holders, including specific followup actions that may be required by guidance elsewhere in this order. The CATT may be used to track other CMT issues; however, it cannot be used to replace documentation requirements specified in other guidance.

10-320 SYSTEM PERFORMANCE AFFIRMED. If the air carrier's system meets all the performance standards and it is affirmed under bottom-line PA Categories 1 or 2, the PI or CPM is not required to take further action.

A. Additional Action. If the air carrier's or applicant's system performance is affirmed under Categories 3 or 4, action is required. Refer to Table 10-4A, Bottom-line PA Categories. The PI may determine that additional data collection, monitoring, or other action is necessary. (Refer to flowchart process step 8.1.)

Table 10-4A. Bottom-line PA Categories

1	**Performance Affirmed**	**No issues observed**	**No action required**
2	**Performance Affirmed**	**Minor issues observed**	**No action required**
3	**Performance Affirmed**	**Minor issues observed**	**Action Required**
4	**Performance Affirmed**	**Issues of concern observed**	**Action Required**
5	**Performance Not Affirmed**	**Safety and/or regulatory issues observed**	**Action Required**
6	**Performance Not Affirmed**	**Systemic safety and/or regulatory issues observed**	**System reconfiguration by air carrier or applicant is required**
Legend Green: 1–2 Yellow: 3–5 Red: 6			

B. Document That Action is Not Required. Once the PI or CPM determines that the air carrier's or applicant's system performance is affirmed and that no action is required under Categories 1 or 2, the decision is documented. (Refer to flowchart process step 8.2.)

C. Enforcement Action. The PI determines if a potential violation of a Federal Aviation Administration (FAA) regulation is involved that may lead to an enforcement action. Enforcement action is required if an air carrier is, or has been, conducting operations contrary to applicable FAA regulations. The PI follows the procedures outlined in the current edition of FAA Order 2150.3, FAA Compliance and Enforcement Program, if enforcement action is required. If you have the Enforcement Investigation Report (EIR) number prior to saving the DCT to final, document the number in the "Inspector Action Taken" field of the activity report. If you do not have the EIR number prior to saving the DCT to final, document the EIR number in

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the explanation box of the Assessment Determination and Implementation (ADI) (Refer to flowchart process step 8.3.).

NOTE: The PI or CPM must ensure that the air carrier has completed a Root Cause Analysis (RCA) of the event(s) that led to the enforcement action. The PI or CPM must verify that the certificate holder implemented the corrective action and if it was effective.

D. Systemic Hazard. The PI or CPM identifies any systemic hazard in the program that may be necessary to address. Hazards are conditions, events, or circumstances that could lead or contribute to an unplanned or undesired outcome. (Refer to flowchart process step 8.4.)

1) Some hazards are isolated incidences that can typically be attributed to performance and do not require system-level changes, but they may be indications of systemic hazards.

2) Systemic hazards are those that indicate defects in the design of the air carrier's processes (e.g., missing procedures, poor controls, lack of attention to interfaces), patterns of repeated noncompliance with procedures, or significant changes in the operating environment. Controlling or eliminating systemic hazards requires modifications to the system design.

E. System Analysis Team (SAT). If the PI or CPM becomes aware of a systemic hazard, he or she will determine whether a SAT would be beneficial. The SAT is formed at the discretion of the PI or CPM when further analysis is required to determine the root cause of a systemic problem. The SAT can include participants from the CMT or Certification Project Team (CPT), other FAA personnel, airline and/or manufacturers' representatives, and industry personnel to perform further analysis and determine root cause. The SAT can be appropriate when the PI or CPM chooses to work jointly with the air carrier or industry in identifying system deficiencies. (Refer to flowchart process step 8.5.)

F. Convene System Analysis Team.

1) Composition of SAT. The PI or CPM determines the composition of the SAT depending on the nature of the issue. The PI or CPM should request input from the certificate holder regarding SAT composition.

