VOLUME 2 AIR OPERATOR AND AIR AGENCY CERTIFICATION AND APPLICATION PROCESS

CHAPTER 1 THE GENERIC PROCESS FOR CERTIFICATING ORGANIZATIONS

Section 3 Safety Assurance System: Obtaining and Constructing Certificate/Designator Numbers

2-46 PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODE. None. This task is accomplished as a step in Title 14 of the Code of Federal Regulations (14 CFR) part 121, 125, 133, 135, 137, 141, 142, 145, or 147 certification tasks and part 91 subpart K (part 91K) issuance of management specifications (MSpecs).

2-47 OBJECTIVE. Successful completion of this task results in issuance of an appropriate certificate number or designator. The objectives of this task are:

- To obtain a precertification number for parts 121, 125, 135, 142, 145, and 147 applicants;
- To obtain a final certificate number for all (other) air carriers, air operators, and air agencies;
- To obtain a designator for the holder of part 91K MSpecs; and
- To obtain a designator for part 125 Letter of Deviation Authority (LODA).

2-48 GENERAL.

A. Management of Certificate/Designator Numbers. The Regulatory Support Division, Aviation Data Systems Branch (AFS-620) manages and controls all air carrier, air operator, and Air Agency Certificate numbers, as well as MSpec and part 125 LODA (125M) designators. The number system provides a standardized format, a multitude of possible numbers, and a central location for assigning, storing, and retrieving information. This system of assigning certification/designator numbers supersedes previously existing systems.

B. Request of Three-Character Designator Element. Assure the certificate-holding district office (CHDO) has obtained the precertification/designator number from AFS-620 via email at 9-AMC-AFS620-CertInfo@faa.gov, in coordination with the regional Flight Standards division (RFSD). Upon issuance of a precertification/designator number by AFS-620, a basic record is created. All required fields in the enhanced Vital Information Database (eVID) or Safety Assurance System (SAS) will have to be entered and saved.

C. Termination of the Application Process. If an applicant for a certificate or MSpec terminates the certification process before a certificate is issued or the Federal Aviation Administration (FAA) terminates the process, the district office must ensure the certificate is terminated in the eVID so the precertification number and the three-character designator can be released for future use.

2-49 CERTIFICATE/DESIGNATOR NUMBER CONSTRUCTION. This discussion provides background information on the methods used to construct certificate/designator numbers. AFS-620 is responsible for the management and control of all Air Operator Certificates

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(AOC) and MSpec designator numbers using a systematic scheme which provides a nationally standardized format, a multitude of numbers, and a centralized assignment, storage, and retrieval location.

2-50 ELEMENTS OF A CERTIFICATE/DESIGNATOR NUMBER.

A. List of Elements. The certificate/designator number has four elements as follows:

1) Designator element,

2) Type element,

3) Numeric element, and

4) Alpha suffix element.

B. Example of Elements in a Number. An example of a certificate/designator number using these four elements would be RAA-A-001-A (without dashes RAAA001A). This number, divided into its four elements, is illustrated in Table 2-1, Example of Certificate/Designator Number Elements.

Table 2-1. Example of Certificate/Designator Number Elements

RAA	**A**	**001**	**A**
(Designator)	(Type)	(Numeric)	(Alpha Suffix)

C. Element Descriptions. The certificate/designator number elements are described as follows:

1) Element 1, the designator element, is a three-letter or three-character designation.

2) Element 2, the type certificate (TC) element code, identifies the type of certificate and/or the applicable operating regulation specified and are shown in Table 2-2, Element Codes for Types of Certificates and Operations.

3) Element 3, the numeric element, provides up to 999 unique number combinations for each type of certificate/designation (001 to 999).

4) Element 4, the alpha suffix, permits additional certificate number combinations by establishing 25 alpha groups (A through Z, excluding P, which is reserved for precertification/designation numbers). When all number combinations of the numeric element (001-999) have been assigned for a particular type of certificate/designation and alpha suffix, the alpha suffix will change to the next alphabetical letter.

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Table 2-2. Element Codes for Types of Certificates and Operations

Air Operators—Type of Certificate	**Type—Certificate/ID Code**	**14 CFR Part**
Air Carrier Certificate	A	121/135
Operating Certificate (not common carriage)	B	125
Operating Certificate (commercial)	C	121/135
Foreign Operator (operations specifications (OpSpecs) only)	F	129
Agricultural Aircraft Operator Certificate	G	137
Fractional Ownership (see Volume 2, Chapter 5)	K	91K
Rotorcraft External-Load Operator Certificate	L	133
Part 125 LODA Holder (designator issued)	M	125
Air Agencies—Type of Certificate	**Type—Certificate Code**	**14 CFR Part**
Domestic Training Center Certificate	X	142
Foreign Training Center Certificate	W	142
Domestic Repair Station Certificate	R	145
Domestic Satellite Repair Station Certificate	D	145
Foreign Repair Station Certificate	Y	145
Foreign Satellite Repair Station Certificate	Z	145
Pilot School Certificate (includes provisional)	S	141
Aviation Maintenance Technician School (AMTS) Certificate	T	147
Computer Testing Designee (CTD)	E	183

D. Variation of Certificate Types Within an Organization. Using this scheme, organizations holding different types of certificates and designators will be issued certificate/designator numbers as in the following examples:

1) RAA-A-001-A:

- RAA: unique to Romeo Alpha Airlines.
- A: air carrier certificate (121/135).
- 001: numeric element (first of 999 possibilities).
- A: alpha suffix (indicating the numeric element is in the “A” alpha suffix grouping).

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2) RAA-R-001-A:

- RAA: same as above.
- R: repair station certificate (145).
- 001: same as above.
- A: same as above.

E. Type Code as Activity Identifier. It should be noted from the preceding examples that the second element (type code) is the key element identifying the activity of the certificate or MSpec holder. An organization operating under more than one type of certificate and regulation is assigned the same three-letter or three-character designator. An air operator, who is also an air agency, will have the same designator. Each kind of certificate is readily identified by the type of certificate code. For example:

- RAA-A-001-A: air carrier.
- RAA-R-001-A: repair station.
- RAA-G-001-A: agricultural operator.
- RAA-S-001-A: pilot school.
- RAA-L-001-A: external-load operator.

F. Element Combinations. Table 2-3, Element Combinations, illustrates a few of the many possible element combinations.

Table 2-3. Element Combinations

DESIGNATION ELEMENTS POSSIBLE			**TYPE CERTIFICATE ELEMENTS**	**NUMERIC ELEMENTS & ALPHA SUFFIX**		
				A	B	C
AAA	ABA	ACA	A	001	001	001
AAB	ABB	ACB	B	002	002	002
AAC	ABC	ACC	C	003	003	003
AAD	ABD	ACD	D	004	004	004
↓	↓	↓	↓	↓	↓	↓
AAZ	ABZ	ACZ		999	999	999

2-51 PRECERTIFICATION NUMBER CONSTRUCTION. The letter “P” is used as the alpha suffix element for the temporary designation of an applicant who has stated intent to apply for an FAA certificate (e.g., ABCA021P or XYZR030P). The complete four-element number with P as the last element serves as the precertification number. Upon successful completion of the certification process, the alpha suffix is changed to the appropriate alpha suffix element (A through Z, excluding P) as applicable.

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2-52 RESTRICTIONS AND PROVISIONS FOR CERTIFICATE/DESIGNATION NUMBER CONSTRUCTION. In the assignment of certificate numbers, the following provisions and restrictions apply:

A. Complete Designation Number. The complete identification number (all eight characters), as assigned to an organization, will never be reassigned to another organization.

B. Designator Element. When more than one type of certificate/specification is held by an organization, the three-letter or three-character designator element is unique to the organization.

NOTE: If "RAA" is the designator for Romeo Alpha Airlines's air carrier certificate (Certificate No. RAAA001A), the designator RAA will also be assigned to Romeo Alpha Airlines's air agency repair station certificate (Certificate No. RAAR001A).

C. Repair Stations. Repair stations may be assigned either a three-letter designator element or a three-character, alphanumeric designator element.

1) The unique designator element for a repair station could be RAA, RA1, RA3, or RA9. The unique three-character (RA2) designator element signifies that it was "machine assigned" by AFS-620.

2) The three-letter or three-character designator element assigned to satellites of a parent repair station is the same as the parent repair station. The type element will be "D" for domestic satellite repair station certificates and "Z" for foreign satellite repair station certificates. If the parent repair station has more than one satellite, the type element assigned to the second satellite will be 2, the type element for the third satellite will be 3, etc.

a) For example, if RA2R001A is the certificate number machine-assigned to a repair station and later satellites were certificated, the certificate number for the first satellite would be RA2D001A, and the certificate number for the second satellite would be RA22001A.

b) Another example would be a repair station associated with an air operator with an existing certificate number such as RAAA001A. The associated repair station certificate number would be RAAR001A, and the first satellite repair station certificate number would be RAAD001A, and the second satellite would be RAA2001A.

c) A foreign repair station with satellites would be assigned certificate numbers such as RA4Y001A, RA4Z001A, RA42001A, and RA43001A.

D. Reassignment of Inactive or Terminated Designator Element. The designator element, regardless of the type of certificate/MSpec that has become inactive or terminated, will not be reassigned to a different organization until a minimum of 3 years have elapsed after the termination of the original organization. The designator can be reassigned to the original legal organization if it resumes operations within the 3-year period. After 3 years, the three-letter or three-character designator may be reassigned to another organization provided there is no record of significance associated with the designator element in any of the databases maintained by

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AFS-620. If a designator element has an associated record of significance, AFS-620 will not reassign the designator element for at least 10 years for historical tracking.

E. Voluntary Surrender of Certificates Issued to Holders of a LODA. Operators of aircraft that meet the applicability of part 125 but conduct operations under a LODA may not hold an AOC. Any certificate issued to an operator approved to conduct operations in accordance with a part 125 LODA prior to December 21, 2006 should be voluntarily surrendered to the jurisdictional FSDO and a new LODA issued.

F. Alpha Suffix Group. When a number and an alpha suffix group combination have been assigned to an active organization (such as 001A or 002A), that number is not reassigned to another active organization (of the same certificate type and operating regulation) until all 999 possibilities of the specific alpha suffix groups have been used. Organizations which have more than one type of certificate and who conduct business under more than one operating regulation are assigned identical numeric elements for each assigned certificate number, whenever possible. A specific numeric element can be reassigned provided a different alpha suffix element grouping is assigned. For example, 999 can be used with an “A” alpha suffix and 999 can be used with a “B” alpha suffix element grouping.

RESERVED. Paragraphs 2-53 through 2-70.

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VOLUME 2 AIR OPERATOR AND AIR AGENCY CERTIFICATION AND APPLICATION PROCESS

CHAPTER 4 THE CERTIFICATION PROCESS—TITLE 14 CFR PART 135

Section 6 Safety Assurance System: Single-Pilot, Single Pilot-in-Command, and Basic Part 135 Operations

2-456 GENERAL. This section provides direction and guidance to inspectors for the certification of Title 14 of the Code of Federal Regulations (14 CFR) part 135 operators of limited size and scope who are not required to comply with all regulatory requirements for manuals, training programs, and management positions. These operators normally need less extensive manuals or training programs and will have fewer management positions than more complex part 135 operators. However, these operations will not be permitted a reduction in safety standards due to their limited size and scope. See Volume 2, Chapter 4, Section 1, Safety Assurance System: Phase 1—Preapplication, paragraph 2-342 for specific part 135 definitions.

2-457 CERTIFICATION PROCESS. Processing applications for certificates to conduct single-pilot, single pilot-in-command (PIC), and basic part 135 operations will generally follow the same certification procedures as other applicants. Certification of these applicants may take less time since fewer documents, facilities, and other items require Federal Aviation Administration (FAA) evaluation. Applicable differences in the certification process for single-pilot, single PIC, and basic part 135 operators are discussed in this chapter.

2-458 SPECIAL AIRWORTHINESS CONSIDERATIONS. Any single-pilot, single PIC, or basic part 135 certificate holder may elect to maintain aircraft under part 135, § 135.411(a)(2). Maintenance programs under § 135.411(a)(2) require more extensive written procedures than those usually required for small operators by § 135.23. Compliance with § 135.411(a)(2) requires a more complex maintenance program and may require small operators to employ additional qualified management personnel. Therefore, regardless of the minimum standards for personnel and manuals established elsewhere in this section, Part D of the operations specifications (OpSpecs) authorizing aircraft maintenance under § 135.411(a)(2) shall not be issued to these types of operators unless the certificate-holding district office (CHDO) determines that the operator has appropriate personnel and manuals to provide adequate means of compliance with § 135.411(a)(2).

2-459 CERTIFICATION PROCESS DIFFERENCES FOR SINGLE-PILOT AND SINGLE PIC OPERATORS. This paragraph describes deletions, modifications, and additions to the certification process for single-pilot and single PIC applicants.

A. Differences in the Preapplication Phase.

1) In the Preapplication Statement of Intent (PASI) the applicant must state that the proposed operation will employ either one pilot or only one PIC. The applicant should enter this statement in item 10 of the PASI. A single PIC applicant must attach to the PASI a brief statement identifying regulations from which deviations will be requested (e.g., § 135.21,

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§ 135.341). This statement will include the number of seconds in command (SIC) the applicant proposes to use.

2) During the preapplication meeting, the content and scope of the initial compliance statement shall be established by the certification project manager (CPM). The CPM must ensure that an applicant clearly understands the level of detail expected in the initial and final compliance statements. The applicant may abbreviate the initial compliance statement, where appropriate. However, an initial compliance statement that does not clearly document an applicant's knowledge of regulatory requirements is unacceptable. The initial compliance statement (and later, the final compliance statement) provides the only written evidence of a single-pilot or single PIC operator's understanding of 14 CFR requirements. Simple, conventional requirements for a single-pilot operator using a four-seat, single-engine airplane in day, visual flight rules (VFR)-only operations within the United States differ considerably from the requirements for a single-pilot operation using a Cessna 441 turboprop airplane in day and night, all-weather, international operations. In this example, part 135 does not require either operator to have manuals, training programs, or a full complement of management personnel. An examination of regulatory requirements that may apply to each operator's specific situation may reveal differences in the proposed types of operation, which would cause significant differences in the content and scope of the initial and final compliance statements. In the case of operators not required to maintain manuals in accordance with § 135.21, the compliance statement should be maintained and updated as regulations and operator configuration evolve.

3) The applicant's primary operations official and the single-pilot or single PIC (if different from the primary operations official) should attend the preapplication meetings. A person who is competent to discuss aircraft maintenance requirements for the applicant should also attend the meetings.

NOTE: For example, Akers Realty Corporation owns a Bell Jet Ranger helicopter and applies for a part 135 certificate. The individual with the authority to allow use of the helicopter is Mr. Bill Akers, vice president of sales. Mr. Terry Larson is the only pilot and Mr. Akers' sales manager. City Copters Inc., a Fixed-Base Operator (FBO), does the maintenance. In this situation, it would be appropriate for Mr. Akers, Mr. Larson, and a representative from the City Copters maintenance department to attend the preapplication meetings.

B. Differences in the Formal Application Phase.

1) Formal application attachments for company general manuals and company training curriculums are not required to be submitted with the formal application for a single-pilot applicant, nor the single PIC applicant if the single PIC applicant is requesting full deviations from §§ 135.21 and 135.341. For those single PIC applicants that are not requesting a full deviation from §§ 135.21 and 135.341, those sections shall be submitted.

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2) For single-pilot and single PIC operators, attachments required to be submitted with the formal application are as follows:

- Schedule of Events (SOE);
- Documents of purchase, contracts, leases, and/or Letter of Intent (LOI);
- Initial compliance statement; and
- Management qualification résumés.

3) The management qualification résumés are only required for the principal owner and company officers who are primarily responsible for operational control of the part 135 activities within the organization. The management résumés will provide assistance when determining compliance with 14 CFR part 119, § 119.69. Examples of management qualification résumés to be submitted for these applicants are described as follows:

a) A plastic products manufacturer based in Wilmington, DE, owns a King Air and applies for a certificate to operate under part 135. The company employs 1,400 people and has only one pilot. The company president has an office in New York City and keeps the plane in Wilmington, DE. The only person who can authorize use of the aircraft is the Wilmington plant manager. In this case, résumés are required for the president and the Wilmington plant manager.

b) Another example is the pilot/owner applicant when the pilot/owner will be the single-pilot or single PIC. In this situation, only the résumé of the pilot/owner is required.

C. Differences in the Design Assessment (DA) Phase. The differences are as follows:

1) Inspectors will evaluate any material submitted by applicants for acceptance or approval regardless of whether it is required. If, for example, a single PIC operator chooses to submit a complete General Operations Manual (GOM) rather than request a deviation, that manual must be evaluated and must meet the same criteria for acceptance as a required manual. The same would apply to training programs required under § 135.341, except that program requires approval rather than acceptance. Unacceptable submissions that are not corrected require denial of the application. It is irrelevant whether 14 CFR specifically requires the submitted material. The following items are not required by regulation for single-pilot operators and will not be evaluated unless the applicant chooses to develop and submit these items to the FAA:

- GOMs;
- General Maintenance Manuals (GMM), if appropriate; and
- Pilot training program curriculums.

2) Other documents and items required to be submitted during the document DA phase will be evaluated, including the following:

- The operator’s flight-locating procedures (required by § 135.79); and
- Procedures to provide hazardous material (hazmat) training (required by part 135 subpart K).

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D. Differences in the Performance Assessment (PA) Phase.

1) For single PIC operators, each SIC identified on the proposed certificate holder's OpSpecs must pass the entire check required by § 135.293 while occupying the normal SIC duty station (usually the right pilot seat in airplanes).

2) There are no differences in the PA phase for single-pilot operators. For example, a proposed operation may have only one person (this person may be the owner, pilot, and mechanic) who uses a single-engine airplane in day VFR operations. Evaluators will use the same careful process for the aircraft, facilities, equipment, records, and pilot/owner competency as the one used for a larger, more complex operator. Although the scope of the operation may require fewer demonstrations or inspections, every operator must meet the safety standards required by 14 CFR. Proving tests may be required by Volume 3, Chapter 29, Proving and Validation Tests.

E. Differences in the Administrative Function Phase.

1) Single-pilot or single PIC operators will be issued the appropriate standard OpSpec paragraph which identifies by name one individual authorized as the pilot or PIC. For single PIC operators, no more than three individuals shall be authorized as SICs.

2) A single PIC operator may be issued an OpSpec paragraph authorizing deviations from §§ 119.69(a), 135.21(a), and 135.341(a).

2-460 CONCEPT OF A BASIC PART 135 OPERATOR. Basic part 135 operators are limited in size and scope. This paragraph establishes conditions that an operator must meet to qualify as a basic part 135 operator and specifies the extent of authorized deviations from the manual, management personnel, and training program requirements of part 135. Basic part 135 operators are required to have management personnel, manuals, and training curriculums adapted to their smaller, less complex operations. Subparagraphs 2-465A through E discuss these requirements in detail. For classification as a basic part 135 operator, the operator must meet each of the following conditions and limitations:

- No more than five pilots, including SICs, are used in the operation;
- No more than five aircraft are used in the operation;
- No more than three different types of aircraft are used in the operation;
- No aircraft type certificated for more than nine passenger seats is used in the operation;
- No Category II (CAT II) or Category III (CAT III) operations are conducted; and
- No operations are conducted outside the United States, Canada, Mexico, and the Caribbean (which includes the Bahamas).

2-461 CHECK PILOT APPROVAL FOR SINGLE-PILOT, SINGLE PIC, AND BASIC PART 135 OPERATORS.

A. Approval Despite Deviations. Recent experience indicates single PIC and basic part 135 operators who hold deviations granted by OpSpec paragraphs A037–A039 have

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demonstrated the management skills, organizational abilities, and good regulatory compliance record to warrant the appointment of check pilots.

B. Check Pilot Appointments. Check pilot appointments should be limited to only those operators who have demonstrated to the satisfaction of the assigned principal operations inspector (POI) all of the above important characteristics.

1) "Single-pilot" operators may be granted approval to use a check pilot who is presently employed by another certificate holder. The check pilot must be authorized to serve as a check pilot in the same make, model, and series (M/M/S) of aircraft. These operators are limited to one check pilot approval at any one time.

2) "Single PIC" operators may be granted approval to use a check pilot presently employed by another certificate holder if the other certificate holder operates the same M/M/S of aircraft and the check pilot is currently approved as a check pilot on that type of aircraft. The check pilot must also meet all the requirements of part 135 to serve as a check pilot. At the discretion of the POI, these check pilots may be authorized to give to both the single PIC and/or any of the SICs listed in paragraph A039 of the OpSpecs the proficiency or competency checks required by part 135. These operators are limited to one check pilot approval at a time.

3) "Basic 14 CFR Part 135 On-Demand Operations Only" and "Basic 14 CFR Part 135 Commuter and On-Demand" certificate holders may be granted approval to use check pilots after receiving approval for a check pilot curriculum in their approved training programs.

NOTE: When approving check pilots for multiple operators, inspectors should see Volume 3, Chapter 20, Section 6, paragraph 3-20-6-23 for additional guidance.

4) For a basic part 135 operator-issued OpSpec paragraph A037, Basic 14 CFR Part 135 Operator—Commuter and On Demand Operations, or A038, Basic Title 14 CFR Part 135 Operator—On Demand Operations Only, the following selections are required:

a) If no check pilot other than an Operating Experience (OE) check pilot is used for commuter operations, select OpSpec A037c(7).

b) For on-demand operations only, if no check pilot is used, select OpSpec A038b(7).

c) Select the appropriate paragraph A037b(2)(a) or A038a(3)(a).

2-462 PROCEDURE FOR APPROVING DEVIATION FROM MANAGEMENT EXPERIENCE.

A. Initial Actions. When an operator requests approval for a deviation from the management experience requirements of § 119.71, the operator must specify the deviations requested and the justifications for them. The POI will review the certificate holder's request and follow the guidance found in Volume 2, Chapter 2, Section 3.

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B. POI Responsibilities. When a deviation is approved under § 119.71(f), the POI will ensure that the operator notes the deviation in the appropriate section of the certificate holder's company manual. In addition, the CHDO will ensure that a record of the deviation is in OpSpec paragraph A005.

NOTE: During the annual review of the OpSpecs, the POI must determine currency and applicability of the deviations listed in OpSpec A005.

2-463 DEVIATIONS FOR BASIC PART 135 OPERATORS. When an applicant meets the requirements for a basic part 135 operator, certain deviations from part 135 may be authorized. These deviations are as follows:

- Reduction in the content of the operator's manual (refer to § 135.21(a));
- Different management positions or different numbers of management positions (refer to § 119.69(a)); and
- Limited modification of training program requirements (refer to § 135.341(a)).

2-464 DELEGATION OF AUTHORITY TO APPROVE DEVIATIONS. The manager of the CHDO assigned certification responsibilities is authorized to approve deviations from §§ 119.71, 135.21(a), and 135.341(a) for a single PIC or basic part 135 operator applicant who proposes to conduct on-demand passenger, cargo-carrying operations, or scheduled cargo-carrying operations. The CHDO manager will process § 119.71 management deviation requests in accordance with Volume 2, Chapter 2, Section 3. If the CHDO manager grants a deviation to an operator for basic part 135, and subsequently that operator proposes to operate scheduled passenger carrying operations, the CHDO manager must forward this request to the Air Transportation Division (AFS-200) and the Aircraft Maintenance Division (AFS-300) for approval, as appropriate. Deviations from §§ 135.21(a) and 135.341(a) for a basic part 135 operator applicant who proposes to conduct scheduled passenger (commuter) operations must be forwarded to AFS-200 for approval.

2-465 LIMITATION OF AUTHORITY TO APPROVE DEVIATIONS.

A. Single PIC or Basic Part 135 Operator. The authority to approve deviations from §§ 119.69(a), 119.71, 135.21(a), and 135.341(a) for part 135 operators and applicants, other than scheduled passenger, is delegated to the CHDO manager.

B. Management Personnel. An approved deviation from the number of management positions required by § 119.69(a) will not be granted to any operator authorized to conduct scheduled passenger (commuter) operations. For additional information regarding part 119 management positions, see Volume 2, Chapter 2, Section 3.

C. Manual Content. All basic part 135 operators shall have a manual that includes at least the information required by the following sections of part 135. Deviation from the manual content requirements of these sections of part 135 is not authorized.

- Section 135.23(a)—Management personnel;
- Section 135.23(b)—Weight and Balance (W&B);

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- Section 135.23(c)—Information from OpSpecs;
- Section 135.23(e)—Airworthiness information;
- Section 135.23(f)—Recording mechanical irregularities;
- Section 135.23(g)—Recording corrective action for mechanical irregularities;
- Section 135.23(h)—Obtaining service and maintenance;
- Section 135.23(i)—Use of minimum equipment lists (MEL), if applicable;
- Section 135.23(j)—Fuel handling;
- Section 135.23(k)—Passenger briefing;
- Section 135.23(l)—Flight locating; and
- Section 135.23(o)—Approved inspection program.

D. Training Program Requirements. Deviation from training program requirements of § 135.341(a) for basic part 135 operators is limited.

E. Approved Deviations. The only deviation that may be approved is authorization for a basic part 135 operator to have portions of its training conducted by another part 135 operator or a training organization that specializes in providing ground, simulator, and aircraft training.

1) The training organization must provide training equivalent to that required by part 135 subpart H. In all cases, the basic part 135 operator must train its personnel using only programs acceptable to the FAA and specifically authorized by the terms of the deviation. If a basic part 135 operator wishes to change any item in a training program that may affect the quality of training, the POI and the authorized manager must completely reexamine the authorization for deviation to avoid degrading operational standards.

2) The basic part 135 operator must provide to the FAA a written plan detailing how training will be implemented. The plan must accompany the request for deviation. A copy of the other part 135 operator's (or training organization's) curriculums must be attached to the plan. Before deviation is granted, the plan (and attached training curriculums) must be evaluated and accepted by the CPM or assigned POI, and the manager authorized to approve the deviation. Although these curriculums are not required to be "approved" in the same manner specified in Volume 3, Chapter 19, Training Programs and Airman Qualifications, they must specify training that equals the quality required for "approved" curriculums.

3) The written plan must include procedures for maintaining individual crewmember training records. The basic part 135 operator must maintain the records required by § 135.63. The plan must include provisions for certification of individual training records by the organization that conducts the training.

4) A basic part 135 operator must always prepare and keep current curriculum segments for basic indoctrination training (refer to § 135.329(a)(1)), Crew Resource Management (CRM) training (refer to § 135.330), and crewmember emergency training (refer to § 135.331). These curriculum segments will be evaluated and approved in accordance with Volume 3, Chapter 19.

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2-466 CERTIFICATION PROCESS DIFFERENCES FOR BASIC PART 135 OPERATORS. This paragraph describes deletions, modifications, and additions to the certification process described in Volume 2, Chapter 4, Sections 1 through 5.

A. Preapplication Phase. The differences are as follows:

1) The applicant must attach to the PASI a brief statement identifying the regulations from which they are requesting a deviation. The statement will present justifications for the proposed deviations and include descriptions of the size and scope of the proposed operation.

2) During the preapplication meeting, the CPM will ensure that the applicant's representatives thoroughly understand that the requested deviations will not be allowed unless the justifications presented with the application merit granting the request. The operator should consider developing alternative plans for certification if any request for deviation is denied.

B. Formal Application Phase. The differences are as follows:

1) If a basic part 135 operator is requesting any deviations, those deviations must be identified in a letter and attached to the application. This letter must identify each regulation for each deviation the applicant is requesting. The letter must also identify all documents the applicant is submitting in support of the request for deviation.

2) When a formal application is accepted from a basic part 135 operator, which requires approval of a deviation by the CHDO, a copy of the application (and the pertinent attachments) shall be forwarded to the regional Flight Standards division (RFSD). The copy shall be accompanied by the recommendations of the CPM along with the approval/denial by the district office manager and any background information that supports the decision.

3) If permission to deviate is denied, the CPM shall notify the applicant. It may be necessary to reject the entire formal application. However, if the applicant has previously prepared an acceptable, alternative plan to proceed with certification (even though the request for deviation may be denied), and this plan was made part of the original formal application, denial of a request for deviation may not require rejection of the whole formal application.

4) When a formal application submitted by a basic part 135 operator includes a request for deviation from the training requirements of § 135.341(a) involving a third party (e.g., a training organization or another part 135 operator), a copy of the application and pertinent attachments shall be forwarded to the RFSD within 5 business days. The copy will be accompanied by recommendations from the CPM and district office manager concerning the request for deviation. The RFSD manager shall review and, after coordination with the regional or district office responsible for the training organization or other part 135 operator, determine what action will be taken on the request. When a training organization is involved (other than a part 135 operator), the RFSD shall obtain concurrence from AFS-200 before authorizing the deviation. The RFSD shall notify the CPM and district office manager of the acceptability of the request for deviation.

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5) Until the applicant has satisfactorily completed the certification process, any grant of deviation must be temporary. The deviations will be made effective as of the date the certificate is issued.

6) Each deviation must include a provision for automatic invalidation of the deviation when the operator no longer meets the criteria for classification as a basic part 135 operator.

C. DA Phase. There are no differences.

D. PA Phase. There are no differences.

E. Administrative Function Phase. There is one difference in the certification phase. Each basic part 135 operator shall be issued an appropriate standard OpSpec paragraph authorizing limited deviation from §§ 119.69(a), 135.21(a), and 135.341(a).

NOTE: Inspectors should utilize Figure 2-12, Part 135 Certification Job Aid and Schedule of Events for Single-Pilot, Single PIC, and Basic Applicants, to complete the single-pilot, single PIC, and basic part 135 operator certification process.

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Figure 2-12. Part 135 Certification Job Aid and Schedule of Events for Single-Pilot, Single PIC, and Basic Applicants

PTRS Code/ Input	I. PREAPPLICATION PHASE	Date(s) Received	Date(s) Returned for Changes	Date Accepted	Insp. Initials
	A. REVIEW PREAPPLICATION STATEMENT OF INTENT (PASI) B. TITLE 14 OF THE CODE OF FEDERAL REGULATIONS (14 CFR) PART 119 RÉSUMÉS C. SCHEDULE OF EVENTS (SOE)				
	II. FORMAL APPLICATION PHASE				
	NOTE: Enter information provided by the applicant and update prepopulated fields as appropriate within the Certificate Holder Operating Profile (CHOP).				
	A. REVIEW APPLICANT'S SUBMISSIONS 1. FORMAL APPLICATION LETTER				
	a. Full and Official Name (Legal)				
	b. Mailing Address				
	c. Primary Operating Location (Principal Operations Base)				
	d. Name and Address of Applicant's Agent for Service				
	e. Key Management Personnel Names				
	2. FORMAL APPLICATION ATTACHMENTS				
	a. SOE				
	b. Initial Compliance Statement				
	c. Proposed Operations Specifications (OpSpecs)				
	d. Company General Manuals (Operations and Maintenance)				

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Figure 2-12. Part 135 Certification Job Aid and Schedule of Events for Single-Pilot, Single PIC, and Basic Applicants (Continued)

	e. New-Hire Training Curricula, to include: • Basic Indoctrination • Crewmember Emergency Training • Pilot—Ground & Flight Training to Include: Initial, Upgrade, Transition, Differences & Recurrent, as applicable • Flight Attendant (F/A) Ground Training to Include: Initial, Transition & Recurrent, as applicable* • Hazardous Materials (Hazmat) Training • Initial/Transition Check Airmen Training • Initial/Transition Flight Instructor Training • Security Training				
	f. Management Qualification Résumés				
	g. Documents of Purchase/Contract/Lease/Letters of Intent (LOI)				
	h. Applicant completed Element Performance Data Collection Tools (EP DCT)				
	B. EVALUATE FEDERAL AVIATION ADMINISTRATION (FAA) RESOURCE CAPABILITY BASED ON SOE				
REMARKS:					

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Figure 2-12. Part 135 Certification Job Aid and Schedule of Events for Single-Pilot, Single PIC, and Basic Applicants (Continued)

	C. FORMAL APPLICATION MEETING 1. SCHEDULE MEETING Date: Time: 2. DISCUSS EACH SUBMISSION 3. RESOLVE DISCREPANCIES/OPEN ITEMS 4. REVIEW CERTIFICATION PROCESS 5. REVIEW IMPACT IF SOE NOT MET				
	D. ISSUE LETTER ACCEPTING/REJECTING APPLICATION				
REMARKS:					
	III. DESIGN ASSESSMENT (DA) PHASE				
	A. EVALUATE APPLICABLE TRAINING PROGRAMS 1. TRAINING CURRICULA				
	a. Basic Indoctrination				
	b. Crewmember Emergency Training				
	c. Pilot Initial Ground & Flight Training				
	d. Pilot Recurrent Training				
	e. Pilot Transition/Upgrade/Differences Training				
	f. F/A Initial Ground Training (as applicable)*				
	g. F/A Transition/Recurrent Training (as applicable)*				
	h. Security Training				
	i. Hazmat				
	j. Check Airman/Flight Instructor				

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Figure 2-12. Part 135 Certification Job Aid and Schedule of Events for Single-Pilot, Single PIC, and Basic Applicants (Continued)

	k. Maintenance Personnel				
	B. EVALUATE MANAGEMENT QUALIFICATIONS				
	1. DIRECTOR OF OPERATIONS (DO) (Principal Owner/Principal Ops Official*)				
	2. CHIEF PILOT*				
	3. DIRECTOR OF MAINTENANCE (DOM)*				
	4. REQUEST FOR DEVIATION LETTER(S) (part 119, § 119.71(f))				
	C. EVALUATE APPLICABLE MANUALS NOTE: See 14 CFR part 135, § 135.23 for a detailed list of requirements.				
	1. GENERAL OPERATIONS MANUAL (GOM)				
	a. Management Persons Required Under § 119.69(a)				
	b. Applicable OpSpec Sections				
	c. Emergency Plan/Accident Notification				
	d. Pilot in Command (PIC) Knowledge of: Required Airworthiness Inspections, Reporting and Recording of Mechanical Irregularities, Minimum Equipment List (MEL)/Logbook Knowledge and Out Station Maintenance/Servicing				
	e. Procedures for the Release for, or Continuation of, Flight with Inoperable or Unserviceable Equipment				
	2. GENERAL MAINTENANCE MANUAL (GMM)				
	3. FAA-APPROVED AIRPLANE FLIGHT MANUAL (AFM)				

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Figure 2-12. Part 135 Certification Job Aid and Schedule of Events for Single-Pilot, Single PIC, and Basic Applicants (Continued)

	4. AIRCRAFT CHECKLISTS				
	a. Normal				
	b. Abnormal				
	c. Emergency				
	5. F/A MANUAL (AS APPLICABLE)				
	6. DESTINATION AIRPORT ANALYSIS (AS APPLICABLE)*				
	7. MEL				
	8. CONFIGURATION DEVIATION LIST (CDL) (AS APPLICABLE)				
	9. MAINTENANCE TECHNICAL MANUALS (AS APPLICABLE):				
	a. Airframe/Powerplant				
	b. Structural Repair				
	c. Parts Catalogue				
	d. Inspection Procedures				
	e. Manufacturer’s or Vendor’s Manual				
	f. Wiring Manual				
	g. Overhaul Manual				
	10. FUELING/REFUELING PROCEDURES				
	11. FLIGHT LOCATING (AS APPLICABLE)				
	12. WEIGHT AND BALANCE (W&B) LIMITATIONS				
	13. HAZMAT RECOGNITION AND/OR ACCEPTANCE				
	14. SECURITY PROGRAM				
	15. CONTINUOUS AIRWORTHINESS MAINTENANCE PROGRAM (CAMP) (IF APPLICABLE)				
REMARKS:					

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Figure 2-12. Part 135 Certification Job Aid and Schedule of Events for Single-Pilot, Single PIC, and Basic Applicants (Continued)

	D. OTHER EVALUATIONS (AS APPLICABLE)*				
	1. AIRCRAFT LEASE				
	2. MAINTENANCE CONTRACTS/AGREEMENTS				
	3. SERVICING CONTRACTS/AGREEMENTS				
	4. EXEMPTION/DEVIATION REQUESTS/JUSTIFICATION				
	5. AIRCRAFT PROVING OR VALIDATION TEST PLAN (IF APPLICABLE)				
	6. ENVIRONMENTAL ASSESSMENT				
	7. FINAL COMPLIANCE STATEMENT				
	8. INITIATE OPSPECS PREPARATION DATA SHEET				
	9. TRAINING CONTRACTS				
	10. DEICING/ANTI-ICING				
	11. EXIT ROW SEATING (20-30 SEAT ON-DEMAND OR COMMUTER 10 OR MORE SEATS)*				
	12. ANTIDRUG AND ALCOHOL MISUSE PREVENTION PROGRAM				
	13. COMPLETE ASSIGNED ED DCT				
REMARKS:					

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Figure 2-12. Part 135 Certification Job Aid and Schedule of Events for Single-Pilot, Single PIC, and Basic Applicants (Continued)

	IV. PERFORMANCE ASSESSMENT (PA) PHASE				
	A. EVALUATE APPLICANT CONDUCTING TRAINING				
	1. TRAINING FACILITIES				
	2. TRAINING SCHEDULES				
	3. FLIGHTCREW MEMBER TRAINING*				
	a. Basic Indoctrination				
	b. Emergency Training				
	c. Ground Training				
	d. Flight Training				
	4. CHECK AIRMAN/FLIGHT INSTRUCTOR				
	5. F/A TRAINING*				
	a. Basic Indoctrination				
	b. Emergency Training				
	c. Ground Training				
	6. HAZMAT				
	7. SECURITY TRAINING				
	8. MAINTENANCE TRAINING				
	a. Mechanics/Repairmen				
	b. Inspection Personnel				
	c. Ground Handling/Servicing				
	d. Station Personnel				
REMARKS:					

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Figure 2-12. Part 135 Certification Job Aid and Schedule of Events for Single-Pilot, Single PIC, and Basic Applicants (Continued)

	B. CREWMEMBER TESTING AND/OR CERTIFICATION				
	1. PILOTS				
	2. F/As*				
REMARKS:					
	C. AIRCRAFT CONFORMITY INSPECTION				
	D. MAIN OPERATIONS BASE				
	E. MAIN MAINTENANCE BASE				
	F. RECORDKEEPING:				
	1. CREWMEMBER:				
	a. Training				
	b. Flight & Rest Times				
	c. Qualifications				
	G. MAINTENANCE:				
	1. AIRCRAFT RECORDS				
	2. PERSONNEL TRAINING				
	3. PERSONNEL DUTY TIME LIMITATIONS				
	H. FLIGHT/TRIP RECORDS				
	I. EMERGENCY AND EMERGENCY EVACUATION DUTIES AND PROCEDURES				
	J. AIRCRAFT PROVING TEST(S) (AS APPLICABLE)				
	K. VALIDATION TEST(S) (AS APPLICABLE)				
	L. PROOF OF DEPARTMENT OF TRANSPORTATION (DOT) ECONOMIC AUTHORITY (AIR CARRIERS ONLY)				
REMARKS:					

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Figure 2-12. Part 135 Certification Job Aid and Schedule of Events for Single-Pilot, Single PIC, and Basic Applicants (Continued)

	V. ADMINISTRATIVE FUNCTION PHASE				
	A. APPROVE OPSPECS				
	B. PRESENT CERTIFICATE & OPSPECS TO CERTIFICATE HOLDER				
REMARKS:					
	C. PREPARE CERTIFICATION REPORT				
	1. ASSEMBLE REPORT				
	a. PASI				
	b. Certification Job Aid				
	c. Formal Application Letter				
	d. SOE				
	e. Final Compliance Statement				
	f. Proving/Validation Test Evaluation Report				
	g. Copy of OpSpecs				
	h. Copy of Certificate				
	i. Summary of Difficulties				
	j. Suggestions to Improve Certification Process				
	2. DISTRIBUTE REPORT				
REMARKS:					

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Figure 2-12. Part 135 Certification Job Aid and Schedule of Events for Single-Pilot, Single PIC, and Basic Applicants (Continued)

	D. DEVELOP POSTCERTIFICATION SURVEILLANCE PROGRAM 1. WITHIN GEOGRAPHICAL AREA				
	2. OUTSIDE GEOGRAPHICAL AREA				
REMARKS:					
*—Denotes processes/steps that may not be required of single-pilot, single PIC, or basic part 135 operators					

RESERVED. Paragraphs 2-467 through 2-480.

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VOLUME 3 GENERAL TECHNICAL ADMINISTRATION

CHAPTER 15 EVALUATE AVIONICS TEST EQUIPMENT

Section 1 Safety Assurance System: General

3-591 REPORTING SYSTEM(S).

A. Program Tracking and Reporting Subsystem (PTRS). For Title 14 of the Code of Federal Regulations (14 CFR) parts 91, 125, 133, and 137, use PTRS activity codes: 5378 and 5379.

B. Safety Assurance System (SAS). For 14 CFR parts 121, 135, and 145, use SAS automation. This section is related to SAS Element 4.7.1, (AW) Control of Calibrated Tools and Test Equipment.

3-592 OBJECTIVE. This chapter provides guidance for evaluating test equipment used during the calibration, repair, and overhaul of avionics equipment.

3-593 GENERAL. A repair facility certificated to maintain airborne avionics equipment must have test equipment suitable to perform that maintenance. Regardless of the type of equipment being used, the minimum test equipment necessary to perform the maintenance, as required by the manufacturer, is acceptable.

A. Test Equipment Equivalency. Normally, test equipment equivalent to that recommended by the appliance or aircraft manufacturer will be accepted.

1) Before acceptance, a comparison should be made between the specifications of the test equipment recommended by the manufacturer and those proposed by the repair facility.

2) The test equipment must be capable of performing all normal tests and checking all parameters of the equipment under test. The level of accuracy should be equal to or better than that recommended by the manufacturer.

B. Test Equipment Updating.

1) State-of-the-art advances often affect the modes and parameters of avionics equipment. Therefore, previously accepted test equipment may need to be modified to ensure compatibility with the new equipment to be tested.

2) Surplus military test equipment is sometimes used by repair facilities as a primary test unit or as a backup in case of failure of the primary test unit. Modification of this equipment may be necessary to meet current industry standards and equivalency requirements.

C. Test Equipment Calibration. The regulations require that maintenance facilities test the test equipment at regular intervals to ensure correct calibration.

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1) National Institute of Standards and Technology (NIST) traceability can be verified by reviewing test equipment calibration records for references to NIST test report numbers. These numbers certify traceability of the equipment used in calibration.

2) If the repair station uses a standard for performing calibration, that standard cannot be used to perform maintenance.

3) The calibration intervals for test equipment will vary with the type of equipment, environment, and use. The accepted industry practice for calibration intervals is usually 1 year. Considerations for acceptance of the intervals include the following:

- Manufacturer's recommendation for the type of equipment; and
- Repair facility's past calibration history, as applicable.