2) Request for Participation. The PI or CPM contacts personnel from the certificate holder and the FAA to request their participation on the SAT. The certificate holder coordinates the participation with non-FAA participants, such as manufacturers' representatives or other industry personnel.

3) System Analysis Team Process. The PI or CPM uses the SAT process to develop and execute collaborative action plans to ensure that certificate holders manage their risks. Personnel from the FAA, the certificate holder, and other non-FAA entities work together to determine root causes and recommend solutions. The SAT process ensures that the SAT participants provide feedback on any actions taken to applicable parties as part of the information sharing process.

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NOTE: The SAT process does not change any existing Flight Standards enforcement policies. The PI or CPM must conduct SATs in a manner that does not compromise FAA enforcement responsibilities.

4) Risk Management Process (RMP). The RMP is the primary developing, reporting, and documenting tool in the SAT process. Throughout the implementation of the RMP, the assigned CMT members perform periodic process checks to monitor the completion and effectiveness of action items. Once the action items are complete, the SAT verifies that the overall action plan either eliminated the hazard or reduced the level of risk sufficiently so that no additional action is necessary.

5) SAT Process. The following describes the tasks related to the SAT process:

a) Convene a SAT. The PI decides when it is appropriate to convene a SAT.

b) Composition of SAT. The PI or Designated Person (DP) should request input from the certificate holder regarding SAT composition. Depending on the nature of the system problem, the SAT may be comprised of the following:

- CMT members,
- Other FAA personnel,
- Airline representatives,
- Manufacturers' representatives, and
- Other industry personnel.

c) Request for Participation. The PI or DP contacts personnel from the certificate holder and the FAA to request their participation on the SAT. The certificate holder coordinates the participation with non-FAA participants such as manufacturers' representatives or other industry personnel.

d) Followup if Initial Request is Not Accepted. If the certificate holder does not accept the initial request to participate on the SAT, the PI should send a written request for participation to the appropriate certificate holder management official. Figure 10-72, Sample Letter Requesting Participation on a System Analysis Team, provides a sample letter requesting participation on a SAT.

e) Actions if Participation is Declined. If the identified personnel decline participation after a written request, PIs should notify their regional division manager through their certificate-holding district office (CHDO)/certificate management office (CMO) manager. The regional division manager and the CHDO/CMO manager decide the following:

- Contact a higher level of management of the declining organization; or
- Continue the SAT without the initially identified participants.

f) Develop, Implement, and Validate the Results of the RMP. Volume 10, Chapter 3, Section 1, Risk Management Process, describes the policy and procedures for the

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development, implementation, and validation of the results of an RMP. The PI or DP coordinates with other appropriate parties of the SAT to:

- Determine the approach that the PI or DP will use;
- Develop the RMP action items;
- Coordinate performance of the action items; and
- Determine if the RMP eliminated the hazard or reduced the risk level sufficiently so that no additional action is necessary.

g) Provide Feedback to Applicable Parties. As part of the information sharing process, after the RMP is complete, the PI or DP communicates the results to all applicable parties. (Refer to flowchart process step 8.6.)

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Figure 10-55A. Sample Letter Requesting Participation on a System Analysis Team

U.S. Department
of Transportation
Federal Aviation Administration

[Date]

[Air Carrier Address]

Dear [Appropriate Official]

As part of the FAA's Air Transportation Oversight System (ATOS) Implementation [action] process, the FAA may respond to an identified risk via several action plans. One is to convene a System Analysis Team (SAT) whose objective is a collaborative approach whereby the certificate holder, other non-FAA entities, and the FAA work together on significant safety matters to determine the root cause(s) and solutions.

The [CMT] and [certificate holder] have agreed to convene a SAT to develop an action plan (Refer to attachment) that will set milestone dates, assign the responsible company departments and personnel, and forecast completion dates with the focus on [describe the problem that the SAT was formed to address].

This meeting is scheduled for [date, time, and location]. FAA participation will include [names and titles of participants from the FAA].

Thanks for your cooperation and this opportunity to effect tangible improvements to safety.