4) If the manufacturer's manual does not describe a test procedure, the repair station must coordinate with the manufacturer to develop the necessary procedures prior to any use of the equipment.

5) Test equipment that is not used to certify items as Airworthy (troubleshooting only) should be placarded as such and are excluded from the requirement for periodic calibration traceable to NIST.

3-594 AUTOMATIC TEST EQUIPMENT (ATE). The following guidance should be used to determine the adequacy of maintenance procedures and programs established for the use of ATE. These criteria are intended for the application of ATE to the specific performance evaluation of line replacement units.

A. Purpose of ATE. ATE is a self-contained unit configured and integrated to provide rapid and accurate testing of digital and analog avionics equipment. ATE consists of the following:

- Programmable stimulus and measurement devices;
- Digital computer hardware and software;
- Digital computer peripheral equipment and interface devices; and
- A means of providing printouts of the test results.

B. Installation of ATE. ATE is generally installed at a repair facility as part of the shop test equipment. ATE can vary in size from large units at a repair station to smaller portable units used in ramp inspections.

1) A number of avionics systems used on current aircraft are of such complexity that no manual test equipment has been designed for their testing. Even manufacturers will employ ATE for the testing of production units when no manual test equipment is available.

2) If an ATE is to be used on different types of avionics equipment that are similar in function, it must have self-testing features that ensure that the unit is operating within acceptable tolerance limits.

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3-595 BUILT-IN TEST EQUIPMENT (BITE).

A. System as a Passive Fault Indicator. If the functional signal flow stops or increases beyond a maximum acceptance level, a visual/aural warning is displayed to indicate that a malfunction has occurred. Warnings are either automatic or generated by the manual selection of switching devices. Some of the functions or capabilities of BITE include the following:

1) Evaluations that include:

a) Systems status and malfunction verification by:

- The use of go/no-go alarms, and
- Quantitative readouts.

b) Degraded capabilities status, including:

- Marginal circuit operation, and
- Degree of functional mode deterioration.

2) Continuous critical monitoring that provides:

- Continuous readout,
- Sampled recorder readout, and
- Module and/or subassembly failure isolation.

B. Evaluate the Program. Prior to acceptance, the inspector must determine if the limitations, parameters, and reliability of the testing system are equal to or better than the components and/or systems to be tested. If this cannot be proven, then it is the inspector's responsibility to require a complete reevaluation of the program or, when necessary, request assistance from the Federal Aviation Administration (FAA) Regional Office (RO) or Directorate.

3-596 PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. Successful completion of Airworthiness Inspector Indoctrination course 21000019, ACAW Maintenance Organization Practical Applications Workshop, or 21000064, GAAW Practical Applications Workshop #1, or previous equivalent.

B. Coordination. This task may require coordination with the principal maintenance inspector (PMI), principal avionics inspector (PAI), and the manufacturer.

3-597 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- Title 14 CFR Parts 43, 65, 91, 121, 125, 135, and 145.
- Advisory Circular (AC) 145-9, Guide for Developing and Evaluating Repair Station and Quality Control Manuals.

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- Volume 2, Chapter 11, Section 5, Safety Assurance System: Evaluate Part 145 Repair Station Facilities and Equipment.
- Volume 10, Safety Assurance System Policy and Procedures.

B. Forms. None.

C. Job Aids. None.

3-598 PROCEDURES.

A. Perform the Inspection.

1) Determine what test equipment is required, by reviewing the applicant and/or manufacturer's maintenance manuals.

2) Determine if the applicant is requesting the use of equivalent test equipment. Prior to the acceptance of equivalent test equipment, accomplish the following:

a) Ensure that the limitations, parameters, and reliability of the proposed test equipment are equivalent to the manufacturer's recommended test equipment.

b) Compare the specifications of the manufacturer's and applicant's proposed equipment.

c) Observe demonstrations of the proposed test equipment equivalency.

d) Request assistance from the appropriate FAA office, as necessary.

3) Ensure that the applicant has full control of test equipment (ownership, lease, etc.).

4) Ensure that the applicant's manual includes procedures for the following:

- Identification of the test equipment;
- Inspection and calibration of test equipment; and
- Recording of the date and identification of the person accomplishing the calibration.

5) Inspect all evaluation and test equipment, including precision tools and measuring devices, to ensure the following:

a) That all equipment has been tested at regular intervals and is within its required currency period.

b) That test equipment calibration standards are derived from and traceable to one of the following:

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- The NIST,
- Standards established by the test equipment manufacturer, and
- If foreign-manufactured test equipment, the standards of the country where it was manufactured, if approved by the Administrator.

B. Evaluate ATE/BITE.

1) Ensure the following:

a) That the ATE/BITE testing programs provide an indepth analysis that ensures that the aircraft components are functionally tested within the prescribed manufacturer's limits.

b) That all required checks are accomplished.

c) That the applicant has established procedures that outline and describe the total program and related management control for the ATE unit, to include the following:

- Limits and standards;
- Performance evaluation checks and tests;
- Identification of individual ATE, by test number;
- Maintenance programs;
- The source of the ATE program tapes (either in-house programming or approved purchase); and
- The method of controlling and identifying the revision status of software programs.

2) Determine if the applicant's purchasing maintenance service ensures that all services are accomplished in accordance with the applicant's approved maintenance program.

3) Ensure that whenever a BITE examination is substituted for a manual check, it performs the required qualitative and quantitative tests and analyses to substantiate the component and/or system performance.

4) Ensure that when approving BITE as a substitute for actual manual checks, the self-check is of sufficient depth to perform the required task.

NOTE: Inspectors should not be misled by such statements as "confidence factor" which have no specific meaning unless defined.

5) Ensure that the analysis of BITE includes the limitations and shows whether it checks the component and its associated plugs and wiring.

NOTE: Some quantitative BITE may not be capable of checking a total system, such as instrument landing system (ILS), unless a signal is introduced into the antenna.

C. Analyze Results. Review inspection results and discuss any discrepancies with the applicant.

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3-599 TASK OUTCOMES.

A. Complete the Task. For parts 91, 125, 133, and 137, completion of this task may result in the following:

1) Coordination of inspection results with the certification project manager (CPM), if part of a certification project.

2) Acceptance/approval or nonacceptance/disapproval of the test equipment.

3) Issuance of a letter to the operator/applicant detailing the results of the inspection.

B. Document the Task.

1) For parts 91, 125, 133, and 137, file all supporting paperwork in the operator's office file.

2) For parts 121, 135, and 145, follow SAS guidance for data collection and reporting in Modules 4 and 5.

3-600 FUTURE ACTIVITIES. For parts 91, 125, 133, and 137, complete normal surveillance. For parts 121, 135, and 145, follow SAS guidance.

RESERVED. Paragraphs 3-601 through 3-615.

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VOLUME 3 GENERAL TECHNICAL ADMINISTRATION

CHAPTER 16 PRORATED TIME AUTHORIZATIONS

Section 1 Safety Assurance System: Determining the Prorated Time for an Item

3-616 REPORTING SYSTEM(S).

A. Program Tracking and Reporting Subsystem(s) (PTRS). Activity codes: 3316 and 5316.

B. Safety Assurance System (SAS). Use SAS automation and the associated Data Collection Tools (DCT).

3-617 OBJECTIVE. This chapter provides guidance in determining the prorated time for an item.

3-618 GENERAL.

A. Definition of Proration. Proration is a procedure to determine the time consumed under one maintenance system, and to establish the remaining time under a new system.

B. How Proration is Used. Certificate holders often sell or lease their equipment to other certificate holders. This "used" equipment will have accumulated a certain amount of time in service. This time is transferred to the new certificate holder and may be phased in or prorated to the new certificate holder's approved time limitations.

C. Buyer Options for Prorated Time. When a buyer's approved overhaul time limits are lower than those of the seller, the buyer has two options:

1) Elect to use the proration process.

2) Elect to use direct inclusion, providing the previous certificate holder's actual time since overhaul (TSO) is less than the buyer's approved overhaul time limit.

a) When using the direct inclusion option, the difference between the buyer's approved overhaul time limit and the previous certificate holder's actual TSO will determine the time remaining to the overhaul for the buyer.

b) When the buyer's approved overhaul time limit is higher than that of the seller, proration procedures should be used to adjust the TSO. However, based upon the buyer's assigned principal maintenance inspector's (PMI) comparison of the buyer's and seller's maintenance programs for similarity, direct inclusion may be used if both programs are found comparable.

D. Scope and Limitations of Proration.

1) Proration does not lessen a certificate holder's responsibility to maintain the aircraft in an Airworthy condition.

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2) Proration is optional.

3) Life-limited components may not be prorated.

4) Proration may not be applied to times specified in Airworthiness Directives (AD).

5) Certificate holders who have been operating equipment under Title 14 of the Code of Federal Regulations (14 CFR) parts 121 and 135 may use proration.

6) Both adjusted and actual times must be shown on the proration document and the aircraft records.

7) When an item is inspected or overhauled as appropriate, the applicable prorated time limits will be canceled. Thereafter, the item will be handled according to the certificate holder's approved program.

8) Partial proration is not acceptable. A certificate holder electing proration must prorate the airframe and all of its installed powerplants, propellers, and appliances. Spare engines and propellers acquired at the time of sale or at a later date with "time in service" may be prorated.

9) If an increase in a time limitation is approved for a certificate holder operating on prorated times, that increase will be credited to the prorated item(s).

10) Amendments to a certificate holder's operations specifications (OpSpecs) that increase time limits apply to all aircraft of the same type and model operated by a carrier. Such time increases apply to aircraft operating on a prorated time basis, as well as to the other aircraft in the fleet.

E. Phasing in Foreign Aircraft with U.S. Type Certificates (TC). Foreign air carrier aircraft for which there is a U.S. TC may be phased into a U.S. air carrier's program via proration. However, the U.S. certificate holder must first present satisfactory evidence that the program under which the aircraft was maintained is at least equivalent to the new certificate holder's program for a similar type of aircraft.

3-619 DATA AND COMPUTATION.

A. Computing Prorated Time. Prorated time remaining can be determined by using the following mathematical procedures:

1) Divide the actual time used by the previous certificate holder's approved time limit under which the aircraft has been operated. The result, carried to two decimal places, will represent the percentage of approved time already used.

2) Multiply the new certificate holder's time limit by the percentage of time used. This will result in the prorated time to be used under the new program.

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3) Subtract the prorated time from the time limit approved in the new program. The result will represent the number of hours remaining under the new program. (See Figure 3-66, Proration Formula Example.)

B. Block/Pattern Time Limitation.

1) When block/pattern time is to be prorated, each block/pattern shall be treated as though a complete aircraft were being prorated.

2) When the previous certificate holder used a block/pattern system, a document must be submitted showing the following:

- Time limitation for each block or pattern, together with a list of items that are part of the block or pattern; and
- Time since accomplishment for each individual item on the aircraft.

3-620 COORDINATION REQUIREMENTS. This task requires coordination between the inspector and the certificate holder.

3-621 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- Advisory Circular (AC) 120-17, Maintenance Control by Reliability Methods.
- Certificate holder's documentation, including OpSpecs, for previous and new certificate holder.
- Volume 3, Chapter 18, Section 6, Parts D and E Maintenance OpSpecs/MSpecs/LOAs.
- Volume 10, Safety Assurance System Policy and Procedures.

B. Forms. None.

C. Job Aids. Figure 3-66.

3-622 PROCEDURES.

A. Receive Data From Applicant. The certificate holder must submit required information to the district office in which the certificate holder's principal base of operation is located.

1) The certificate holder must submit all OpSpecs containing the time limits utilized for the particular aircraft by the previous certificate holder.

a) If the OpSpecs do not show hours, the certificate holder must submit other documentation that will establish the time limits.

b) If conversion to hours is necessary, the computations used for the conversion should be included.

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2) The certificate holder must provide OpSpecs pertinent to the particular aircraft.

3) The certificate holder must submit documents itemizing the following:

- Engines, propellers, and appliances that have different time limitations than the previous certificate holder and are to be prorated. These will be listed by Airlines for America (A4A) chapter numbering system, showing the name, part number, serial number, and position;
- The approved time under which the aircraft has been operated;
- The actual time since last accomplishment;
- The percent of time used by the previous certificate holder; and
- The approved time limitation for the new certificate holder.

4) When the previous certificate holder used a block/pattern system, a document must be submitted showing the following:

- Time limitation for each block or pattern, together with a list of items that are part of the block or pattern; and
- Time since accomplishment for each individual item on the aircraft.

B. Determine Eligibility. Determine that the aircraft and/or components are eligible for proration.

C. Check the Prorated Time Computation. Times obtained via proration may be rounded to the nearest 10-hour figure. (See Figure 3-66.)

3-623 TASK OUTCOMES.

A. Complete the PTRS Record. For 14 CFR part 125, complete the required PTRS record. For parts 121 and 135, follow SAS guidance Modules 4 and 5 for data collection and reporting.

B. Complete the Task. Successful completion of this task will result in continuation of the certification task in accordance with the appropriate certification process.

C. Document the Task. File all supporting paperwork in the applicant's office file.

3-624 FUTURE ACTIVITIES. Normal surveillance.

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Figure 3-66. Proration Formula Example

The example below demonstrates the simple steps involved in determining a buyer's time remaining to overhaul.

Known
Previous certificate holder's approved overhaul time limit = 8,000 hours
Previous certificate holder's time since overhaul (TSO) = 2,000 hours
Buyer's approved overhaul time limit = 12,000 hours

Step One
Divide the previous certificate holder's TSO figure by the previous certificate holder's approved overhaul time limit. Carry this out to two places. The result represents the percentage of approved overhaul time already used.
2,000 ÷ 8,000 = .25
In this example, 25 percent is the result.

Step Two
Multiply the buyer's approved overhaul time limit figure by the decimal arrived at in Step One. The result is the prorated TSO to be used by the buyer.
12,000 x .25 = 3,000
In this example, 3,000 is the prorated TSO to be used by the buyer.

Step Three
Subtract the prorated TSO arrived at in Step Two from the buyer's approved overhaul time limit. The resulting figure will be the number of hours remaining to overhaul for the buyer.
12,000 - 3,000 = 9,000
In this example, the buyer's prorated time remaining to overhaul is 9,000 hours.

RESERVED. Paragraphs 3-625 through 3-640.

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VOLUME 3 GENERAL TECHNICAL ADMINISTRATION

CHAPTER 19 TRAINING PROGRAMS AND AIRMAN QUALIFICATIONS

Section 2 Safety Assurance System: Training Approval Process

3-1095 REPORTING SYSTEM(S).

A. Program Tracking and Reporting Subsystem (PTRS) Activity Codes. Initial Approval: 1306; Final Approval: 1307.

B. Safety Assurance System (SAS). This section is related to SAS Elements 2.1.1 (OP), Training of Flight Crew Members; 2.1.2 (OP), Training of Check Airmen and Instructors; and 2.1.5 (OP), Appropriate Airmen/Crewmember Checks & Qualifications.

3-1096 GENERAL.

A. Overview. Training curriculum approvals follow the five-phase general process for approval or acceptance described in Volume 3, Chapter 1, Section 1. The basic steps of this process must be followed. Each phase, however, may be adjusted to accommodate existing circumstances. Depending on the complexity of the operator's request and the availability of Federal Aviation Administration (FAA) resources, the approval process may be accomplished in just a few days, or may last many months. The approval process applies to each operator requesting approval of a new curriculum or a revision to a currently approved curriculum. Inherent in the approval process is the FAA's responsibility to deny approval of any training which does not meet regulatory requirements or which has been found deficient. Training curricula which have been granted approval and later found either to be in conflict with regulatory requirements or to be ineffective must be appropriately modified by the operator, or FAA approval must be withdrawn. This section establishes procedures for granting approval or withdrawing approval of all or part of a training curriculum. When appropriate, job aids have been developed to assist inspectors in the approval process of curriculum segments. These job aids are discussed in subsequent sections of this chapter.

B. Applicability. The training approval process discussed in this section applies only to Title 14 of the Code of Federal Regulations (14 CFR) part 121 operators and part 135 operators. Part 121 subparts N and O training, checking, and qualification can be approved for part 121 operators and part 135 operators. Part 135 subparts E, G, and H training, checking, and qualification can be approved for only part 135 operators (refer to part 135, § 135.3).

3-1097 OPERATIONS CONDUCTED UNDER BOTH PARTS 121 AND 135.

A. Differences Between Parts 121 and 135. There are only a few differences in the training required by parts 121 and 135. Part 121, however, generally contains more stringent requirements. To maintain the requisite level of safety without unnecessary restrictions and redundant training, certain considerations may be given to operators using flightcrew members in operations conducted under both parts 121 and 135. All regulatory requirements applicable to the operation in which the flightcrew member is engaged must be met. Training which meets the same requirements of both parts 121 and 135, however, does not have to be repeated. Training

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curricula may be combined if the training given clearly meets all applicable regulatory requirements. For most aircraft, however, a combined curriculum may not be possible due to differences in the training requirements between parts 121 and 135.

B. Part 121 Subparts N and O. The FAA recognizes that the flightcrew member training, checking, and qualification requirements of part 121 will always meet or exceed the requirements of part 135. This is consistent with the recognition that part 121 affords the highest standards of safety in civil flight operations. Therefore, as a matter of safety policy, the FAA will both permit and encourage compliance with part 121 subparts N and O by operators who conduct part 135 operations. It is FAA policy that a training, checking, and qualification program submitted by a part 135 operator, which is found by the FAA to be in compliance with part 121 subparts N and O, will be considered as a program that exceeds the requirements of part 135 and will be approved by the FAA for use by that operator. Principal operations inspectors (POI) are authorized to approve curriculum segments (including qualification curriculum segments which permit training to be substituted for checking), provided the operator adopts all the training, checking, and qualification requirements of part 121 subparts N and O, except as follows:

1) In accordance with § 135.3(b), a pilot serving in part 135 operations as a second in command (SIC) in a commuter operation with airplanes in which two pilots are required by the type certification rules may meet the requirements of § 135.245 instead of the requirements of part 121, § 121.436. The minimum crew requirement is typically found in the Airplane Flight Manual (AFM) or type certificate (TC).

2) In accordance with § 135.3(c), certificate holders conducting part 135 operations (except commuter operations with airplanes in which two pilots are required by the type certification rules) may choose to comply with the operating experience requirements of § 135.244, instead of the requirements of § 121.434.

3-1098 INITIATING THE APPROVAL PROCESS—PHASE ONE.

A. Approval Process Initiation. The training approval process can be initiated by either the operator or the FAA as follows:

1) Operator Initiated. The operator informs the FAA that it is planning to establish a new training curriculum or to change an existing curriculum.

2) FAA Initiated. The FAA informs an operator that revisions to its training program are required based on recently acquired information relative to training techniques, aviation technology, aircraft operational history, operator performance, or regulatory changes.

B. Needed Information. When a proposal is initiated by the operator, one of the first steps the POI or certification project manager (CPM) should take is to obtain the following basic information:

- Type of operation;
- Type of equipment to be operated;

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- Geographic areas of operation;
- Proposed training schedules;
- Proposed date of revenue operations;
- Proposed contract training, if any;
- Type of flight simulation training device (FSTD) to be used, if any; and
- Facilities to be used.

3-1099 FAA INVOLVEMENT IN PHASE ONE.

A. POI Responsibilities. Early in the process, the FAA and the operator should establish, through discussion, a common understanding of both the regulatory training requirements and the direction and guidance provided in this order. The POI or CPM and the operator must examine the entire operation to ensure that any training necessitated by operational requirements, authorizations, or limitations (such as those in the operations specifications (OpSpecs), minimum equipment lists (MEL), deviations, and exemptions) is included in the operator's training curricula. The training program is the area most affected by operational changes. The POI should review all general requirements in the regulations and in this order that apply to the proposed operation. The POI should be aware of changes to the information initially provided by the operator. The POI should discuss with the operator the sequence and timing of events which occur in the development and the granting of initial and final approval of a training curriculum. If the operator's proposal involves complex operations (such as long-range navigation or polar navigation operations), the POI must consult appropriate sections of this order and other relevant documents and be prepared to advise the operator during this phase. In such a case, the POI should also determine whether assistance from an FAA specialist is necessary. If an operator's proposal includes related aircraft differences training, the operator must first receive approval of the related aircraft designation from the Air Transportation Division (AFS-200) prior to initial approval of the curriculum. (See Volume 3, Chapter 19, Section 12 for additional information regarding related aircraft designation and related aircraft differences training.)

B. Advice and Guidance Given to the Operator. An FAA inspector should be prepared to provide advice to an operator during training curriculum development. During phase one, the operator must be informed of the procedure for requesting initial approval and of the types of additional supporting information which the POI will require the operator to submit. An inspector should be prepared to provide advice and guidance to the operator on the following:

- The general format and content of curricula, curriculum segments, training modules, and flight maneuvers and procedures documents;
- Courseware;
- Facilities;
- Qualifications of instructor personnel; and
- Other areas of the operator's proposed training program.

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C. Importance of Early Involvement. Early FAA involvement is also important for the following reasons:

1) FAA advice and guidance during development of training may provide a useful service to the operator. This advice may save the operator and the FAA from unnecessary use of resources. It may also prevent the operator from submitting a training curriculum proposal which would not be approved by the FAA.

2) The POI can become familiar with the material the operator intends to submit. This facilitates review of the proposal before the granting of initial approval.

3) The POI can begin planning long-range needs, such as qualification of inspectors on the operator's aircraft, and evaluation of the program's overall effectiveness.

4) Early FAA inspector involvement in the development of training programs is appropriate. An FAA inspector, however, must act in an advisory capacity only. The inspector must avoid active participation in the actual training program development. The operator is responsible for the development of its own training program. The FAA inspector must not assume that responsibility.

D. Additional Help. As the operator's proposals solidify, any significant requirements which may affect office or regional inspector resources should be discussed with the district office manager (OM). An FAA inspector may need training on an operator's aircraft type. Requests for inspectors from outside the office or region to assist in the training approval process may be necessary.

E. Potential Causes of Approval Delays. The operator should be aware of the potential for delays in approval. Such delays may be caused by any of the following reasons:

- The applicant for a certificate not meeting the schedule of events;
- The operator failing to expeditiously transmit information to the FAA;
- A change in plans (e.g., changing either the training locations or the type of aircraft);
- Inadequate, insufficient, or unclear material submitted in phase two;
- Deficiencies in the training discovered during phases two, three, or four;
- Delays in obtaining FSTDs and training equipment or FSTD approval; and
- Higher priority work (such as accidents) assigned to the POI or other inspectors associated with the training approval process.

3-1100 REQUESTS FOR INITIAL APPROVAL—PHASE TWO.

A. Overview. Phase two begins when the operator submits its training proposal for initial approval in writing to the FAA. The operator is required to submit to the FAA an outline of each curriculum or curriculum segment and any additional relevant supporting information requested by the POI. These outlines, any additional supporting information, and a letter must be submitted to the FAA. This letter should request FAA approval of the training curriculum.

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Two copies of each curriculum or curriculum segment outline should be forwarded along with the letter of request to the FAA.

B. Required Information in Curricula. Each operator must submit its own specific curriculum segment outlines appropriate for its type of aircraft and kinds of operations. These outlines may differ from one operator to another and from one category of training to another in terms of format, detail, and presentation. Each curriculum should be easy to revise and should contain a method for controlling revisions, such as a revision numbering system. Curricula for different duty positions may be combined in one document, provided the positions are specifically identified and any differences in instruction are specified for each duty position. Each curriculum and curriculum segment outline must include the following information:

- Operator's name,
- Type of aircraft,
- Duty position,
- Title of curriculum and/or curriculum segment including the category of training,
- Consecutive page numbers, and
- Page revision control dates and revision numbers.

C. Required Curriculum Segment Items. Each curriculum and curriculum segment must also include the following items, as appropriate:

1) Prerequisites prescribed by 14 CFR or required by the operator for enrollment in the curriculum.

2) Statements of objectives of the entire curriculum and a statement of the objective of each curriculum segment.

3) A list of each training device, mockup, system trainer, procedures trainer, and other training aid which will be used in the curriculum. (The curriculum may contain references to other documents in which the approved devices and aids are listed.)

4) A list of FSTDs approved under § 121.407 or § 135.335, as applicable, including approvals for particular maneuvers, procedures, or functions.

5) Descriptions or pictorial displays of normal, abnormal, and emergency maneuvers and procedures which are intended for use in the curriculum, when appropriate. These descriptions or pictorial displays, when grouped together, are commonly referred to as the flight maneuvers and procedures document. The operator may choose to present detailed descriptions and pictorial displays of flight maneuvers and procedures in other manuals. For example, the flight maneuvers and procedures document may be described in an aircraft operating manual. However, as a required part of the training curriculum, it must either be submitted as part of the curriculum or be appropriately referenced in the curriculum.

6) An outline of each training module within each curriculum segment. Each module should contain sufficient detail to ensure that the main features of the principal elements or events will be addressed during instruction.

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7) Training hours which will be applied to each curriculum segment and the total curriculum.

8) The checking and qualification modules of the qualification curriculum segment used to determine successful course completion, including any 14 CFR qualification requirements for flightcrew members to serve in part 121 or part 135 operations (e.g., operating experience (OE), consolidation of knowledge and skills, and line checks).

3-1101 ADDITIONAL RELEVANT SUPPORTING INFORMATION—PHASE TWO. As specified in §§ 121.405(a)(2) and 135.325(a)(2), an operator must submit any additional relevant supporting information requested by the POI. This information is that additional information the POI finds necessary for determining whether the proposed training program is feasible and adequately supported. It is information which would be difficult to include in a curriculum outline format. The type and amount of supporting information needed will vary depending on the type of training, aircraft types to be operated, and kinds of operations. The POI must determine the appropriate types of supporting information to be required. This should be limited to only that information critical to the determination of the proposed training program's acceptability. The following list of types of relevant supporting information is not all-inclusive, but includes information that is typical.

A. Description of Facilities. A description of facilities is appropriate if the POI is unfamiliar with the facilities, or if the facilities are not readily available for examination.

B. List of Ground and Flight Instructors and Qualifications. A list of ground and flight instructors and their qualifications may be requested. This information is particularly important if the operator intends to use contract instructors. The POI should determine whether the proposed instructors meet regulatory requirements and if they are qualified to conduct training.

C. Description of an FSTD. A detailed description of each FSTD is appropriate when the FSTD is not readily available for the POI's examination. This detailed description is particularly important when the operator intends to contract for a specific FSTD. This description should provide sufficiently detailed information to enable the POI to determine whether the training and checking to be conducted is appropriate for the level of the FSTD to be used.

D. Description of Qualification and Enrollment Prerequisites. A detailed description of minimum student qualifications and enrollment prerequisites is appropriate when such prerequisites are not described in detail in the curriculum. Examples of these prerequisites which may need to be detailed as supporting information include: type of airman certificate, aircraft type qualifications, previous training programs, minimum flight hours, experience with other part 121 or 135 operators, and recency of experience. This description may be useful to the POI when determining whether the proposed amount of detail outlined in training modules and the proposed training hours are adequate.

E. Recordkeeping Requirements. Copies of training forms and records to be used for recording student progress and the completion of training may be required. This ensures the operator has planned for the 14 CFR recordkeeping requirements. This type of supporting

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information shall be required of applicants for an air operator certificate. It may also be required of operators with any significant revision to existing training programs. These forms, records, or computer transmittal worksheets must be designed so that attendance and course completion information is recorded and retrievable for verifying regulatory compliance.

F. Supporting Information. Supporting information may include samples of courseware, such as lesson plans and instructor guides. Descriptions of other types of courseware, such as home study, computer-based instruction (CBI), and Line-Oriented Flight Training (LOFT) scenarios, should be in enough detail to provide an understanding of how the training will be administered and of the proposed instructional delivery method. This information should describe the instructor–student interaction and indicate methods for measuring student learning.

3-1102 INITIAL REVIEW OF REQUESTS FOR APPROVAL—PHASE TWO. In phase two, the POI must review the submitted training curriculum and supporting information for completeness, general content, and overall quality. A detailed examination of the documents is not required during phase two. If after initial 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 indepth review. If the submission is determined to be incomplete or obviously unacceptable, the approval process is terminated and the POI must immediately return the documents (preferably within 5 working days) with an explanation of the deficiencies. The documents must be immediately returned, so the operator will not erroneously assume the POI is continuing the process to the next phase. The approval process can be resumed when the revised training curriculum or curriculum segment is resubmitted.

3-1103 TRAINING CURRICULA SUBMITTED WITH AIR CARRIER OR OPERATING CERTIFICATE APPLICATIONS. An applicant for a certificate in the early stages of certification may be unable to provide all information required for its training program. For example, the applicant may not yet know what training facilities or FSTDs it intends to use. The lack of such information in the formal application does not necessarily indicate that the training curriculum attachment be returned. There should be an understanding between the applicant and the CPM that such portions are missing. The CPM may initiate the phase three indepth review without this type of information. Initial approval, however, of a curriculum segment must be withheld until all portions pertinent to the curriculum segment have been examined. For example, it may be appropriate to initially approve a ground training curriculum segment even though the FSTD has not yet been evaluated and approved for flight training. However, effective evaluation of training curricula can be hampered when an excessive number of incomplete curriculum segments are permitted. The CPM shall either delay initial approval of training curricula or return them to the applicant when an excessive number of incomplete curriculum segments have been submitted with the formal application.

3-1104 INDEPTH REVIEW OF SUBMITTED CURRICULA—PHASE THREE.

A. Specialists and/or FAA Offices. Phase three is initiated when the FAA begins a detailed analysis and evaluation of a training curriculum or curriculum segment. The purpose of this phase is to determine the acceptability of training curricula for initial approval. This phase

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ends either with the initial approval or with the rejection of all or part of the training curriculum. To complete an evaluation in a timely manner, the POI may need to involve other FAA personnel early in this phase. Certain specialists or offices may be required to participate in the approval process as follows:

1) The principal security inspector (PSI) should be involved in security and hazardous materials (hazmat) training issues.

2) Various aviation safety inspector (ASI) specialists should be involved when appropriate. For example, navigation specialists should be involved with evaluating special navigation operations.

3) The POI may need to contact the Flight Standardization Board (FSB) and the Flight Operations Evaluation Board (FOEB) for information on training recommendations and MEL procedures. See Volume 8 for more information about FSBs and FOEBs.

4) The POI's district OM and certain regional headquarters (HQ) personnel may need to be involved with locating and directing additional FAA resources to accomplish the approval process.

5) AFS-200 may need to be involved with deviation and exemption requests.

B. Required Evaluations. Before granting initial approval for a specific curriculum or curriculum segment, the POI must ensure that the following evaluations are accomplished:

1) A side-by-side examination of the curriculum outline with the appropriate regulations and with the direction provided in this order must be performed. This examination is to ensure that training will be given in at least the required subjects and in-flight training maneuvers. It should also ensure that appropriate training will be given on safe operating practices.

2) An examination of the courseware developed or being developed by the operator must be performed. This review should include a sampling of available courseware such as lesson plans, audiovisual programs, flight maneuvers and procedures documents, and student handouts. The courseware must be consistent with each curriculum and curriculum segment outline. From this review, the POI should be able to determine whether the operator is capable of developing and producing effective training courseware.

3) An inspection of training facilities, FSTDs, training equipment, and instructional aids (which will be used to support the training) must be performed if the POI is not familiar with the operator's training program capabilities.

4) The training hours specified in each curriculum segment outline must be evaluated. An inspector should not attempt to measure the quality or sufficiency of training by the number of training hours alone. This can only be determined by direct observation of training and testing (or checking) in progress, or by examination of surveillance and investigation reports. The specified training hours must be realistic, however, in terms of the amount of time it will take to accomplish the training outlined in the curriculum segment so as to achieve the stated

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training objectives. During the examination of courseware, an inspector should note the times allotted by the operator for each training module. These times should be realistic in terms of the complexity of the individual training modules. The number of training hours for any particular curriculum segment depends upon many factors. Some of the primary factors are as follows:

- The aircraft family in which the specific aircraft belongs;
- Complexity of the specific aircraft;
- Complexity of the type of operation;
- Amount of detail that needs to be covered;
- The experience and knowledge level of the students; and
- Efficiency and sophistication of the operator's entire training program (including items such as instructor proficiency, training aids, facilities, courseware, and the operator's experience with the aircraft).

C. Criteria for Approval. If, after completing these evaluations, the POI determines that the curriculum or curriculum segment is satisfactory and adequately supported and that the training hours are realistic, initial approval should be granted. Sometimes a portion of the submittal may appear to be satisfactory. However, if that portion is dependent upon another undeveloped portion or another unsatisfactory portion, initial approval must be withheld. For example: a pilot-in-command (PIC) BE-100 initial equipment, flight training curriculum segment is satisfactory but related training modules within the initial equipment ground training curriculum segment are unsatisfactory. In such a case, it may be inappropriate to grant initial approval to the initial equipment flight training curriculum segment until the ground training curriculum segment is determined to be satisfactory.

D. Establishment of Priorities. During phase three of the approval process, the POI must establish priorities to ensure that, if appropriate, the granting of initial approval is not unnecessarily delayed. These priorities should assure that deficiencies are resolved so that initial approval can be granted before the operator's planned starting date for training.

3-1105 EXPIRATION DATES FOR INITIAL APPROVALS. When the POI determines that a training curriculum or curriculum segment should be initially approved, the POI must also determine an appropriate expiration date for the initial approval. The expiration date is important throughout phase four of the approval process. Sections 121.401(a)(1) and 135.323(a)(1) require the operator to obtain final approval of training curricula. The expiration date provides an incentive to the operator for refining all aspects of the program to assure that this regulatory requirement is met. The expiration date also provides the POI with a timeframe with which to plan evaluation activities for determining the effectiveness of the training. The expiration date assigned to an initially approved training curriculum must not exceed 24 months from the date of initial approval. The expiration date of initial approval may be reduced by the POI if it is apparent that a 24-month time frame will unnecessarily delay final approval. The POI should be aware that shortening the initial approval expiration date will commit him to completing the final approval phase within the shorter time period. The POI may grant final approval any time before the expiration date. Except when unforeseen circumstances preclude an adequate evaluation of training effectiveness, an extension to the initial approval expiration date should not be permitted. A new expiration date, however, may be established for a curriculum segment when there are significant revisions to an initially approved curriculum segment.

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3-1106 METHOD OF GRANTING INITIAL APPROVAL.

A. Initial Approval Is Granted by Letter. Sample letters granting initial approval are included at the end of this paragraph (Figure 3-71, Letter of Initial Approval (Part 135) and Figure 3-72, Letter of Initial Approval (Part 121)). The initial approval letter must include at least the following information:

- Specific identification of the curricula and/or curriculum segments initially approved, including page numbers and revision control dates;
- A statement that initial approval is granted, including the effective and expiration dates;
- Any specific conditions affecting the initial approval, if applicable;
- A request for advance notice of training schedules so that training may be evaluated in accordance with § 121.405 or § 135.325, as appropriate; and
- If the POI is authorizing a reduction in the programmed hours specified by part 121, a statement concerning the basis for reduction.

B. Other Acceptable Methods. An initial approval letter serves as the primary record of curriculum or curriculum segment pages that are currently effective. In the past, initial approval was stamped on each page of a curriculum. Although this method is no longer necessary, the POI and each operator may agree to use the method to account for revisions to training documents. If this method is used, the stamp must clearly indicate initial approval and the expiration date. Other acceptable methods include a list of effective curriculum or curriculum segment pages, or pages with preprinted signature and date blocks.

C. Return of Originals. The original pages of the curriculum or curriculum segment shall be returned to the operator with the transmittal letter. These documents should be retained by the operator as an official record. A copy of the training curriculum or curriculum segment, with a copy of the transmittal letter granting initial approval attached, and all additional relevant supporting information shall be maintained on file in the certificate-holding district office (CHDO) by the POI during the period that the initial approval is valid.

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Figure 3-71. Letter of Initial Approval (Part 135)

ABC Airlines
Director of Operations
1 Park Avenue
New York, NY 11001

Dear Mr. Smith:

Initial approval is granted to ABC Airlines SD-330 Pilot in Command and Second in Command Initial Equipment Flight Training, pages 1 through 10, dated March 11, 1988. This training curriculum is initially approved in accordance with the provisions of 14 CFR part 135, § 135.325(a), effective March 30, 1988.

Initial approval of this training curriculum shall remain in effect until March 31, 1990, or upon the granting of final approval, whichever occurs first. ABC Airlines is requested to notify this office at least 10 days in advance of any training to be conducted under this program so that the FAA may evaluate the effectiveness of the program, in accordance with § 135.325(b).

Principal Operations Inspector

Figure 3-72. Letter of Initial Approval (Part 121)

ABC Airlines
Director of Training
1 Park Avenue
New York, NY 11001

Dear Mr. Townsend:

This letter is in reference to ABC Airline's B-737 Pilot in Command and Second in Command Initial Equipment Ground Training curriculum, pages 100/1 through 100/15, dated April 14, 1988. This curriculum is granted initial approval, effective April 30, 1988. The approval is contingent upon a satisfactory evaluation of your advanced systems ground trainer scheduled for April 28 and 29, 1988.

The expiration date of this initial approval is April 30, 1990. This office requests ABC Airlines provide at least 7 days advance notice of any training to be conducted under this curriculum to allow for evaluation of the training in accordance with 14 CFR part 121, § 121.405(b) and (c). Approval of the reduced training hours from the programmed hours required by § 121.419(b)(2) to 75 hours is based on the improved training techniques available from your advanced systems ground trainer.

Principal Operations Inspector

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3-1107 METHOD OF DENYING INITIAL APPROVAL. If the POI determines that initial approval of a proposed training curriculum or curriculum segment must be denied, the operator shall be notified in writing of the reasons for denial. This letter must contain an identification of the deficient areas of the training curriculum and a statement that initial approval is denied. It is not necessary that each minor deficiency which resulted in the denial be identified; however, the major deficiencies should be outlined in the letter. It is the operator's responsibility to redevelop or correct the deficient area before resubmission to the FAA. A copy of the denial letter and a copy of the proposed training curriculum or curriculum segment shall be kept on file in the CHDO. Figure 3-73 is a sample letter of a denial of initial approval.

Figure 3-73. Letter of Denial of Initial Approval

ARK Airlines
Director of Operations
48 Turnover Place
Landover, MD 20765

Dear Mr. Townsend:

This letter is in response to your request for initial approval of Revision 2 to ARK Airline's DC-9 Pilot in Command and Second in Command Recurrent Ground Training curriculum, dated August 2, 1988. Your request for initial approval for revision 2 is denied for the following reason.

More than 70 percent of your scheduled operations occur in areas which during the winter months are subject to cold weather, snow, ice, and sleet. Your pilot workforce must have adequate training in the safe operating practices associated with a cold weather environment to enable them to cope effectively with such hazards. Revision 2 deletes training previously given on major aspects of cold weather operations and does not provide any identifiable instruction to your crews for operating flights in such conditions. Presently there is not another course of training for ARK Airline's pilots containing adequate information on cold weather procedures.

Principal Operations Inspector

3-1108 EVALUATING INITIALLY APPROVED TRAINING CURRICULA—PHASE FOUR.

A. Overview. Phase four begins when the operator starts training under the initially approved curriculum. This phase should provide the operator with adequate time to test the program and the flexibility to adjust the program during FAA evaluation. The POI must require an operator to provide ongoing schedules of all training and checking to be accomplished under an initially approved training curriculum. The POI must closely monitor training conducted under initial approval. Whenever possible, the first session of training conducted under initial approval should be monitored by the POI or a qualified Operations inspector. An FAA inspector does not need to observe every training session. A sufficient sampling of the training sessions, however, should be observed as a basis for a realistic evaluation. Inspectors

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qualified in the type aircraft, and other individuals knowledgeable of the curriculum subject matter, should assist in evaluating the training. During training under initial approval, the operator is expected to evaluate and appropriately adjust training methods as needed. Often, adjustments can be made by changing courseware and instructional delivery without (or with only minor) revisions to the initially approved curriculum. Conversely, it may be necessary for the operator to substantially change the curriculum which may require another initial approval action by the POI before the changes can be put into effect. Sometimes proposed revisions may be transmitted to the POI just before the initial approval expiration date. If the change is significant, the POI may need to establish a different expiration date for the curriculum segment, or for the revised portions, to allow adequate time for a proper evaluation.

B. Identification and Correction of Curriculum Deficiencies. During phase four, the operator must demonstrate the ability to effectively train flightcrew members. Each deficiency identified during the evaluation of training conducted under an initially approved curriculum must be discussed with the operator. If the deficiencies are significant, they must be documented and kept on file. In most cases, when the cause of a deficiency has been accurately identified, the operator will make the necessary changes to correct the deficiency to obtain final approval. Each significant deficiency which has been accurately identified must be immediately corrected. If an operator does not take appropriate corrective action, the POI shall advise the operator in writing that initial approval is withdrawn. See paragraph 3-1114.

3-1109 ELEMENTS AVAILABLE FOR EVALUATING TRAINING—PHASE FOUR. The POI must develop a plan for systematically evaluating training given under the initially approved training curriculum. This plan should remain in effect throughout the initial approval period. There are five elements which can be evaluated when assessing the overall effectiveness of training programs. These five elements are: curriculum segment outlines, courseware, instructional delivery methods and training environment, testing and checking, and surveillance and investigation of operator activities. These elements are interrelated; however, each can be evaluated separately. See Table 3-38, Elements for Training Evaluation, for a summary of the five elements.

A. Curriculum Segment Outlines. Before evaluating a training program, an inspector must become familiar with the contents of the curricula or curriculum segments to be evaluated. This preparation is essential if an inspector is to determine whether an operator has developed an effective course of instruction from its initially approved training curriculum.

B. Examination of Courseware. Direct examination of courseware includes reviewing materials such as lesson plans, workbooks, or flight instructor guides. The inspector must determine whether the courseware is consistent with the curriculum or curriculum segment and that it has been organized to facilitate effective instructional delivery. Courseware is usually the training program element which is most adaptable to revision or refinement. Inspectors must review at least a sampling of the courseware.

C. Observation of Instructional Delivery Methods and Training Environments. Direct observation of instructional delivery includes surveillance of training methods, such as instructor lectures, CBI presentations, and in-flight instruction. Effective learning can only occur when an instructor is organized and prepared and properly uses the courseware and various

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training aids. The inspector must determine that the instructional delivery is consistent with the courseware. For example, the inspector should note whether the instructor teaches the topics specified in the lesson plan. Training aids and FSTDs should function as intended during the instructional delivery. In addition, during training, the inspector should be sensitive to the type of questions being asked by students and should identify the reasons for any excessive repetition. These conditions may indicate ineffective instructional delivery or courseware. The inspector must also determine if the instructional environment is conducive to learning. Distractions which adversely affect instructional delivery, such as excessive temperatures, extraneous noises, poor lighting, and cramped classrooms or workspaces, are deficiencies because they interfere with learning.