Sincerely,

[Name and title of PI or Manager]

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G. RMP. The PI or CPM determines whether it is necessary to initiate the Air Transportation Oversight System (ATOS) RMP to address the systemic hazard. The PI or CPM uses the RMP to address any hazard that the PI or CPM decides is significant enough to justify more extensive analysis and tracking. Other possible considerations are the need for a formal action plan, participation of air carrier personnel, timeliness of required actions, regional or national significance, or the output of other tools such as the decision aid used to evaluate air carrier changes. (Refer to flowchart process step 8.7.)

H. Document Need for RMP. If the PI determines that the RMP is required to address the hazard, he or she will document the decision and explanation. (Refer to flowchart process step 8.8.)

I. Certificate Holder Corrective Actions. The PI or CPM must determine if further analysis is required to establish if the certificate holder needs to take corrective action. Other possible considerations include:

- The need for a formal action plan,
- Participation of air carrier personnel,
- Timeliness of required actions,
- Regional or National significance,
- Or the output of other tools (e.g., a decision aid used to evaluate air carrier changes).

J. Document Other Action. The PI or CPM documents what other action is going to be accomplished by the certificate holder/certificate management team as part of the mitigation process. (Refer to flowchart process step 8.4.1.)

K. Document Need for CATT. The PI or CPM must document any corrective actions required of the certificate holder in the CATT. The PI or CPM may also document and track any other items they choose in the CATT. (Refer to flowchart process step 8.4.2.)

L. Document Need for DA, PA, or Constructed Dynamic Observation Reports (ConDOR). If the PI or CPM has not become aware of a systemic hazard, or makes a decision not to initiate the RMP, he or she will document the need for a DA, PA, or ConDOR to monitor the air carrier's system or gather additional information. The PI or CPM documents and explains the decision to take this approach. (Refer to flowchart process step 8.9.)

10-321 SYSTEM PERFORMANCE IS NOT AFFIRMED. If the air carrier's or applicant's system performance is not affirmed, the PI or CPM must determine if the deficiency is due to a systemic problem.

A. System Reconfiguration. When the air carrier's or applicant's system performance is not affirmed due to a systemic problem, and/or a regulatory issue is observed, the PI or CPM must take action. The air carrier may be required to modify its system or the FAA may modify its authorizations. The PI or CPM documents the action and the rationale. (Refer to flowchart process step 8.10.)

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B. Operations Specifications (OpSpecs) Modifications. If changes are required to the OpSpecs issued to the air carrier or applicant, the PI or CPM follows the Title 14 of the Code of Federal Regulations (14 CFR) part 119 procedures. (Refer to flowchart process step 8.11.)

C. Required Enforcement Action. The PI determines if a potential violation of an FAA regulation is involved that may lead to an enforcement action. Enforcement action is required if an air carrier is, or has been, conducting operations contrary to applicable FAA regulations. The PI follows the procedures outlined in Order 2150.3 if enforcement action is required. If you have the EIR number prior to saving the DCT to final, document the number in the "Inspector Action Taken" field of the activity report. If you do not have the EIR number prior to saving the DCT to final, document the EIR number in the explanation box of the ADI (Refer to flowchart process step 8.12.).

D. Document Need for System Reconfiguration. When the air carrier's or applicant's system performance is not affirmed due to deficiencies in the system design, the air carrier may be required to modify its system or the FAA may modify its authorizations. Either way, system reconfiguration will be involved and the PI or CPM documents the nature of the required change. (Refer to flowchart process step 8.13.)

10-322 COMPLETION OF PA. Once the PI or CPM determines and documents the actions he or she intends to implement, the PA is complete. If this occurs within 30 calendar-days following the end of the quarter in which the PA is due, the assessment is considered to have been completed by the due date. The PI or CPM notifies the air carrier or applicant of the results of the PA. The notification may be verbal or in a closeout letter unless other guidance in this order requires written notification. The PI may also use this notification to inform the air carrier of ongoing PA results that occur in the normal planning cycle.