D. Observation of Testing and Checking. Direct observation of testing and checking is an effective method for determining whether learning has occurred. Examining the results of tests, such as oral or written tests or checks, provides a quantifiable method for measuring training effectiveness. The POI must examine and determine the causal factors of significant failure trends.

E. Surveillance and Investigation of Training and Checking in Progress. Direct observation of training and checking in progress is an effective method of evaluating training. Sometimes the opportunity for direct observation, however, will be limited. In such cases, the POI will have to rely more on his evaluation of other sources of information, such as reports of surveillance and investigations. Results of inspection reports, incident or accident reports, compliance and enforcement actions, and other relevant information about the operator's performance should be reviewed by the POI for indications of training effectiveness. The POI must establish methods to evaluate these sources of information for trends which may develop while training is being conducted under initial approval. For example, repeated reports of deficiencies, such as excessive taxi speed, navigation deviations, incomplete briefings, or incorrect use of the checklists, may be traceable to a lack of specific training or ineffective training. Such information may provide indications that revisions or refinements are needed for a curriculum segment and/or training modules. This information should be used when developing the Comprehensive Assessment Plan (CAP) in SAS Module 2, Flight Operations.

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Table 3-38. Elements for Training Evaluation

	ELEMENTS AVAILABLE FOR EVALUATING TRAINING
CURRICULUM SEGMENT OUTLINES	Curriculum segment outlines contain the specific training modules and the amount of time allocated for the curriculum segment. The modules must be consistent with regulatory requirements and safe operating practices. This element requires direct examination.
COURSEWARE	Courseware converts curriculum outline information into usable instructional material. Courseware must be consistent with the curriculum outline and be organized to permit effective instructional delivery. It is readily adaptable to adjustments and refinement by the operator. This element usually requires direct examination.
INSTRUCTIONAL DELIVERY METHODS AND TRAINING ENVIRONMENT	Instructional delivery methods are used to convey information to the student. Effective learning is maximized if the instructional delivery adheres to and properly uses the courseware. The training environment should be conductive to effective learning. This element requires direct observation.
TESTING AND CHECKING	Testing and checking is a method for determining whether learning has occurred. Testing and checking standards are used to determine that a desired level of knowledge and skill has been acquired. Testing and checking also measures the effectiveness of courseware and instructional delivery. This element requires direct observation. It can be supplemented by examining operator records of tests and checks.
SURVEILLANCE AND INVESTIGATION OF OPERATOR ACTIVITIES	Surveillance and investigations produce information about an operator's overall performance. A high rate of satisfactory performance usually indicates a strong, effective training program. Repeated unsatisfactory performances can often be traced to deficiencies in a training program. This element requires the examination and analysis of surveillance and investigative reports.

3-1110 METHOD FOR GRANTING FINAL APPROVAL—PHASE FIVE. This phase involves the granting of final approval of an operator's training curriculum. Based on the results of the evaluation, the POI must determine whether to grant or deny final approval of a training curriculum. This determination must be made before the expiration date of the initial approval. If the POI decides not to grant final approval, the procedures outlined in paragraph 3-1113 or 3-1114 shall be followed. If the POI decides that final approval should be granted, the following procedures apply.

A. Programs that Contain a List of Effective Pages (LEP). Although the method presently stated in this order may still be used in the approval process (that is, stamping each page), another procedure may also be used. Final approval of the training curriculum can be granted and documented by the POI on the LEP. This means that the FAA has given final approval of every page of the operator's training curriculum, as listed on that page, but only one FAA approval block must be completed and signed.

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1) The stamped page that documents final approval of the training curriculum and/or curriculum segment shall be stamped for approval, dated, and signed by the POI. The approval stamp that appears on the page must include at least the information shown in the stamp that appears in Figure 3-73A, Final Approval Stamp.

2) The original curriculum and/or curriculum segment must contain the one page that documents FAA approval on the LEP. The curriculum and/or curriculum segment must be transmitted to the operator with an approval letter signed by the POI in accordance with this section.

B. Programs that Do Not Contain an LEP. The original and a copy of each page of the training curriculum and/or curriculum segment shall be stamped for approval, dated, and signed by the POI. The approval stamp must appear on each page and include at least the information shown in the stamp that appears in Figure 3-73A.

C. Original Stamped Curriculum. The original stamped curriculum or curriculum segment must be transmitted to the operator with an approval letter signed by the POI. This letter must specifically identify the curriculum or curriculum segment, contain a statement that final approval is granted, and provide the effective date of approval. This letter must also state that final approval shall remain in effect until otherwise notified by the FAA that a revision is necessary in accordance with § 121.405(e) or § 135.325(d), provided the operator continues to train in accordance with the approved curriculum. If the POI is authorizing a reduction in the programmed hours specified by part 121, the letter must contain a statement concerning the basis for reduction. A copy of the stamped curriculum or curriculum segment and a copy of the approval letter must be kept on file in the CHDO. Figures 3-74 and 3-75 are sample letters of final approval.

Figure 3-73A. Final Approval Stamp

FAA FINAL APPROVAL

OFFICE DESIGNATOR: _____
EFFECTIVE DATE: _____
NAME: _____
SIGNATURE: _____

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Figure 3-74. Letter of Final Approval (Part 121)

ABC Airlines, Inc.
Director of Training
417 Oakton Boulevard
Enid, OK 78154

Dear Mr. Townsend:

Final approval is granted to ABC Airlines' B-727 Flight Engineer Recurrent Ground Training curriculum, for pages 1 through 5, dated May 21, 2007, and for pages 6 through 7, dated April 15, 2008.

The effective date of final approval is January 20, 2009. ABC Airlines may continue to train in accordance with this curriculum until a revision is required by the FAA under 14 CFR part 121, § 121.405(e) or until ABC Airlines revises the curriculum.

Approval of the reduced training hours from the programmed hours required by § 121.427(c)(1)(iii) to 20 hours is based on the improved training techniques available from your advanced systems ground trainer.

Principal Operations Inspector

Figure 3-75. Letter of Final Approval (Part 135)

ABC Airlines, Inc.
Director of Operations
Hoffman Building, Suite 306
1012 Perkin Lane
Motown, LA 58642

Dear Mr. Smith:

Final approval is granted to ABC Airlines, Inc. Cessna 310 Pilot in Command Upgrade Ground Training curriculum, pages 1 through 6, dated December 10, 2008.

The effective date of this final approval is June 9, 2009. ABC Airlines may continue to train in accordance with this curriculum until a revision is required by FAA under 14 CFR part 135, § 135.325(d) or until ABC Airlines revises the curriculum.

Principal Operations Inspector

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3-1111 REVISIONS TO TRAINING CURRICULA.

A. Final Approval of Proposed Revisions. Revisions to initially approved training curricula shall be processed as described in paragraphs 3-1099 through 3-1109. To incorporate significant revisions into training curriculum with final approval usually requires the full training approval process. Final approval, however, may be directly granted to a proposed revision if the revision involves any of the following situations:

- Correction of administrative errors such as typographical or printing errors;
- A reorganization of training or any changes in the sequence of training that does not affect the quality or quantity of training; and
- An improvement to the quality, or an increase in the quantity, of training.

B. Probable Causes of Revisions. Other proposed revisions, including any proposal to reduce the approved number of training hours, are subject to the training program approval process. Although each step in the process must be completed, the process may be abbreviated in proportion to the complexity and extent of the proposal. There are many factors that could require revisions to training curricula. Such factors include the following:

- The effects and interrelationships of changes in the kind of operations;
- The size and complexity of an operation;
- The type of aircraft being used;
- Any special authorizations through OpSpecs;
- A revised MEL; and
- Any exemptions or deviations.

3-1112 WITHDRAWING APPROVAL OF TRAINING CURRICULA. Before withdrawing approval of an operator's training curriculum or curriculum segment, the POI shall make reasonable efforts to convince the operator to make the necessary revisions. It is important to understand that withdrawing approval could be detrimental to the operator's business. The operator's ability to continue to hold a certificate may be in question if a new curriculum is not submitted for initial approval within a reasonable period of time. A decision to withdraw approval must be based on sound judgment and justifiable safety reasons. When sufficient reasons are established, it is mandatory for the POI to take immediate action to remove FAA approval from an ineffective or noncompliant training curriculum. When an approval is withdrawn, the POI must ensure that the operator clearly understands that any further training conducted under an unapproved curriculum is contrary to 14 CFR requirements. Compliance or enforcement action (see Volume 14) must be taken if any company employee who received unapproved training is used in part 121 or part 135 operations. The three methods for withdrawing approval of a training curriculum are as follows:

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- Allowing an initially approved training curriculum to expire without granting final approval (paragraph 3-1113);
- Withdrawing approval of an initially approved training curriculum before the expiration date (paragraph 3-1114); and
- Withdrawing approval of a training curriculum which has already received final approval in accordance with § 121.405(e) or § 135.325(d) (paragraph 3-1115).

3-1113 EXPIRED TRAINING CURRICULA. A training curriculum granted initial approval has an expiration date. Usually, this date shall not be later than 24 months after the initial approval date. If the POI does not grant final approval before the expiration date, training under that curriculum must terminate as of that date. Therefore, the POI shall not allow an initially approved curriculum to expire due to the FAA's inability to administratively grant final approval. Final approval may not be granted to an operator's training curriculum for several reasons. One reason, for example, may be the operator's inability to achieve an acceptable level of training effectiveness during phase four of the approval process. Another example of a reason for not granting final approval is the discontinued use of the initially approved curriculum. When the POI decides not to grant final approval before the expiration date, he must notify the operator of this decision in writing, at least 30 days before the expiration date of the initially approved curriculum. An operator not so notified may mistakenly assume that the initial approval will continue in effect until receipt of notification of either final approval or termination. The notification letter should contain the reasons for allowing the curriculum to expire and should state that any further training under the expired curriculum will not be in compliance with regulatory requirements. A POI who fails to provide this 30-day notification must establish a new expiration date so that appropriate notification can then be given to the operator.

3-1114 WITHDRAWAL OF INITIAL APPROVAL OF TRAINING CURRICULA. A POI may decide to withdraw initial approval any time during phase four of the approval process. This action may be necessary if the training is not in regulatory compliance, does not provide for safe operating practices, or is ineffective in meeting training objectives. An operator who has received a letter withdrawing approval must revise or refine the training curriculum and resubmit it for initial approval. The POI must ensure that the operator understands that it is his responsibility to correct each deficiency in the training program. The POI withdraws initial approval of training curricula by letter. This letter must contain both a statement informing the operator that initial approval is withdrawn and the effective date of the withdrawal. This letter must include the reasons for withdrawal of approval and a precaution concerning the use of persons trained under a curriculum which is not FAA-approved. A sample letter for withdrawing initial approval is in provided Figure 3-76.

3-1115 WITHDRAWAL OF FINAL APPROVAL OF TRAINING CURRICULA. Each operator is responsible for ensuring that its training curricula, once they have been granted final approval, continue to provide training in accordance with the conditions under which final approval was granted. In accordance with §§ 121.405(e) and 135.325(d), whenever the FAA determines that revisions to a curriculum that has been granted final approval are necessary, the operator shall, after notification, make the necessary changes to ensure the effectiveness and acceptability of its training. Such notification by the FAA effectively withdraws final approval. These regulations also provide the operator with certain appeal rights. Therefore, the following

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procedures will be applied when a decision is made to withdraw final approval of a training curriculum.

A. Required Items of the Notification Letter. The CHDO shall inform the regional Flight Standards division (RFSD) of the impending action to withdraw final approval. The POI must notify the operator in writing that revisions are required in accordance with § 121.405(e) or § 135.325(d). See Figure 3-77 for a sample letter of a notification for withdrawing final approval. The notification letter must contain the following:

- A statement that FAA approval of the training curriculum is withdrawn;
- A list of the revisions which must be made;
- A brief description of the reasons necessitating the revisions;
- A precautionary statement concerning the use of personnel trained under a curriculum which is not FAA approved;
- A statement that the actions specified in the letter may be appealed; and
- Instructions on how to make an appeal.

B. Revisions. If the operator chooses to revise the training program in response to the notification letter, the proposed revision will be processed in the same manner as a request for initial approval. The POI must reinitiate the five-phase approval process previously described.

C. Appeal of Decision by Operator. If an operator decides to appeal the POI's action, it must, within 30 days after receiving notification, petition the CHDO manager for reconsideration of the withdrawal of final approval. The petition must be in writing and contain a detailed explanation on why the operator believes the revisions described in the withdrawal notice are unnecessary.

1) If upon receipt of a petition, the district OM believes that an emergency exists which directly impacts aviation safety, he must immediately inform the operator in writing of his decision. The district OM's letter must include a statement that an emergency exists, a brief description of the revisions which must be made, and the reasons the revisions are necessary. In this case, the district OM's letter upholds the POI's decision to withdraw final approval. The operator must revise its training program if FAA approval is to be obtained.

2) If the district OM does not believe an emergency exists, careful consideration must be given to both the operator's petition and the POI's reasons for withdrawal of approval. The operator's petition stays the POI's withdrawal of final approval and the operator may continue to train under the training curriculum, pending the district OM's decision. The district OM may need to conduct additional evaluations of the operator's training program. It may be appropriate for the district OM to obtain additional facts from other sources. Consultation with the RFSD and Washington HQ may be advisable.

3) The district OM must make a decision within 60 days after receipt of an operator's petition. If the district OM accepts the operator's explanations, he will direct the POI to rescind the letter that withdrew final approval, either partially or fully. If the decision is to uphold the POI's action, the district OM must respond to the operator's petition in writing.

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4) The letter denying the petition should indicate that careful consideration was given to the petition. The letter must also contain the reasons for denying the petition and a statement that confirms the withdrawal of final approval. The letter must also contain a statement that any training conducted under the unapproved training curriculum is contrary to 14 CFR.

3-1116 ORGANIZATION OF DISTRICT OFFICE TRAINING PROGRAM FILES. The POI shall maintain a separate training program file for each operator at the CHDO. Each operator's training program file will be organized and maintained to keep each major curriculum type and any revisions together. Superseded training curriculum pages must be kept on file for 2 years. All correspondence and additional relevant supporting information associated with each training curriculum will be filed with the curriculum or curriculum segment, as appropriate.

Figure 3-76. Letter of Withdrawal of Initial Approval

ABC Airlines
Director of Training
49 Wheat Drive
Barley, Iowa 96496

Dear Mr. Roberts:

This letter notifies you that FAA initial approvals of the following training curriculum segments are withdrawn, effective April 1, 1988:

1. The emergency training segment for the DC-9 Second in Command Initial New-Hire Training curriculum, pages 9.1 through 9.3, dated 11/15/86.

2. The emergency training segment for the DC-9 Pilot in Command Upgrade Training curriculum, pages 9.31 through 9.33, dated 6/1/87.

The investigation of the in-flight incident that occurred on ABC Airline's Flight 943 on February 10, 1988, revealed that the flightcrew did not take positive action to isolate the source of smoke caused by malfunctioning cabin light ballast. During the FAA interview, the flightcrew displayed a lack of concern about the importance of taking immediate and positive action to control in flight fire and smoke. In addition, since this incident, inspectors from this office have been emphasizing fire and smoke-combating procedures during oral testing of DC-9 pilots taking the above listed training. These inspectors have observed that many of your DC-9 pilots have a serious lack of knowledge about fire and smoke control procedures and the use of fire-fighting equipment, particularly the type of extinguishers to be used in different classes of fire. We have discussed these deficiencies with your staff and they have effectively revised the Emergency Training curriculum segment for the DC-9 PIC/SIC Recurrent Training. Your staff, however, advises that they will not revise the training curricula listed above. Therefore, FAA initial approval is withdrawn. Initial approval can be reobtained by revising the curriculum to require detailed instruction on fire and smoke control procedures and fire-fighting equipment. It is contrary to 14 CFR part 121 to use pilots who have not been trained in accordance with an approved training curriculum.

Principal Operations Inspector

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Figure 3-77. Letter of Withdrawal of Final Approval (Part 135)

ABC Airlines, Inc.
Director of Training
49 Wheat Drive
Barley, Iowa

Dear Mr. Roberts:

This letter notifies you that, effective April 7, 1988, final approval of your Cessna 500 Pilot in Command Upgrade Training curriculum, dated March 1987, is withdrawn in accordance with 14 CFR part 135, § 135.325(d). This course of training must be revised as discussed below if FAA initial approval is to be reobtained.

The revised curriculum is required to have more detailed ground and in-flight instruction on the performance, limitations, and proper operating procedures for the area navigation systems. During the past 2 months, three of your Cessna 500 flights failed to maintain the assigned route flight specified by the air traffic control (ATC) clearance. Two of the flights required ATC radar assistance for reestablishing ATC clearance. All three pilots involved in these deviations were recently upgraded to pilots in command by completing the aforementioned training curriculum. The FAA has determined, through interviews with these pilots, that the training being given does not provide sufficient knowledge for the proper operation of the area navigation systems.

You may file a petition for reconsideration of this withdrawal of final approval within 30 days after receipt of this letter by writing to Mr. Belsole, Manager, Utica Flight Standards District Office. Your letter should contain a complete explanation of why you believe final approval of the Cessna 500 Pilot in Command Upgrade Training curriculum should not be withdrawn. It is contrary to part 135 to use pilots who have not been trained in accordance with an FAA-approved training curriculum.

Principal Operations Inspector

RESERVED. Paragraphs 3-1117 through 3-1135.

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VOLUME 3 GENERAL TECHNICAL ADMINISTRATION

CHAPTER 19 TRAINING PROGRAMS AND AIRMAN QUALIFICATIONS

Section 3 Safety Assurance System: Flightcrew Basic Indoctrination Curriculum Segments

3-1136 GENERAL. This section specifies the objectives and content of basic indoctrination curriculum segments. This training is required for all flightcrew members who are enrolled in an initial new-hire category of training. Basic indoctrination is normally the first curriculum segment of instruction conducted for newly hired flightcrew members. It serves as the initial introduction for the new-hire employee to the operator and, in many cases, to the operational requirements of Title 14 of the Code of Federal Regulations (14 CFR) part 121 and/or part 135. This section is related to Safety Assurance System (SAS) Element 2.1.1 (OP), Training of Flight Crew Members.

3-1137 OBJECTIVE OF BASIC INDOCTRINATION. The objective of basic indoctrination training is to introduce the new-hire flightcrew member to the operator and its manner of conducting operations in air transportation. It specifically acquaints the student with the operator's policies, procedures, forms, and organizational and administrative practices, and ensures the student has acquired basic airman knowledge. The flightcrew member basic indoctrination curriculum segment consists of training modules which contain information applicable to the student's specific duty position. Two general subject areas are required during basic indoctrination training. These subject areas are operator-specific and airman-specific training. These two areas serve to acquaint the student with the operator's means of regulatory compliance and to ensure that the student has acquired basic knowledge before entering aircraft ground and flight training. These two areas are not always mutually exclusive and, in many cases, may be covered in the same training module.

3-1138 OPERATOR-SPECIFIC INDOCTRINATION TRAINING.

A. Operator-Specific. The first subject area, operator-specific, must include training modules in at least the following:

- Duties and responsibilities of flightcrew members;
- Appropriate provisions of the regulations; and
- Contents of the certificate holder's operating certificate and operations specifications (OpSpecs).

B. Supplemental Information. Operator-specific training modules should also include information about the company which the student needs in order to properly perform his duties as an employee of the operator. This information may include such items as the operator's history, organization, policies, scope of operation, administrative procedures, employee rules of conduct, compensation, benefits, and contracts.

3-1139 AIRMAN-SPECIFIC INDOCTRINATION TRAINING.

A. Airman-Specific. The second subject area, airman-specific, must address appropriate portions of the certificate holder's operating manual. Airman-specific training should also

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include other pertinent information that ensures the student will be prepared for aircraft ground and flight training. Airman-specific indoctrination training should include elements which show that training applicable to the duty position will be given on the general principles and concepts of the following:

- Operational control (this includes dispatch or flight release for part 121 operators and flight-locating procedures for part 135 operators);
- Weight and Balance (W&B);
- Aircraft performance and airport analysis;
- Meteorology;
- Navigation;
- Airspace and air traffic control (ATC) procedures;
- En route and terminal area charting and flight planning;
- Instrument procedures;
- Airport ground operational safety (refer to the current editions of Advisory Circular (AC) 120-74, Parts 91, 121, 125, and 135 Flightcrew Procedures During Taxi Operations, and AC 91-73, Parts 91 and 135 Single Pilot, Flight School Procedures During Taxi Operations); and
- Normal and emergency communication procedures (refer to part 135, § 135.345(a)(6)).

B. Parts 121 and 135. Airman-specific indoctrination training should address the kind of operation and the general capabilities of the operator's aircraft. For example, a part 121 operator using transport-category turbojet aircraft should include high-altitude meteorological information (e.g., the jetstream) in the meteorology training module. A part 135 operator using single-engine reciprocating-powered aircraft will not normally need to address high-altitude meteorology in this module. It is important to note that airman-specific training is not aircraft-specific and is intended to ensure the student has a fundamental understanding of certain generalized areas before progressing into aircraft ground and flight training for a specific aircraft.

C. Runway Safety Training. Training in runway safety and the specific standard operating procedures (SOP) contained in the current editions of AC 120-74, AC 91-73, and AC 120-35, Line Operational Simulations: Line-Oriented Flight Training, Special Purpose Operational Training, Line Operational Evaluation, should be incorporated in ground training and flight training conducted by air carriers under parts 121 and 135, by training centers under 14 CFR part 142, by pilot schools under 14 CFR part 141, and by all other persons conducting training and evaluation under 14 CFR parts 61 and 91.