RESERVED. Paragraphs 10-323 through 10-337.

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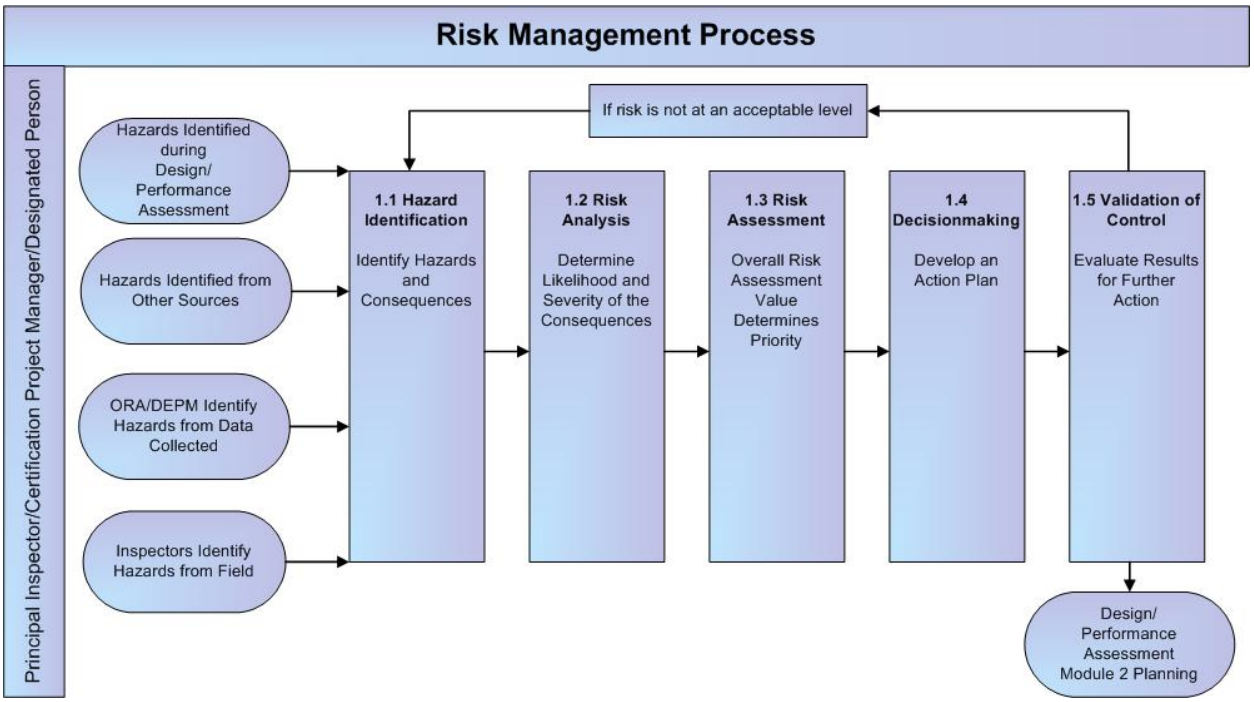
VOLUME 10 AIR TRANSPORTATION OVERSIGHT SYSTEM

CHAPTER 3 RISK MANAGEMENT PROCESS

Section 1 Risk Management Process

Figure 10-56. Risk Management Process



10-338 INTRODUCTION TO THE RISK MANAGEMENT PROCESS (RMP). The RMP provides Certificate Management Teams (CMT) and Certificate Project Teams (CPT) with procedures to manage hazards and their associated risks. The RMP provides the CMT/CPT with a means to document and track hazards, and to oversee and evaluate the disposition of associated risks. This process has five major steps, including:

- Hazard identification (identify hazards and consequences),
- Risk analysis (analyze hazards and identify risks),
- Risk assessment (consolidate and prioritize risks),
- Decisionmaking (develop an action plan), and
- Validation of control (evaluate results for further action).