3-1140 FLIGHTCREW BASIC INDOCTRINATION TRAINING MODULES.

A. Training Modules. The flightcrew member basic indoctrination curriculum segments must include as many training modules as necessary to ensure appropriate training. Each module outline must provide at least the following:

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- A descriptive title of the training module; and
- A list of the related module elements to be presented during instruction on that module.

B. Training Module Outlines. The training module outlines must contain sufficient elements to ensure a student will receive training in both operator-specific and airman-specific subject areas to provide a suitable foundation for subsequent aircraft-specific curriculum segments. An operator has a certain amount of flexibility in the construction of these training modules. For example, the airman-specific training modules for students with significant experience in part 121 or 135 operations may be less comprehensive than the training modules for students without that experience. This is usually the case during acquisitions, mergers, or with operators who hire only highly qualified personnel with experience in part 121 or 135 operations.

C. Training Module Sample. The following example illustrates one of the many acceptable methods in which a basic indoctrination training module could be presented:

Table 3-39. Certificate and Operations Specifications

(a) Definitions, descriptions, and organization	Elements Within a Training Module
(b) Regulatory basis in 14 CFR/Title 49 of the United States Code (49 U.S.C.) (Formerly FA Act)	
(c) Content of certificate and specifications	
(d) Applicable limitations and authorizations	

D. Outlines. It is not necessary or desirable to include detailed descriptions of each element within a training module outline. Such detailed descriptions are more appropriate when included in the operator's courseware such as lesson plans. During the approval process, principal operations inspectors (POI) should review lesson plans as necessary to ensure the scope and depth of the courseware is adequate. Table 3-40, Flightcrew Member Basic Indoctrination Training, illustrates the interrelationship of training modules in the flightcrew member basic indoctrination curriculum segment.

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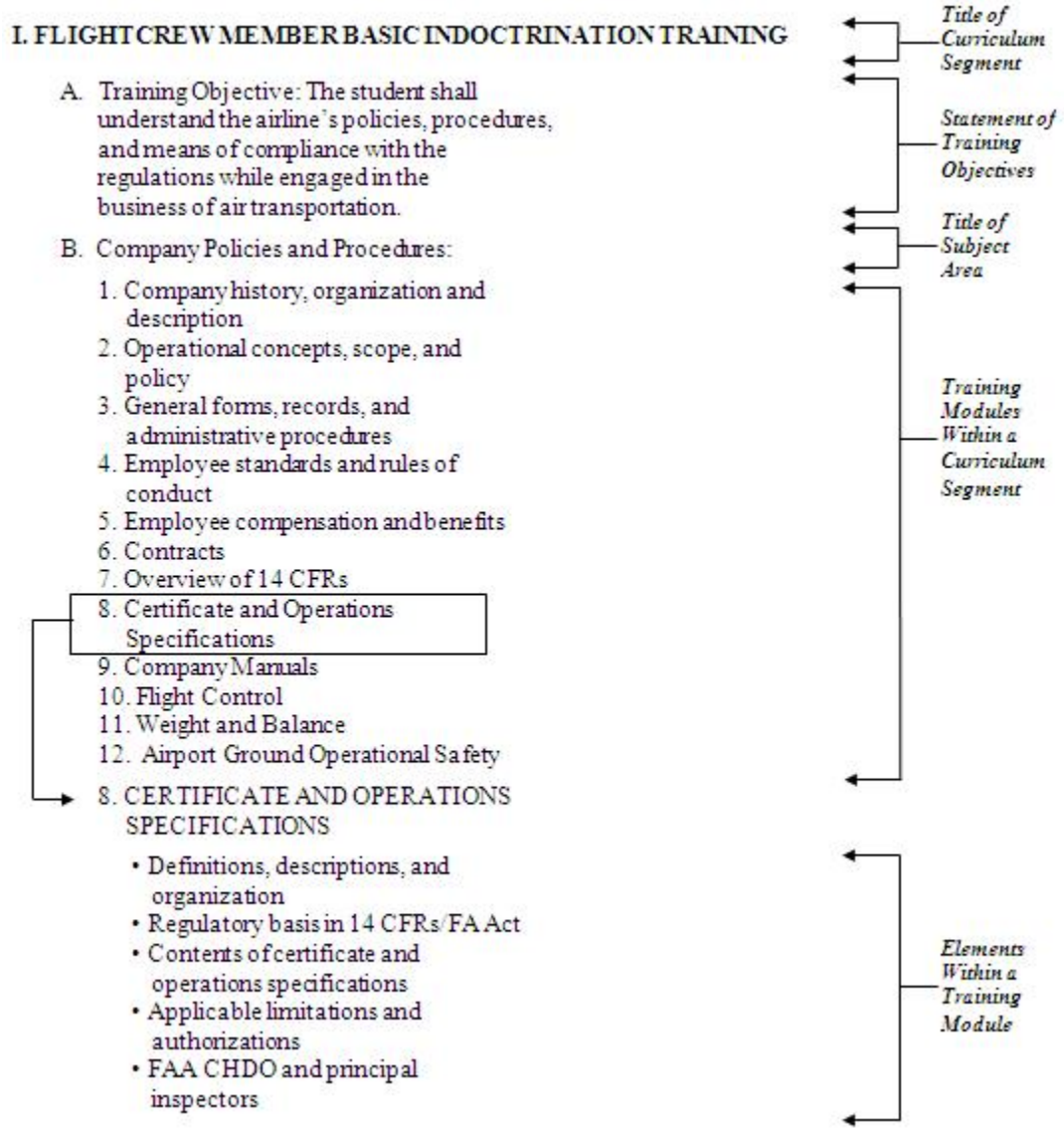
Table 3-40. Flightcrew Member Basic Indoctrination Training



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3-1141 TRAINING HOURS.

A. Part 121 Program Hours. Part 121, § 121.415 specifies a minimum of 40 programmed hours of instruction for basic indoctrination training. Normally, 40 hours should be the minimum number of training hours for basic indoctrination for part 121 operators who employ personnel with little or no previous part 121 experience. Reductions to the programmed hours in certain situations, however, may be appropriate for several reasons. One example would be a merger or acquisition situation where flightcrew members new to the surviving certificate holder may only require operator-specific training modules. Another example would be the operator's enrollment prerequisites requiring a high level of part 121 experience.

B. Reduction in Program Hours Request. Should an operator request a reduction in programmed hours, the POI should not approve the certificate holder's crewmember indoctrination training unless it includes at least 32 programmed hours. This minimum should be maintained even if the reduction is based upon the provisions specified in § 121.405(d). Should additional guidance be necessary, contact the Air Transportation Division (AFS-200).

C. Part 135 Program Hours. Part 135 does not specify programmed hours for flightcrew member basic indoctrination training. Table 3-41, Part 135—Initial New-Hire Flightcrew Member Basic Indoctrination Training Hours, provides direction and guidance to POIs on training hours when approving basic indoctrination curriculum segments for part 135 operators. This table provides national norms. When approving these curriculum segments, POIs must consider the complexity of the operation and aircraft. For example, training hours for a complex type of operation may need to exceed the national norm, while training hours below the national norm for a less complex type of operation may be acceptable.

Table 3-41. Part 135—Initial New-Hire Flightcrew Member Basic Indoctrination Training Hours

PART 135 AIRCRAFT FAMILY	INITIAL NEW-HIRE FLIGHTCREW MEMBER BASIC INDOCTRINATION TRAINING HOURS	
	TYPE OF OPERATION	TRAINING HOURS
Transport and Commuter Category	ALL	32
Multiengine Airplanes	IFR/VFR	24
	VFR ONLY	16
Single-Engine Airplanes	IFR/VFR	24
	VFR ONLY	16
Helicopters	IFR/VFR	24
	VFR ONLY	16

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3-1142 COURSE COMPLETION REQUIREMENTS. Completion of this curriculum segment must be documented by an instructor's or supervisor's certification that a student has successfully completed the course. This certification is usually based on the results of a written examination given at the end of the course. With some training methods, the certification may be based on student progress checks administered during the course.

3-1143 CONTENT OF FLIGHTCREW BASIC INDOCTRINATION CURRICULUM SEGMENTS. A basic indoctrination curriculum segment should show that training will be given in at least two general subject areas appropriate to the operator's type of operation. These subject areas of training are operator-specific (see paragraph 3-1144) and airman-specific (see paragraph 3-1145).

3-1144 OPERATOR-SPECIFIC TRAINING MODULES. The subject area of a basic indoctrination training curriculum segment referred to as operator-specific includes training modules that pertain to the operator's methods of compliance with the regulations and safe operating practices. Examples of recommended training modules for the operator-specific subject area follow:

A. Duties and Responsibilities.

- Company history, organization, and management structure;
- Operational concepts, policies, and kind of operation;
- Company forms, records, and administrative procedures;
- Employee standards and rules of conduct;
- Employee compensation, benefits, and contracts;
- Authority and responsibilities of duty position;
- Company-required equipment; and
- Company manual organization, revisions, and employee responsibilities concerning manuals.

B. Appropriate Provisions of 14 CFR.

- Flightcrew member certification, training, and qualification requirements;
- Medical certificates, physical examination, and fitness-for-duty requirements;
- Operational control requirements (dispatch, flight release, or flight-locating);
- Flight duty and rest requirements;
- Recordkeeping requirements;
- Operational rules in parts 91 and 121 or 135 (as appropriate), and any other applicable regulations;
- Regulatory requirements for company manuals; and
- Other appropriate regulations, such as flightcrew emergency authority, interference with crewmembers, and reporting requirements.

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C. Applicable Portions of Title 49 of the Code of Federal Regulations (49 CFR).

- Part 830, Notification and Reporting of Aircraft Accidents or Incidents and Overdue Aircraft, and Preservation of Aircraft Wreckage, Mail, Cargo, and Records (National Transportation Safety Board (NTSB)).
- Part 1542, Airport Security (Transportation Security Administration (TSA)).
- Part 1544, Aircraft Operator Security: Air Carriers and Commercial Operators (TSA).

D. Contents of Certificate and OpSpecs.

- Regulatory basis in part 121 or 135 (as applicable) and Title 49 of the United States Code (49 U.S.C.) (formerly the Federal Aviation Act of 1958 (FA Act));
- Definitions, description, and organization of OpSpecs;
- Limitations and authorizations of OpSpecs;
- Description of certificate; and
- Description of Federal Aviation Administration (FAA) certificate-holding district office (CHDO) and responsibilities of FAA principal inspectors (PI).

3-1145 AIRMAN-SPECIFIC TRAINING MODULES. The airman-specific training modules of the basic indoctrination curriculum segment contain training to ensure a student will be able to enter subsequent ground and flight training curriculum segments. These modules address the appropriate portions of the operator's manual and standard practices of airmanship and flight procedures in other documents such as the Aeronautical Information Manual (AIM). The emphasis in airman-specific training is not aircraft-specific. It should relate to the operator's kind of operation and the family or families of aircraft used by the operator. The objective of airman-specific training is to ensure the student has acquired the basic knowledge necessary for part 121 or 135 operations (as applicable). Examples of recommended training modules for the airman-specific subject area follow:

A. Company Operational Control.

- Dispatch, flight release, or flight-locating systems and procedures (as applicable);
- Organization, duties, and responsibilities;
- Weather and Notices to Airmen (NOTAM) information; and
- Company communications.

B. W&B.

- Definitions (such as zero-fuel weight, moments, and inches of datum);
- General loading procedures and center-of-gravity (CG) computations;
- Effects of fuel burn and load shifts in flight; and
- W&B forms, load manifests, fuel slips, and other applicable documents.

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C. Aircraft Performance and Airport Analysis.

- Definitions (such as balanced field, visual meteorological conditions (VMC), obstruction planes, and maximum endurance);
- Effects of temperature and pressure altitude;
- General Terminal Instrument Procedures (TERPS) criteria (obstacle clearance standards);
- Airport analysis system as appropriate to the type of operation and family or families of aircraft; and
- Effects of contaminated runways.

D. Meteorology.

- Basic weather definitions (such as forecasts, reports, and symbols);
- Temperature, pressure, and winds;
- Atmosphere moisture and clouds;
- Air masses and fronts; and
- Thunderstorms, icing, and wind shear.

E. Navigation.

- Definitions (such as Class I, Class II navigation);
- Basic navigational instruments;
- Dead reckoning (DR) and pilotage concepts and procedures;
- Navigational Aids (NAVAID); and
- Very high frequency (VHF), very low frequency (VLF), and self-contained systems (as applicable).

F. Airspace and ATC Procedures.

- Definitions (such as precision approaches, airways, and automated terminal information service (ATIS));
- Description of airspace;
- Navigation performance and separation standards;
- Controller and pilot responsibilities;
- ATC communications;
- Air traffic flow control; and
- Wake turbulence recognition and avoidance.

NOTE: There have been several accidents and incidents related to Boeing B-757 wake turbulence. Although the B-757 does not fit into the “heavy” classification of aircraft, it is being treated as such until a new classification determination is made. Each of these events occurred when the trailing aircraft was not being provided instrument flight rule (IFR) traffic separation. To reduce the possibility of such occurrences, ATC started issuing “Wake Turbulence Cautionary Advisories” to visual flight rule (VFR) aircraft following B-757 aircraft. The FAA

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is studying wake turbulence to include pilot awareness, avoidance, and aircraft-specific procedures for a wake turbulence encounter. Pilots and operators should review information, procedures, and guidance contained in chapter 7, section 3 of the AIM and in the current edition of AC 90-23, Aircraft Wake Turbulence. The FAA is not aware of any wake turbulence accidents occurring when pilots have observed AIM-recommended procedures or have utilized IFR traffic separation. Therefore, pilots should be encouraged to maintain the prescribed wake turbulence separation distances. Since wake turbulence is not unique to the B-757, all pilots should exercise caution when operating behind and/or below all heavier aircraft.

G. En Route and Terminal Area Charting and Flight Planning.

- Terminology of charting services (such as Jeppesen or FAA National Aeronautical Charting Office (NACO));
- Takeoff minimums, landing minimums, and alternate requirements;
- General company flight-planning procedures;
- Flight service and international procedures (as applicable);
- Airport diagrams; and
- Airport ground operational safety (AC 120-74 and AC 91-73).

H. Concepts of Instrument Procedures.

- Definitions (e.g., minimum descent altitude (MDA), height above airport (HAA), height above touchdown (HAT), decision height (DH), Category II (CAT II) instrument landing system (ILS), and no procedure turn required (NOPT));
- Holding patterns, procedure turns;
- Precision approaches (such as CAT I, CAT II, and CAT III);
- Nonprecision Approaches (NPA); and
- Circling, visual, and contact approaches (as applicable).

3-1146 EVALUATION OF FLIGHTCREW BASIC INDOCTRINATION CURRICULUM SEGMENT OUTLINES FOR INITIAL APPROVAL. When evaluating a basic indoctrination curriculum segment, inspectors must determine that the operator-specific and airman-specific subject areas are properly addressed. Operation-specific and airman-specific elements may be outlined in the same training module. Inspectors must determine that basic indoctrination curriculum segments meet the following two requirements:

A. Review Criteria for Operator-Specific Training. The operator-specific training must contain information of sufficient quality, scope, and depth to ensure the crewmember fully understands the duties and responsibilities applicable to the duty position. Training modules must also provide enough information to acquaint the student with the operator's policies, procedures, and practices.

B. Review Criteria for Airman-Specific Training. Airman-specific modules must address appropriate portions of the certificate holder's operating manual and other pertinent information. These modules should contain elements which address the operator's type

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of operation and certain generalized areas, such as meteorology and the principles of W&B. It is essential that the inspectors and operators understand that airman-specific training is not aircraft-specific training. Airman-specific training is intended to ensure that students have acquired fundamental aviation concepts before progressing into ground and flight training for a specific aircraft.

3-1147 FLIGHTCREW MEMBER BASIC INDOCTRINATION CURRICULUM SEGMENT JOB AID.

NOTE: This job aid may be used in addition to completing appropriate Data Collection Tool (DCT) questions from SAS Element 2.1.1 (OP).

A. Overview. The basic indoctrination curriculum segment job aid (Tables 3-42, Flightcrew Basic Indoctrination Training Job Aid—Subject Area 1: Operator-Specific Training, and 3-42A, Flightcrew Basic Indoctrination Training Job Aid—Subject Area 2: Airman-Specific Training) is provided to assist the inspector when evaluating this curriculum segment outline. This job aid is provided for guidance only and must not be construed as containing mandatory or regulatory requirements. This job aid focuses on the two subject areas of this curriculum segment (operator-specific and airman-specific training). It serves as an aid for inspectors when evaluating individual training modules.

B. Job Aid/Operator's Proposal Comparison. When using the job aid, inspectors should make a side-by-side comparison of the operator's proposal to make the following determinations:

- The proposal provides for operator-specific and airman-specific instruction;
- The proposal is generalized in nature, and serves to acquaint the student with the operator's procedures, policies, and practices;
- Normally, training modules should not contain elements which are aircraft-specific; and
- Sufficient training module elements should be listed to ensure the appropriate depth and scope of the material will be presented.

C. Organization. The job aid is organized with training subjects listed in the left column and evaluation criteria or remarks listed horizontally across the top. Inspectors may use the spaces within the matrix for items such as notes, comments, dates, or checkmarks. There are also blank columns and rows in each job aid which permit inspectors to include additional training modules or evaluation criteria.

3-1148 DRUG/ALCOHOL TESTING PROGRAM APPROVAL AND INCLUSION IN BASIC INDOCTRINATION TRAINING.

A. Drug/Alcohol Testing Programs. The regulations require 14 CFR part 119 certificate holders operating under parts 121 and/or 135 to obtain OpSpec A449, Antidrug and Alcohol Misuse Prevention Program, to certify compliance with the drug and alcohol testing regulations. The operator's drug testing program must include an Employee Assistance Program (EAP) that includes education and training on drug use and abuse for employees. Operators must

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distribute educational materials that explain the alcohol misuse program regulatory requirements and the operator's policies and procedures.

B. Responsibility for Surveillance and Compliance/Enforcement of Operator Drug/Alcohol Training. The Drug Abatement Division (AAM-800) is responsible for the surveillance and compliance/enforcement of drug/alcohol testing programs that includes the training requirements under the regulations. POIs who receive drug/alcohol testing documentation other than information for the OpSpec A449 should return them to the operator with instructions to submit them promptly to the FAA at the following address:

Federal Aviation Administration
Office of Aerospace Medicine
Drug Abatement Division, AAM-800
800 Independence Avenue, SW, Room 806
Washington, DC 20591
202-267-8442

C. Inclusion of Operator Drug/Alcohol Training Programs as a Module in Basic Indoctrination and Recurrent Training Curriculum Segments. Operators may, but are not required to, include EAP training (part of the operator's overall drug/alcohol training program) as a module in the operator's basic indoctrination and recurrent training. POIs are not to review the EAP training module content or to conduct surveillance of the training conducted in the EAP training module.

1) Credit for EAP Training Module Hours. Operators who have currently approved training curriculums and who wish to receive credit for EAP training hours should submit a revised outline for the basic indoctrination and recurrent training curriculum segment, including the EAP module, to the POI. The operator's outline must indicate the additional number of course hours required to include EAP training. POIs and operators may not count these hours in the total hours of the basic indoctrination and recurrent training curriculum segment. The POI will stamp the revised pages/control page of the curriculum segment outline according to the instructions in Volume 3, Chapter 19, Section 2.

2) New Operator Awareness of EAP Training Requirements. Inspectors who are responsible for certifying new operators must ensure that the operators are aware that they may take credit for the training hours in the basic indoctrination curriculum segment. POIs must also ensure that the operators know of the EAP training requirements. POIs must ensure that an operator's basic indoctrination and recurrent training curriculum segment outline lists the operator's proposed training hours.

D. Points of Contact (POC). Should operators or POIs have questions about EAP training program content, they should contact AAM-800. See Table 3-43, FAA Regional Aviation Drug/Alcohol Abatement Program Representative Addresses, Telephone Numbers, and States Covered.

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Table 3-42. Flightcrew Basic Indoctrination Training Job Aid—Subject Area 1: Operator-Specific Training

TRAINING SUBJECTS	EVALUATION CRITERIA				
	ADEQUACY OF ELEMENTS/ EVENTS	ADEQUACY OF COURSEWARE TRAINING	AIDS AND FACILITIES		
Company History, Organization, and Description					
Operational Concepts, Scope, and Policy					
General Forms, Records, and Administrative Procedures					
Employee Standards and Rules of Conduct, Including Drug and Alcohol Training					
Employee Compensation and Benefits					
Contracts					
Overview of 14 CFR					
Certificate and Operations Specifications					
Company Manuals					
Flight Control					
Weight and Balance					
Airport Ground Operational Safety					

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Table 3-42A. Flightcrew Basic Indoctrination Training Job Aid—Subject Area 2: Airman-Specific Training

TRAINING SUBJECTS	EVALUATION CRITERIA				
	ADEQUACY OF ELEMENTS/ EVENTS	ADEQUACY OF COURSEWARE TRAINING	AIDS AND FACILITIES		
Principles of Weight and Balance					
Performance and Airport Analysis					
Principles of Meteorology					
Principles of Navigation					
Airspace and ATC Procedures					
En Route/ Terminal Charting and Flight Planning					
Instrument Procedures					

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Table 3-43. FAA Regional Aviation Drug/Alcohol Abatement Program Representative Addresses, Telephone Numbers, and States Covered

1. Eastern Compliance and Enforcement Center FAA/Office of Aerospace Medicine Drug Abatement Division 2895 SW 145th Avenue, Suite 148 Miramar, FL 33027 954-641-6251	Alabama Connecticut Delaware Florida Georgia Kentucky Maine Maryland Massachusetts Mississippi New Hampshire New Jersey	New York North Carolina Pennsylvania Puerto Rico Rhode Island South Carolina Tennessee Vermont Virgin Islands Virginia Washington D.C. West Virginia
2. Central Compliance and Enforcement Center FAA/Office of Aerospace Medicine Drug Abatement Division 2601 Meacham Boulevard Fort Worth, TX 76137 817-222-5340	Arkansas Illinois Indiana Iowa Kansas Louisiana Michigan Minnesota Missouri	Nebraska New Mexico North Dakota Ohio Oklahoma South Dakota Texas Wisconsin
3. Western Compliance and Enforcement FAA/Office of Aerospace Medicine Drug Abatement Division 15000 Aviation Boulevard, Room 5012 Lawndale, CA 90261 310-725-3766	Alaska American Samoa Arizona California Colorado Guam Hawaii Idaho	Montana Nevada Oregon Saipan Utah Washington Wyoming

RESERVED. Paragraphs 3-1149 through 3-1165.