A. When to Use the RMP. Use the RMP to address any hazard identified by any CMT member that the principal inspector (PI) or certification project manager (CPM) decides is significant enough to justify analysis and tracking. Systemic hazards are often good candidates for this process. Examples include:

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- The output of the tools in Volume 6, Chapter 2, Section 18, Evaluation of Air Carrier's Management of Significant Changes;
- Voluntary Disclosure Reporting Programs (VDRP);
- Aviation Safety Action Programs (ASAP);
- Internal Evaluation Programs (IEP);
- Local, regional, national, or any other unique considerations; and
- Potential Airworthiness Directive (AD) noncompliance.

NOTE: Volume 6, Chapter 2, Section 18, paragraph 6-570, Figure 6-29, subparagraph 3, and Figure 6-30, subparagraph 3, require the PI to begin an RMP immediately and closely track all issues of concern for overall word picture scores of 9-45 and 8-39.

B. RMP Participants. The primary participants of the RMP process are PIs. Nonsupervisory PIs must collaborate with the Front Line Manager (FLM) to determine work assignments and resource needs. The PI may request the FLM to assign any CMT member to act as the Designated Person (DP) for the RMP. PIs are encouraged to include CMT inspectors, Operations Research Analysts (ORA), and data evaluation program managers (DEPM), when appropriate, to assist with historical data collection and statistical information. Any CMT inspector can identify hazards, be assigned as a DP, and/or be assigned action items associated with the RMP. RMP work requests appear on the inspector's Data Collection Assignment page.

10-339 SPECIFIC RESPONSIBILITIES FOR AIR TRANSPORTATION OVERSIGHT SYSTEM (ATOS) RMP.

A. Office Manager Responsible for the CMT/CPT. This individual obtains and provides resources to support the RMP development and accomplishment. This includes funding travel when necessary.

B. FLM or Supervisory PI.

1) Ensures that the RMP work assignments are resourced in accordance with established ATOS processes and procedures.

2) Ensures the inspectors conduct their assigned work plans according to the CPM's or PI's specific inspection instructions.

3) Resolves differences of opinion between reporting inspectors and the PI.

4) Ensures a proper closeout and/or transfer of the RMP.

C. CPM or PI.

1) Is responsible for the RMP.

2) Determines when it is appropriate to use the RMP.

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3) Collects and organizes information to initiate an RMP; solicits input from team members such as ORAs and/or a DEPM, if available.

4) Analyzes risk and ensures that the certificate holder addresses hazards by using the RMP to document rationale, develop action items, and monitor progress.

NOTE: Nonsupervisory PIs must collaborate with the FLM to determine work assignments and resource needs. A nonsupervisory PI may recommend to the FLM that another CMT member be assigned as a DP to develop the RMP action plan.

D. ORA. Provides guidance, expert advice, data collection, and analysis.

E. DEPM or Data Reviewer. Participates in the development of a risk management (RM) plan and provides expert advice for RMP activities.

F. DP. Assumes the PI's authority for accomplishing the RMP.

G. Aviation Safety Inspector (ASI).

1) Brings hazards, risks, and/or adverse trends to the attention of the PI.

2) Participates in the planning activities to develop the RMP.

3) Accomplishes action item tasks associated with the RMP.

4) Reports data in accordance with the data quality guidelines (DQGs) using the appropriate tool when reporting observation for RMP action items.

10-340 HAZARD IDENTIFICATION (IDENTIFY HAZARDS AND CONSEQUENCES). A hazard is a condition, event, or circumstance that could lead or contribute to an unplanned or undesired event. The PI, CPM, or DP identifies any hazard in the air carrier's operating environment or systems. The PI, CPM or DP analyzes data from many sources to determine if hazards are isolated incidents or systemic problems. The ORA continually monitors available data sources to identify events, trends, or patterns that indicate potential safety issues and reports them to the PI. The ORA also reviews issues tracked using an RMP to avoid duplication and identify any issues that might be related. The PI, CPM or DP analyzes and assesses systemic hazards and their potential consequences to determine the level of risk associated with the hazard. Without conducting a complete analysis, the PI may notify the air carrier of any isolated incidences that do not require a complete RMP. If the isolated incident leads to noncompliance, then the PI, CPM or DP must follow national guidance for processing any enforcement action. (See flowchart process step 1.1.)

A. Name and Describe the Identified Hazard. All members of the CMT should be alert for potential hazards and notify the PI if they discover any hazards. Once the PI, CPM, or DP has identified the hazard, the PI, CPM, or DP prepares a summary that describes the identified hazard, and includes relevant facts such as who, what, why, how often, and where.

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B. Determine and Document Potential Consequences. The PI, CPM, or DP determines and documents the potential consequences that could result if the air carrier does not address or correct the hazard. These consequences could be any one of the following:

- Equipment failure,
- Human error,
- Damage to equipment,
- Procedural nonconformance,
- Process breakdown,
- Personal injury or death,
- Regulatory noncompliance,
- Decreased quality or efficiency, or
- Other.

10-341 RISK ANALYSIS (DETERMINE THE LIKELIHOOD AND SEVERITY OF THE CONSEQUENCES). The next step in the RMP is risk analysis. The PI analyzes hazards to identify risk factors that assist in risk analysis and provide specific targets for action plans. Risk factors identify what the air carrier must later mitigate to reduce the overall level of risk. An effective action plan should address risk factors by eliminating them or by reducing their impact. (See flowchart process step 1.2.)

A. Risk Factors Are Known. The risk factors identify what the air carrier must control in order to reduce the level of risk. These factors then become specific targets for risk control, either by eliminating or reducing the negative effects. The PI, CPM, or DP determines whether there are known risk factors associated with the severity of the consequences and the likelihood of their occurrence. Risk factors are typically situational factors (e.g., operating conditions that promote corrosion, aging aircraft, or high cycle use of aircraft) or deficiencies in design or performance related to safety attributes (e.g., missing attributes or failure to adhere to procedures).

B. Perform Further Analysis. When risk factors are unknown, the PI, CPM, or DP must suspend the RMP and conduct additional research on the risk factors before assessing the risk. The PI, CPM, or DP may use Constructed Dynamic Observation Reports (ConDOR), Safety Attribute Inspections (SAI), Element Performance Inspections (EPI), and the System Analysis Team (SAT) to obtain more information about the factors affecting the level of risk.

C. Identify and Document Risk Factors. After identifying the risk factors associated with a hazard, the PI, CPM, or DP provides a description of each risk factor selected. Identifying the risk factors facilitates the risk assessment process and provides a specific direction for subsequent action plans.

D. Determine the Severity Value. The PI, CPM, or DP determines the appropriate value related to the severity of the potential consequences, should they occur. The PI, CPM, or DP assesses the severity using the standard risk matrix status of high, medium, or low. The PI, CPM, or DP produces the severity assessments using a combination of available data and expert judgment. Severity is defined using the following scale:

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1) High—Potential loss (or breakdown) of an entire system or subsystem; an accident or incident.

2) Medium—Potential moderate damage to an aircraft, partial breakdown of an air carrier system, or violation of regulations or company rules.

3) Low—Potential poor air carrier performance or disruption to the air carrier.

E. Determine the Likelihood Value. The PI, CPM, or DP determines the appropriate value related to the likelihood of the consequences actually occurring. The PI, CPM, or DP assesses the likelihood using a combination of available data and expert judgment. Likelihood standard values are defined as follows:

- Frequent—Continuously experienced,
- Probable—Occurs often,
- Occasional—Occurs several times, and
- Remote—Unlikely, but could occur.