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VOLUME 3 GENERAL TECHNICAL ADMINISTRATION

CHAPTER 21 THE ADVANCED QUALIFICATION PROGRAM

Section 1 Safety Assurance System: Scope, Concepts, and Definitions

3-1496 ADVANCED QUALIFICATION PROGRAM (AQP) OVERVIEW. In response to the recommendations from a Joint Aviation Task Force and from the National Transportation Safety Board (NTSB), the Federal Aviation Administration (FAA) on October 2, 1990 published Special Federal Aviation Regulation (SFAR) 58, Advanced Qualification Program. The FAA on October 2, 2005 incorporated SFAR 58 into Title 14 of the Code of Federal Regulations (14 CFR) part 121 as a permanent subpart (Y). Under part 121 subpart Y, certificated air carriers, as well as the training centers they employ, are provided with a regulatory alternative for training, evaluating, qualifying, and certifying pilots, Flight Engineers (FE), flight attendants (F/A), aircraft dispatchers, instructors, evaluators, and other operations personnel subject to the provisions of part 121 and 14 CFR part 135. The capabilities and use of simulators and other computer-based training (CBT) devices in training and qualification activities have changed dramatically, as has our knowledge of the role of Crew Resource Management (CRM) issues involving fatal accidents. Part 121 subpart Y allows certificate holders to develop innovative training and qualification programs that incorporate the most recent advances in training methods and techniques. It also requires participants to validate the training program empirically through continuing data collection and analysis. This section is related to Safety Assurance System (SAS) Element 2.1.6 (OP), Advanced Qualification Program (AQP).

A. Safety Enhancement. Although AQP is a voluntary program, the Flight Standards Service (AFS) encourages air carriers to participate. The AQP methodology directly supports the FAA's goals for safety enhancement. AQP provides for enhanced curriculum development and a data-driven approach to quality assurance (QA) along with the flexibility to target critical tasks during training. AQP aligns very well with a systems safety approach for training development, implementation, quality oversight, and surveillance. The AFS envisions data obtained from an AQP curriculum(s) in conjunction with information sharing from the flight operations quality assurance (FOQA) program and the Aviation Safety Action Program (ASAP), can provide AFS personnel with information that will enhance oversight capability, capacity, and improve operational safety.

B. AQP Methodology. The AQP is designed to provide a systematic methodology for developing the content of training programs for air carrier crewmembers and dispatchers. It replaces programmed hours with proficiency-based training and evaluation, integrating CRM, derived from a detailed Job Task Analysis (JTA). AQP incorporates data-driven quality control (QC) processes for validating and maintaining the effectiveness of curriculum content. The AQP encourages innovation in the methods and technology that are used during instruction and evaluation, and efficient management of training systems.

C. Technical and CRM Skills. It is a common misconception that the AQP targets only CRM skills. Although AQP participants must integrate CRM throughout the curriculum and CRM is indeed important to a complete training program, it is not the only important factor in AQP training. While analysis of commercial accidents indicates that deficiencies in CRM

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skills have been a significant contributor to mishaps, skill-based errors are associated with a large percentage of aviation accidents. Nearly 60 percent of all accidents involving scheduled air carriers have involved at least one skill-based error. AQP combines technical and CRM skills in training and evaluation in order to achieve proficiency in the entire range of skills required for safe operations.

D. Other Voluntary Programs. Existing and future voluntary systems will be an integral part of FAA safety oversight activities. An increasing number of AQP participants have begun to implement programs that enable proactive corrective action to reduce the likelihood of accidents. Most AQP participants are using other voluntary data-driven programs (e.g., the FOQA program, the ASAP, and the Line Operations Safety Audit (LOSA) program) to feed information into the AQP in order to better identify training needs, improve training practices, or to simply validate assumptions. FOQA, ASAP, and LOSA information can also help in the design of AQP scenarios that focus on real-world operations.

E. Regulatory Flexibility. Since its release in 1990, AQP has provided the regulatory flexibility for participants to modernize and innovate training content and methods. AQP participants have pioneered instructor, check pilot, and check FE training, the use of flight simulation training devices (FSTD), distance learning methods, computerized testing, training strategies based on the mission – international versus domestic, the use of pilot demographic information, training intervals based on performance, the use of data-derived training decisions, the integration of other safety feedback programs into training, and fostering a strong relationship between the FAA, industry, and labor.

NOTE: Confusion sometimes arises concerning the relationship between policy guidance and the regulations. Inspectors and operators must bear in mind that Public Laws and regulations—including exemptions—comprise the body of requirements that cannot be changed by policy. Policy guidance documents, such as advisory circulars (AC), handbooks, and bulletins to the handbooks, are always subordinate to those requirements. Such policy documents may provide guidance on one means, but not necessarily the only means, acceptable to the FAA of achieving compliance with a regulatory requirement, or they may provide guidance on implementing programs for which there is no underlying regulatory requirement, such as ASAP.

NOTE: AQP, by part 121, §§ 121.903(b) and 121.909(b)(4), allows participants to depart from traditional practices with respect to what, how, when, and where training, evaluation, and certification is conducted. An applicant may propose to replace certain requirements of 14 CFR part 61, 63, 65, 121, or 135 with an AQP curriculum. An AQP may also employ alternatives to the practical test requirements. This is subject to FAA approval of the specific content of each proposed program. Policy established by this section defines the limits and obligations of the proposed alternatives.

1) Goal. The primary goal of AQP is to achieve the highest possible standard of individual and crew performance. In order to achieve this goal, AQP seeks to reduce the probability of crew-related errors by aligning training and evaluation requirements more

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closely with the known causes of human error. Accidents are typically caused by a chain of errors that build up over the course of a flight that, if undetected or unmitigated, results in a final, fatal error. Singular maneuver-based evaluation artificially segments simulation events, preventing the realistic buildup of the error chain. The AQP development process will integrate CRM skills, systems knowledge, and flying skills in ground, flight training, validations, and evaluation modules. Traditionally, training programs have focused primarily on individual training and evaluation. Under AQP, the focus is on individual and crew performance during training and evaluation. An AQP evaluation is scenario-based, allowing the error chain to progress to a logical conclusion. It extends this concept from Line-Oriented Flight Training (LOFT) and Special Purpose Operational Training (SPOT) to Line Operational Evaluation (LOE). This approach allows both technical and cognitive skills to be tested together in a crew-oriented setting.

2) Equivalent Level of Safety (§ 121.909(b)(4) and (e)). AQP was also established to permit a greater degree of regulatory flexibility in the approval of innovative training programs. Based on a documented analysis of operational requirements, a certificate holder under AQP may propose to depart from traditional practices with respect to what, how, when, and where training, evaluation and certification is conducted. An applicant may propose to replace certain requirements of part 61, 63, 65, 121, or 135 with an AQP curriculum. An AQP may also employ alternatives to the practical test requirements. This is subject to FAA approval of the specific content of each proposed program. Part 121 subpart Y requires that all departures from traditional regulatory requirements be documented and based upon an approved continuing QA and data analysis process sufficient to establish at least an equivalent level of safety. To determine an equivalent level of safety, an airline's AQP must be examined as a comprehensive whole rather than considering any one component in isolation.

3) Process. Under an AQP, the FAA monitors the process as well as the product. Instead of basing curriculums on prescribed generic maneuvers, procedures, and knowledge items, AQP curriculums are based on a detailed analysis of the specific job tasks, knowledge, and skill requirements of each duty position of the individual airline. The AQP process provides a systematic basis for establishing an audit trail between training requirements and training methodologies.

4) Systematic Basis. AQPs are systematically developed, continuously maintained, and empirically validated, proficiency-based training systems. They allow for the systematic analysis, design, development, implementation, progressive evaluation, and maintenance of training programs that include integrated resource management, improved instructor/evaluator training and standardization, scenario-based evaluation, and a comprehensive data-driven QA system. AQP provides a systematic basis for matching technology to training requirements and for approving a training program with the content based on relevance to operational performance.

5) Requirements. To ensure that the AQP does establish an initial justification and a continuing process to show an equivalent level of safety, mandatory requirements have been established. AQP participants will:

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a) Comply with all aspects of the approved AQP.

b) Continue the use of the approved processes for development, implementation, and maintenance of program operations throughout the life of the program.

c) Document the requirements of the practical test standards (PTS) and part 61, 63, 65, 121, or 135, as applicable, which would be replaced by an AQP curriculum.

d) Comply with each applicable requirement of the PTS and part 61, 63, 65, 121, or 135 that is not specifically documented in the AQP.

e) Provide satisfactory justification that the proficiency-based qualification of personnel under AQP meets or exceeds existing part 121 and/or part 135 standards.

f) Establish an initial justification and a continuing process to show how the AQP curriculum provides an equivalent or better level of safety for each requirement to be replaced.

g) Include all flightcrew member positions, instructors, and evaluators, and may include other positions, such as F/As, aircraft dispatchers, and other operations personnel.

h) Base curriculums on an instructional systems development methodology. This methodology must incorporate a thorough analysis of the certificate holder's operations, aircraft, line environment, and job functions.

i) May build upon an existing training program or be completely new.

j) Any training or evaluation that is satisfactorily completed in the calendar-month before or the calendar-month after the calendar-month in which it is due is considered to have been completed in the calendar-month it was due.

k) Accommodate make, model, and series (M/M/S) aircraft (or variant).

l) Provide three basic types of curriculums for every duty position: indoctrination (for new hires, new instructors, and new evaluators), qualification, and continuing qualification. Specialty curriculums (e.g., transition, upgrade, requalification, or refresher) will be derivatives of the basic types.

m) Integrate the training and evaluation of technical and CRM/dispatch resource management (DRM) knowledge and skills.

n) Develop a list of, and text describing, the knowledge requirements, subject materials, job skills, and qualification standards of each task to be trained and evaluated.

o) Develop a list of, and text describing, supervised operating experience (OE), evaluation/remediation strategies, provisions for special tracking, and how recency of experience requirements will be accomplished.

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p) Include planned (not programmed) hours for ground training, flight training, evaluation, and OE.

q) Include line operational training (e.g., full crew Line-Operational Simulation (LOS)).

r) Use LOE or an equivalent evaluation under an AQP acceptable to the FAA for proficiency evaluations.

s) Integrate appropriate advanced flight training equipment. Flight training devices (FTD) and full flight simulators (FFS) will be used to support scenario-based training as appropriate.

t) Develop data collection and analysis processes in order to obtain performance information on crewmembers, dispatchers, instructors, evaluators, and other operations personnel that will enable the certificate holder and the FAA to determine whether the form and content of training and evaluation activities are satisfactorily accomplishing the overall objectives of the curriculum.

u) Provide a Master AQP Transition Schedule (MATS) that provides a plan to transition from a traditional program to an AQP. In addition, the MATS should include a plan on how the applicant would return to a traditional program if that becomes necessary or desirable at some later date.

v) Develop and implement their AQP in five sequential phases:

- Phase One—Initial Application.
- Phase Two—Curriculum Development.
- Phase Three—Training System Implementation.
- Phase Four—Initial Operations (Initial Approval).
- Phase Five—Continuing Operation (Final Approval).

3-1497 UNIQUE CHARACTERISTICS OF AN AQP.

A. Extended Review Team (ERT). The review and surveillance of an AQP prior to final approval is equivalent to a recertification of the applicant's training program. Historically, the FAA has provided regulatory flexibility through an exemption/deviation or through operations specifications (OpSpecs). Unfortunately, in many instances the principal inspector (PI) is excluded from the exemption review process. The AQP process includes the principal in all decisions and provides for a data-driven validation for all program revisions and modifications.

B. Components. The ERT combines the national program perspective and standardization with the expertise and insight of the field office. The Air Transportation Division (AFS-200) 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 certificate holder AQP

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application will initiate the AFS-200/FSDO/CMO/CMU partnership. AFS-200 will provide assistance during the development, implementation, and review, as well as followup reviews, for the certificate holder's AQP. AFS-200 and the FSDO/CMO/CMU will manage program approvals and revisions through an ERT process.

C. JTA and Qualification Standards (§ 121.907). Programmed hours are replaced by a proficiency-based curriculum. The JTA documents each major task and subtask, together with their associated knowledge and skills, to be addressed in an AQP curriculum. Proficiency requirements are embodied in applicant-developed qualification standards, which specify the performance, standards, and conditions to be employed for training and evaluation purposes. Qualification standards are derived from a JTA that is specific to an individual carrier's aircraft, operating environment, and trainee population.

D. Instructional Systems Development (§ 121.907). The use of the systematic Instructional Systems Development Methodology, known as Instructional Systems Development, must be incorporated into the AQP development process. Applicants may employ any of a wide range of current models or customize their own approaches to curriculum development. Applicants are encouraged to be creative in tailoring their own approach to their requirements, as long as the FAA deems them appropriate. Innovation and practical application may result in equally acceptable AQP. A document entitled "Applied ISD in AQP Development" is available from AFS-200. The minimal Instructional Systems Development requirements are:

- Develop a job task listing.
- Analyze that listing to determine essential skill and knowledge requirements (either directly or by reference).
- Determine which skill and knowledge requirements must be trained/tested.
- Develop qualification standards that define acceptable operational performance levels.
- Develop proficiency objectives that capture all training requirements.
- Develop tests that measure proficiency in skill and knowledge areas.
- Provide instructional programs that teach and test training requirements.
- Establish and maintain an audit trail of explicit links between task requirements, training requirements, training and evaluation activities, and evaluation results.
- Measure student performance against proficiency objectives and qualification standards for all curriculums.
- Revise the training program based on student performance levels on an ongoing basis. This data (stored in the Performance/Proficiency Database (PPDB)) will be collected and reported to the FAA on a regular basis.

E. Integration of Resource Management (CRM/DRM) (§ 121.917(a)). Training of CRM/DRM skills is mandatory. Using the Instructional Systems Development process, CRM/DRM skills must be integrated into the ground and flight training segments. A means of evaluating the effectiveness of such training is also mandatory, but pass/fail standards are not required. Applicant-developed evaluation strategies must at least include provisions for assessing the extent to which poor CRM/DRM skills are a contributory factor in a failure to meet technical standards of operational performance in proficiency evaluations and line checks.

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F. Data Reporting (§ 121.917(c)). Data collection and analysis are fundamental parts of AQP. Data collection and analysis processes must ensure that the certificate holder obtains performance information on its crewmembers, dispatchers, instructors, and evaluators that will enable the certificate holder and the FAA to determine whether the form and content of training and evaluation activities are satisfactorily accomplishing the overall objectives of the curriculum. AQP requires certificate holders to report data on performance in training and evaluation to AFS-200. This data must be submitted in a digital electronic format approved by AFS-200. All such data is de-identified. AQP data augments, but does not replace, the physical surveillance of certificate holder training and evaluation programs.

NOTE: AFS-200 uses de-identified data for program monitoring, not to monitor individual crewmembers, dispatchers, or other operations personnel.

G. Duration of Evaluation Periods and the Continuing Qualification Cycle (§ 121.915(a), (b), (d)). The time period during which all proficiency objectives are trained, validated, or evaluated is called a continuing qualification cycle. Initially, the continuing qualification cycle approved for an AQP must not exceed 24 calendar-months in duration, and must include two or more evaluation periods of equal duration. The FAA may approve extensions of the continuing qualification cycle and evaluation period upon demonstration that the extension is warranted. The maximum permissible duration of a continuing qualification cycle is 36 months. Extensions beyond the initial evaluation period and continuing qualification cycle permitted by AQP (12 and 24 months, respectively, plus or minus 1 month) will require strong justification. To obtain approval for an extension, a participant must show that individuals subject to the AQP are able to maintain their knowledge and skills under the already approved schedules and that a rational basis exists for believing that no loss of knowledge, skill, or ability would result from the extension. An extension shall be allowed to continue, or an additional extension shall be granted, only if a certificate holder's record and independent FAA evaluation show that the extension is appropriate as a means to maintain or increase the level of proficiency. This could occur, for example, if the applicant proposes to increase the number of training sessions per evaluation period.

3-1498 KEY CONCEPTS, SPECIAL TERMINOLOGY, AND DEFINITIONS.

A. First Look Maneuvers (§ 121.907). "First Look" maneuvers are applicable only to the continuing qualification curriculum. First Look maneuvers are those maneuvers that are identified as likely to be sensitive to loss of proficiency due to infrequent practice and/or other factors. The principal purpose of First Look is to test the retention of proficiency of the flightcrews over the evaluation period and continuing qualification cycle. First Look is an AQP requirement whenever the evaluation period exceeds the checking/training interval of a traditional part 121 training program. However, First Look is a valuable tool and should be considered regardless of the length of the evaluation period. For example, First Look may be employed as a means of validating that currency items are performed in line operations with sufficient frequency that proficiency is being maintained. First Look maneuver proficiency assessment is graded using the same measurement methodology and rating criteria used in maneuver validation. The First Look grades are then analyzed to determine trends of degraded proficiency. Repeating First Look maneuvers on an evaluation allows a pretest, post-test measure of the learning during training, where the difference between the session's First Look grades

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and the last session's evaluation grades provide a rough measure of skill decay over the training interval.

B. Terminal Proficiency Objectives (TPO) and Supporting Proficiency Objectives (SPO). TPOs are derived at the task level from the JTA. They reflect the end-level proficiency to be achieved in training and demonstrated in evaluation. SPOs are derived at the subtask level from the JTA. They reflect the subtasks on which proficiency must be achieved in training in order to perform at a satisfactory level on a given TPO. However, a consistent one-to-one correlation between all tasks/subtasks and TPOs/SPOs is not expected. Multiple TPOs may be derived from a single task, or multiple tasks may produce a single TPO, depending on how significantly the performance is altered due to conditions and/or contingencies. Both TPOs and SPOs require specification of the performance to be accomplished, the standards that must be met or exceeded to demonstrate proficiency, and the conditions under which training or evaluation of performance will be conducted. A complete list of TPOs and SPOs would encompass all major tasks and subtasks for all phases of flight/operation.

C. Qualification Standard (§ 121.907). A Qualification Standard is a job task proficiency objective (TPO or SPO) linked to an evaluation strategy together with specification of a media range. A certificate holder's qualification standards define the requirements of mastery for specific duty positions and replace the PTS for evaluation and certification. Qualification standards created at the terminal level generally reflect objectives for evaluation, although some such objectives may be addressed only in training to proficiency in the applicant's approved AQP. Qualification standards created at the supporting level generally reflect objectives for training, although some such objectives may also be identified for evaluation in the applicant's approved AQP. Figure 3-95, Advanced Qualification Program—Qualification Standards Documentation, presents an example of an AQP qualification standard established at the terminal level. See also Figure 3-96, Advanced Qualification Program—Documentation Checklist and Review Job Aid.

NOTE: Variation in the format of a given certificate holder's qualification standards is permissible, provided that all of the categories of information in the example are addressed.

D. Currency Objectives. The purpose of identifying currency events is to enable training and evaluation to focus on areas of greatest need. An applicant may elect to identify certain objectives (TPOs or SPOs, as applicable) as currency events, based on an analysis of the frequency with which a given objective and condition occur during line operations. Candidates for such a designation include only those objectives on which skills are maintained by virtue of their frequent exercise in flight, such as normal takeoff under Ceiling and Visibility OK (CAVOK) conditions. Approved currency events do not need to be specifically trained in continuing qualification curriculums, provided that the applicant implements a means acceptable to the FAA of periodically verifying that proficiency on such items is being maintained (line checks, safety audits, observations, etc.).

E. Critical Objectives. An applicant may elect to identify certain objectives (TPOs or SPOs, as applicable) as critical or non-critical, based on the applicant's JTA. The principal consideration with respect to criticality is the frequency of proficiency training or evaluation

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required to ensure a margin of safety with respect to pilot performance. Critical objectives must be trained, validated, or evaluated during every evaluation period. Training or evaluation of non-critical objectives for such a curriculum must occur within every continuing qualification cycle. If the applicant elects not to categorize objectives in terms of criticality, all objectives derived from the applicant's JTA shall be considered critical.

F. Special Tracking (§ 121.913(b)(4)). Special tracking is the assignment of a person to an augmented schedule of training and/or checking. It is applied to individuals that have failed to demonstrate proficiency during an evaluation event. There are other criteria that the certificate holder may use to place an individual on special tracking. It could include continuing difficulty in completing the maneuver validation, an extended absence from duty, for new pilots in command (PIC), or at the request of the individual trainee. However, the AQP participant may implement an AQP strategy such as reduced training intervals that would offset the need for a specific special tracking strategy.