10-342 RISK ASSESSMENT (OVERALL RISK ASSESSMENT VALUE DETERMINES PRIORITY). The PI considers the overall level of risk to determine the priority in ensuring that the air carrier addresses the hazard and its associated level of risk. This assessment assists the PI, CPM, or DP in decisionmaking, action planning, and evaluating air carrier actions (see flowchart process step 1.3). The PI uses this information from the risk analysis to determine the overall level of risk using the following matrix:

Table 10-5. Risk Matrix

Risk Matrix			
	Severity		
Likelihood	**High**	**Medium**	**Low**
Frequent	**1**	**3**	**5**
Probable	**2**	**6**	**8**
Occasional	**4**	**9**	**11**
Remote	**7**	**10**	**12**
Overall Risk Assessment Legend: 1–3 (Red) High Overall Risk 4–9 (Yellow) Medium Overall Risk 10–12 (Blue) Low Overall Risk			

10-343 DECISIONMAKING (DEVELOP AN ACTION PLAN). Based on the results of the risk analysis, the PI, CPM, or DP determines to do one of the following:

- Eliminate the hazard,
- Mitigate the risk,
- Accept the risk at its existing level, or
- Transfer the risk.

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A. Determine if the Action is Within the Scope of the CMT's Authority. The PI, CPM, or DP should determine if the actions required to eliminate the hazard and resulting risk are within the scope of the CMT's authority.

B. Document That Action is Outside the CMT's Authority. The PI or designee documents the facts that show the air carrier is responsible for ensuring the elimination of the hazard or reduction of the level of risk is not within the scope of the Federal Aviation Administration's (FAA) authority.

C. Close the RMP and Transfer the Risk to the Appropriate FAA Organization. When corrective action is beyond the CMT's authority, the PI can allocate the authority, responsibility, and accountability for taking corrective action for the identified hazard to the appropriate FAA organization. The PI, CPM or DP uses this approach to address risks that may require actions such as rule changes, new or revised ADs, policy changes, and FAA safety recommendations. If an RM action plan is developed, the PI should include this with the information package sent to the receiving organization. Once the PI, CPM, or DP transfers responsibility, he or she will close the RMP. The PI must enter the rationale for closing the RMP. The PI, CPM, or DP might decide to follow up on the status of transferred issues.

D. Acceptable Levels of Risk. Where the overall risk falls into the blue area of the risk matrix, the PI, CPM, or DP may accept it without further action. If the PI or designee determines that the risk level is within normally acceptable limits (blue area), no additional Design Assessments (DA) or Performance Assessments (PA) are required beyond the normal oversight planning.

E. Document Rationale for Acceptable Levels of Risk. The PI or designee documents the rationale for determining that the risk level is within acceptable levels.

F. Close the RMP and Monitor Through Normal Oversight Planning. The PI closes the RMP and monitors the hazard through ATOS. The PI must enter the rationale for closing the RMP.

G. Document Mitigation Rationale for Unacceptable Risk Levels. If the PI, CPM, or DP finds the overall level of risk to be unacceptable, he or she will document the mitigation rationale.

1) Where combinations of severity and likelihood cause the overall level of risk to fall into the red area, the PI, CPM, or DP will assess the risk as unacceptable and further work would be required to eliminate that associated hazard or control the factors that lead to higher risk likelihood or severity.

2) Where the risk assessment falls into the yellow area, the PI, CPM, or DP may accept the risk under defined conditions of mitigation. An example of this situation would be an assessment of the impact of an inoperative aircraft component that is deferred in accordance with a minimum equipment list (MEL). Defining an operational or maintenance procedure in the MEL would constitute a mitigating action that could make an otherwise unacceptable risk

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acceptable, as long as the defined procedure was implemented. These situations may also require continued special emphasis in the safety assurance function.

H. Develop an Action Plan. The PI, CPM, or DP creates and assigns action items to ensure that the air carrier addresses the identified hazard and mitigates the associated levels of risk. The air carrier, with CMT oversight, usually carries out mitigation. The CMT may take actions that do not involve the participation of the air carrier to effectively oversee the air carrier's mitigation of the hazard and associated levels of risk. (See flowchart process step 1.4.)

1) Develop and Document Action Items. Action items describe what, how, where, and when an action is necessary. The PI, CPM, or DP develops and documents action items that address the risk factors. Mitigation strategies may include:

a) Reevaluating the air carrier's programs, approvals, authorizations, deviations, and exemptions.

b) Amending or revoking the air carrier's authority to conduct all or part of its operation.

c) Initiating an enforcement investigation.

d) Suspending the certification process.

e) Convening the SAT.

2) Select Personnel Resources. The PI or designee selects individuals to perform action items through coordination with the individual's FLM. RMP action items become work assignments once a manager approves them.

3) Work Request Approval. The FLM or supervisory PI determines whether to approve and resource the work assignment. If the FLM or supervisory PI approves and resources the work assignment, the work may begin on the action items.

4) Implement the Action Plan by Completing All Action Items. The assigned inspector completes his or her assigned action items. Throughout the course of the RMP, the PI, CPM, or DP monitors the progress of the action items and ensures their completion.

5) Deleting an RMP. The PI, CPM, or DP can delete the RMP on the RMP hazard list. The option to mark for deletion is no longer available on the hazard list once the manager resources an action item. Changing circumstances may eliminate the need for an RMP. When this occurs, the PI, CPM, or DP will document the relevant information in the action item(s), and explain why there is no longer a need for the RMP. The PI, CPM, or DP should enter this information in comments when he or she closes the RMP.

10-344 VALIDATION OF CONTROL (EVALUATE RESULTS FOR FURTHER ACTION). After all action items are complete, or data indicates that the action plan has eliminated the hazard or reduced the associated risk to acceptable levels, the PI, CPM, or DP validates the effectiveness of the selected approach. The PI, CPM, or DP reviews the status of

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the hazard and verifies that the air carrier has eliminated the hazard or mitigated the level of risk associated with the hazard to an acceptable level. After evaluating the results of the mitigation strategies, the PI, CPM, or DP decides whether to close the RMP or to require the development and implementation of additional action items. (See flowchart process step 1.5.)

A. Validation. Validation answers the question, "Did it work?" To complete the validation step, the PI, CPM, or DP evaluates the current status of the hazard and verifies that the certificate holder addressed the risk factors that contributed to or caused the hazard to occur, and also verifies that the certificate holder has reduced the level of risk posed by the hazard. Using this assessment of the current level of risk, the PI, CPM, or DP decides whether to close the RMP for the risk or whether more implementation actions are required.

B. Risk Factors Identified and Addressed. If all of the risk factors were not initially identified, the PI or designee returns to Volume 10, Chapter 3, Section 1, paragraph 10-341 and adds them to the list of risk factors. The PI, CPM, or DP determines if the action items have addressed each risk factor to the extent possible and describes any changes that have occurred to the risk factors because of the action taken. If any of the identified risk factors are still present and contributing to an unacceptable level of risk, the PI, CPM, or DP will reenter the flowchart in at step 1.1.

C. Update Risk Assessment. After determining that the certificate holder has addressed all risk factors to the extent possible, the PI, CPM, or DP reviews the hazard and its consequence descriptions, and determines if they can revise the severity and likelihood values based on the completed action plan. The PI uses this risk analysis information and the risk matrix to determine if the overall level of risk is affected.

D. Level of Risk Acceptable. The PI, CPM, or DP determines whether the risk level is within acceptable limits. If so, no additional action is required beyond the normal oversight planning. The RMP will display the original risk assessment and the new risk assessment in the hazard list.

E. Level of Risk Unacceptable. If the level of risk is unacceptable, the PI, CPM, or DP returns to step 1.1 of the flowchart in Figure 10-56 to review the hazard description and associated details to determine what additional actions are necessary.

F. Close the RMP. After determining that the risk level is acceptable, the PI closes the RMP, enters the closure rationale, and monitors the hazard through DA and PA. If the level of risk is acceptable based on mitigation, then the air carrier and CMT must continually monitor the mitigating strategy (risk control). This helps ensure that the action plan to control the risk continues to be effective for as long as the hazard and associated risk factors exist. Nonsupervisory PIs must collaborate with an FLM to close an RMP.

RESERVED. Paragraphs 10-345 through 10-359.

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