G. Train to Proficiency. Training to proficiency is training to a performance level that meets or exceeds a qualification standard. The training must include enough repetition and practice to ensure that each individual can perform at the qualification standard level over the entire evaluation period or continuing qualification cycle.

H. Dual Qualification. For the purposes of AQP, an individual is deemed "dual qualified" if, during the continuing qualification cycle following an AQP proficiency evaluation, the individual performs flightcrew member duties in that aircraft type after becoming qualified and operating another aircraft type during that same continuing qualification period.

I. Inter-Rater Reliability. Rater reliability is a standardization program for instructors/evaluators. The required data collection and analysis is incumbent upon reliable and valid instructor/evaluator grading judgments. This standardization program is necessary to establish uniform grading criteria, address reliability between instructors/evaluators, and develop remediation procedures. The program must provide rater reliability training during the qualification, transition, continuing qualification, and differences curriculums.

J. Crew-Oriented Scenario-Based Training and Evaluation. All AQP curriculums require crew-oriented scenario-based training and evaluation. AQP extends this concept from LOFT and SPOT to LOE. LOFT/SPOT/LOE scenarios must be designed to provide the opportunity for training or evaluation, as appropriate, on approved AQP qualification standards and CRM skills. LOE scenarios must be approved for their intended use in an AQP by the principal operations inspector (POI). A flightcrew member AQP curriculum requires scenario-based training and evaluation conducted with a full crew in a FSTD. Dispatchers, F/As, and other operations personnel training and evaluation scenarios must be conducted in an operational setting.

K. Full Crew. A complete paired (PIC/second in command (SIC)) crew complement should be scheduled and maintained. Unpaired flightcrew member (PIC/PIC or SIC/SIC) substitution is highly discouraged. If crew substitutions are unavoidable, the substitute crewmember will be either another line-qualified crewmember or a task-familiar crewmember in a training status comparable to the duty position being substituted. Evaluators conducting

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a validation or evaluation may not serve as a substitute crewmember. The crew substitution table/matrix will be part of the certificate holder's approved AQP documentation (Implementation and Operations Plan (I&O Plan)). Refer also to the current edition of AC 120-35, Line Operational Simulations: Line Oriented Flight Training, Special Purpose Operational Training, Line Operational Evaluation.

L. Random Line Check (§ 121.915 (b)(2)(ii)). A no-notice line check strategy may be used in lieu of the annual PIC line check. The certificate holder who elects to exercise this option must ensure that the no-notice line checks are administered so that the flightcrew members are not notified in advance of the evaluation. In addition, the AQP Certificate holder must ensure that each PIC receives at least one no-notice line check every 24 months. As a minimum, the number of no-notice line checks administered each calendar-year must equal at least 50 percent of the applicant's PIC workforce, as determined in accordance with a strategy approved by the Administrator for that purpose. In addition, the line checks to be conducted under this paragraph must be representatively sampled over all geographic areas flown by the certificate holder in accordance with a sampling methodology approved by the Administrator for that purpose.

M. Planned Hours (§ 121.907). All curriculums will include planned hours for ground training, flight training, evaluation, and OE. Planned hours represent the estimated amount of time (as specified in a curriculum outline) that it takes an average student to complete a segment of instruction (to include all instruction, demonstration, practice, and evaluation, as appropriate, to reach proficiency). Planned hours replace the programmed hours associated with traditional programs. Planned hours enable the FAA and the applicant to schedule their personnel resources more efficiently and provide a baseline for curriculum adjustments. Planned hours are not used by the FAA as a basis for program approval, review, or compliance assessment. Planned hours should be shown on the course footprint that is part of the curriculum outline.

N. Conditions. Describe the range of circumstances under which student performance will be measured and evaluated. Conditions include the operational environment (e.g., Navigational Aid (NAVAID) inoperable, different aircraft weight, passengers not seated, or aircraft configuration), and natural environment (e.g., ceiling, visibility, wind, or turbulence). The qualification standard should (1) indicate with an asterisk those specific conditions to be evaluated as part of the qualification curriculum, and (2) provide a more exhaustive listing of conditions over which crewmembers will be trained and tested during the course of successive continuing qualification cycles.

O. Contingencies, Abnormal Situations, Minimum Equipment List (MEL)/Configuration Deviation List (CDL), and Emergencies. The qualification standard should (1) indicate those specific contingencies to be evaluated as part of the qualification curriculum, and (2) provide a more exhaustive listing of contingencies over which crewmembers will be trained and tested during the course of successive continuing qualification cycles.

3-1499 REQUIRED DOCUMENTATION. In addition to the supporting documents and manuals provided the FAA in traditional training programs, there are six documents and an annual report requirement that are unique to AQP. The documents are instrumental in managing the AQP and must be maintained throughout the life of the program. The documents can be

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categorized in two groups, management and database, by their function and interrelationship. The documents, along with the reports, comprise the Program Audit Database (PADB). The annual report provides a QC function and indicates the status of the program. See SAS Element 2.1.6 (OP), Advanced Qualification Program (AQP), Element Design Data Collection Tool (ED DCT) or Element Performance Data Collection Tool (EP DCT), as applicable, and Figure 3-96.

NOTE: Variation in the format of a given certificate holder's qualification standards is permissible, provided that all of the categories of information in the applicable ED DCT or EP DCT and Figure 3-96 (Qualification Standards) are addressed.

A. Management Documents. These documents include the Application, Instructional Systems Development Methodology, and I&O Plan. These documents are standalone in that a change in one will not necessitate a change in another.

B. Database Documents. These documents include the Task Analysis, Qualification Standards, and Curriculum Outlines. Because a change to one often means a change to the others, they should be maintained in an interactive database.

C. Annual Report. The purpose of the report is to identify changes to the curriculums resulting from feedback and analysis of the information in the PPDB.

1) The AQP Application (§ 121.909(a)). The purpose of the application is to establish the applicant's methodology for developing an AQP for all of its fleets, instructors, and evaluators, and for non-fleet-specific curriculum (i.e., indoctrination). The application is submitted once and is updated as information in the application warrants changing (e.g., a change in the schedule, adding new aircraft, or initiating F/A or dispatcher AQP programs). See Figure 3-96.

2) JTA (§ 121.909(b)(2)). JTA is the method or procedure used to reduce a unit of work to its base components. The JTA provides a detailed, sequential listing of tasks, subtasks, and elements (if required) with the knowledge and skills that clearly define and completely describe the job. A JTA provides consideration for conditions surrounding the job both in the environment and in the equipment used. It establishes standards (parameters and tolerances) that provide safe and effective job accomplishment. It also identifies characteristics such as consequence of error, relative difficulty, frequency of occurrence in specific operations, and the time needed to accomplish the task. As a complete document, the JTA has several components: a job task list, a learning analysis, and crew positions. See Figure 3-94, Advanced Qualification Program—Job Task Analysis Documentation, and Figure 3-96.

3) Qualification Standards Document (§ 121.909(b)(2)). It is the central AQP document. It provides the regulatory basis for all departures from current regulations, and summarizes the operational and instructional foundations for all major curriculum elements, such as learning objectives, curriculum outlines, evaluation strategies and gradesheets. The Qualification Standards Document has four parts: the prologue, a regulatory comparison,

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the evaluation/remediation methodology, and the specific TPO or SPO qualification standards. See Figures 3-95 and 3-96.

4) Instructional Systems Development Methodology Document (§ 121.909(b)(2)). It describes the approach to be used by applicant airlines to develop and maintain all AQP curriculums. The Instructional Systems Development Methodology document should be finalized before constructing curriculums for each duty position. It applies to pilot, instructor, and evaluator programs, and may be expanded to include other personnel, such as F/As and dispatchers. This document is divided into two sections. The first section, Curriculum Development Procedures, describes the applicant's approach for using the JTAs and qualification standards as baseline documents to construct their general training curriculums across all AQP courses. The second section, Line Operational Simulation Methodology, describes the approach for developing LOS scenarios. See Figure 3-96.

5) Curriculum Outline Document (§ 121.909(b)(2)). This is a listing of course material divided into segments, segments into modules, modules into lessons, and lessons into elements or topics. All AQP curriculum outlines must be structured in accordance with the guidance provided in Volume 3, Chapter 19, for segment, module, lesson, and element. Each part of the curriculum outline must clearly indicate the subject matter to be taught and correspond directly to the hierarchical numbering system of the Task Analysis. The document must detail a clear audit trail tracing each training objective to the appropriate curriculum. A curriculum outline provides the basis for the curriculum footprint, which is a high-level graphical overview of the curriculum content depicting the training and evaluation activities and the proposed hours for each day of the curriculum. Curriculum outlines are developed and submitted with the understanding that application of the course material may require some flexibility regarding the actual day on which each activity is accomplished. See Figure 3-96.

6) I&O Plan (§ 121.909(b)(2)). This is a milestone schedule detailing the transition to an AQP and a blueprint describing provisions for maintenance, administration, data management, and continuing QC of curriculums. The I&O Plan can be sectioned into two parts. The first part describes how the certificate holder proposes to implement the AQP. Included in this proposal is the schedule for the Phase III training evaluation to include instructor/evaluator training and small group tryouts. It should also include provisos for evaluating the effectiveness of performance measurement tools, and provisions for evaluating facilities, courseware, and equipment before starting the plans for the small group tryouts. The second part explains how the certificate holder intends to operate the AQP in Phases IV and V. Included in this section are strategies for maintaining the program, crew pairing policy, First Look administration, and instructor/evaluator requirements. The operations plan will also describe, in detail, the Data Management Plan that includes a statement of understanding addressing the collection and analysis of performance/proficiency data and a description of the PPDB, the data management collection process, and the FAA data submission, analysis, and reporting requirements. See Figure 3-96.

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7) Annual AQP Report. Certificate holders will monitor the status of all AQP curriculums and the PPDB and will summarize their findings in an annual report that is given to the POI with a copy to AFS-200. See Figure 3-96.

8) Job Aids. SAS Element 2.1.6 ED DCT and/or EP DCT and Figure 3-96.

3-1500 TRAINING, VALIDATION, EVALUATION, REMEDIATION, AND CERTIFICATION.

A. Conformance to Handbook Standards. AQP follows the direction and guidance provided in Volume 3, Chapter 19 for training programs and flightcrew member qualification. All AQP curriculum outlines must be structured in accordance with the guidance provided in Volume 3, Chapter 19 for segment, module, lesson, and element. Although AQP follows its own phased approval process, the activities described in Volume 3, Chapter 19 with respect to inspector review of curriculum content, are virtually identical under AQP.

B. Elements From Existing Programs. A curriculum approved under an AQP may include elements of existing approved training programs under parts 121 and 135. Each curriculum must specify the M/M/S and variant of aircraft and each crewmember position or other positions to be covered by that curriculum. Positions to be covered by the AQP must include all flightcrew member positions, instructors, and evaluators, and may include other positions, such as F/As, aircraft dispatchers, and other operations personnel.

C. AQP Requirements over Part 61, 63, 65, 121, or 135. Each certificate holder that obtains approval of an AQP must comply with all of the requirements of the AQP instead of the corresponding provisions of part 61, 63, 65, 121, or 135. However, each applicable requirement of part 61, 63, 65, 121, or 135 that is not specifically addressed in the AQP continues to apply to the certificate holder. No person may be trained under an AQP unless the FAA has approved that AQP and the person complies with all of the requirements of the AQP.

D. Completion Month. Any training, validation, or evaluation required under an AQP that is satisfactorily completed in the calendar-month before or the calendar-month after the calendar-month in which it is due is considered to have been completed in the calendar-month it was due.

E. FSTDs (§ 121.921). Procedures for the qualification of FSTDs are described in 14 CFR part 60. An applicant may propose to depart from the permissible-use tables for FSTDs provided in Volume 3, Chapter 19, Section 6, subject to acceptable justification and FAA approval of the intended use of such equipment in a specific AQP curriculum.

F. Training. Section 121.909(b) requires three primary curriculums for each M/M/S of aircraft (or variant) for each duty position. These curriculums are Indoctrination, Qualification, and Continuing Qualification. In addition to primary curriculums, operational necessities may require secondary curriculums (segments) to fulfill particular needs. Secondary curriculums may include: Transition, Upgrade, Differences, Related Aircraft Differences, Requalification, Refresher, and Recency. The three primary curriculums do not have to be implemented simultaneously. For example, participants may elect to develop a continuing

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qualification curriculum followed by a qualification curriculum implemented sometime in the future.

1) Indoctrination Curriculum (§ 121.911). (See also Volume 3, Chapter 19). An indoctrination curriculum consists of all training elements which will be learned and evaluated before an individual may begin a qualification curriculum. Indoctrination curriculum segments typically consist of ground training and evaluation. Four distinct areas of indoctrination ground training are:

a) Operator-Specific Training. This training acquaints crewmembers, dispatchers, instructors, evaluators, and other operations personnel with company policies, practices, and general operational procedures. The subject matter of indoctrination includes elements that pertain to the certificate holder's methods of compliance with regulations and safe operating practices.

b) Airmen-Specific Training. This training provides the basic aeronautical knowledge needed to enter the subsequent qualification curriculum. Weather, 14 CFR, security, some emergency, and hazardous material (hazmat) training that is partially certificate holder-specific and partially duty-position-specific.

c) Instructor-Specific Training. The fundamental principles of the teaching and the learning process; methods and theories of instruction; and the knowledge necessary to use aircraft, FSTDs, and other training equipment.

d) Evaluator-Specific Training. General evaluation requirements of the AQP; methods of evaluating crewmembers, aircraft dispatchers, and other operations personnel, and policies and practices used to conduct the kinds of evaluations particular to an AQP (e.g., LOE).

G. Qualification Curriculum (§ 121.913). (See also Volume 3, Chapter 19). AQP requires a qualification curriculum for each duty position in each M/M/S aircraft (or variant). Each qualification curriculum will include training, validation, evaluation, and possibly airman certification. The training activities include ground and flight training, operational experience, and may include special qualification training. If the training is to result in airman certification or an additional type rating, curriculum segments must explicitly identify the alterative training and evaluation strategy to be used in place of the prescribed practical test requirements of part 61, 63, 65, 121, or 135. The applicant must show that the proposed AQP training and evaluation strategy will ensure individual competence that equals or exceeds the practical test requirements and that that each person certificated through an AQP has demonstrated satisfactory proficiency in the integration of technical and CRM skills.

1) Ground Qualification Training Activities. To be qualified for a particular duty position, a person will receive job-specific ground training. This training typically includes general operational subjects, technical systems, system integration, and emergency equipment training. Ground Qualification culminates in a systems knowledge validation session that may take the form of a traditional oral examination, a written test, or may incorporate other means of systems knowledge validation (e.g., computer-based), as approved by the FAA.

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2) Flight Qualification Training Activities. Each AQP includes curriculum segments for systems training integration and knowledge validation, with training and evaluation in FSTDs, where applicable. Training and evaluation in an aircraft is discouraged, but may be approved by the FAA on a case-by-case basis.

3) Special Qualification Training. Curriculum segments may include special purpose training. These are portions of ground and flight training that have specific application; (e.g., to crewmembers that serve in international operations or for initial introduction of new flight operations, such as Category (CAT) II/III, Global Positioning System (GPS) or Required Navigation Performance (RNP) approaches). Special purpose training and validation may initially be a separate curriculum segment that is later integrated into ground and flight training segments.

4) Instructor Training. Training and evaluation activities to qualify a person to conduct instruction on how to operate, or on how to ensure the safe operation of, a particular M/M/S aircraft (or variant).

5) Evaluator Training. Training and evaluation activities that are aircraft and equipment specific to qualify a person to assess the performance of persons who operate, or who ensure the safe operation of, a particular M/M/S aircraft (or variant).

H. OE. OE curriculum segments are integral to qualification curriculums. OE provides hands-on experience in performing the duties of a newly assigned position under the supervision of an appropriately and currently qualified evaluator/check pilot/check FE. OE is conducted during actual flight operations. Part 121 subpart Y allows participants to propose alternatives to the requirements of § 121.434, subject to FAA approval. Deviation from the OE and operating cycle requirements of § 121.434 based on a designation of related aircraft must be authorized by AFS-200. (See Volume 3, Chapter 19, Section 12 for additional information regarding deviations based on designation of related aircraft.)

I. Secondary Curriculums (§ 121.909(b)). Developing a secondary curriculum entails selecting, revising, and arranging modules (with related proficiency objectives) from all three primary curriculums. In all cases, the TPOs, SPOs, and enabling objectives (EO) must include CRM principles and when appropriate include the use of LOS for training, validation, and evaluation. The applicant will identify the differences between the traditional training/checking regulatory requirements and those specified in a certificate holder's AQP.

1) Transition Curriculum. This curriculum is applicable for an employee who has been previously trained and qualified in a specific duty position by the certificate holder and is being assigned the same duty position on a different aircraft. In a transition training curriculum, the same qualification standards apply as found in the qualification curriculum. Individuals must meet all the same validation and evaluation sessions as the qualification curriculum. However, the training received may be abbreviated, based on an analysis of the training/validation/evaluation requirements of the qualification curriculum compared to an assessment of the currency, knowledge, skills, and qualifications of the individual. In most cases, the training received would be from modules extracted from the qualification curriculum for that particular aircraft. For example, if both aircraft used the same flight management system (FMS),

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training may be tailored to be aircraft-specific and proficiency-validated rather than requiring the student to sit through the entire FMS curriculum segment.

2) Upgrade Curriculum. This curriculum is for an employee who has been previously trained and qualified as either a SIC or FE for the certificate holder and is being assigned as either a PIC or SIC, respectively, for the same aircraft type in which he or she was previously trained and qualified. Elements or training modules for this curriculum may be found in all three primary curriculums. In upgrade training, the same qualification standards apply as found in the qualification curriculum. The individual must meet at least the same validation and evaluation sessions as in the continuing qualification curriculum for the position that they are being assigned. However, the training received may be abbreviated, based on an analysis of the training/validation/evaluation requirements of the qualification and continuing qualification curriculums compared to an assessment of the currency, knowledge, skills, and qualifications of the individual. For example, if the individual is current in the aircraft as a SIC, proficiency in training modules such as systems, FMS, and emergency drills may be validated through testing. Other training, such as seat dependent task training, command authority, and CRM, may be trained and evaluated using a combination of classroom and LOS methodology.

3) Downgrade. Seat-dependent task training is required when a PIC is reassigned as an SIC on the same type aircraft. It may be appropriate to provide modules from several different secondary curriculums (i.e., transition and requalification) if the flightcrew member has never served as an SIC on that type aircraft. The training required when the downgrade is from PIC to SIC from one type aircraft to another type aircraft will depend on whether the crewmember was previously qualified as a SIC in that type. If previously qualified in the duty position and type, a requalification curriculum based on time away is appropriate. If only previously qualified in the duty position, transition is appropriate.

4) Refresher Training. This curriculum is for an individual who has not met the time requirements of consolidation. The individual must be requalified using this secondary curriculum in order to resume serving in that duty position.

J. Continuing Qualification Curriculum (§ 121.915). (See also Volume 3, Chapter 19). This curriculum provides the means for fully qualified individuals to maintain their proficiency in their duty positions and aircraft assignments. Similar to the Qualification Curriculum, each Continuing Qualification Curriculum will include training, validation, and evaluation.

1) Continuing Qualification Cycle. During a continuing qualification cycle each person qualified under an AQP, including instructors and evaluators, will receive a mix of training and evaluation on the objectives necessary to ensure that each person maintains proficiency in the knowledge, technical skills, and cognitive skills required for initial qualification. Each continuing qualification cycle must include at least the following:

a) Evaluation Period. Initially, the continuing qualification cycle is comprised of two or more evaluation periods of equal duration. Each person qualified under an AQP must receive ground training and flight training, as appropriate, and an evaluation of proficiency during each evaluation period.

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b) Training Session. A contiguously scheduled period devoted to training activities at a facility acceptable to the FAA for that purpose. The FAA must approve the number and frequency of training sessions.

2) Training. Continuing qualification must include training in all tasks, procedures, and subjects required in accordance with the approved program documentation, as follows:

a) Ground Training. For crewmembers, instructors, evaluators, dispatchers, and other operational personnel, a general review of knowledge and skills covered in qualification training, hazmat, security, emergency equipment, updated information on newly developed procedures, and safety information and, if applicable, a line observation program.

b) Flight Training. For crewmembers, instructors, evaluators, and other operational personnel who conduct their duties in flight: proficiency training in an aircraft or FSTD, as appropriate, on normal, abnormal, and emergency flight procedures and maneuvers. For instructors and evaluators who are limited to conducting their duties in FSTDs: training in operational flight procedures and maneuvers (normal, abnormal, and emergency).

c) First Look. For PICs, SICs, and FEs, in accordance with the certificate holder's approved program.

d) Instructors/Evaluators. Proficiency training in a FSTD regarding training equipment operation and inter-rater reliability training.

e) Recency of Experience. For PICs, SICs, FEs, aircraft dispatchers, instructors, evaluators, and F/As, approved recency-of-experience requirements appropriate to the duty position.

K. Requalification Curriculum. This curriculum is for an individual who has not met the requirements of a Continuing Qualification Curriculum and becomes unqualified for the duty position. The individual must be requalified to resume serving in that duty position. An AQP applicant should establish nonqualification duration limits based on a currency analysis beyond which an individual would be required to repeat some or the entire indoctrination and qualification curriculum to requalify.

L. Dual Qualification. When maintaining qualification in more than one aircraft type, the individual will have one aircraft type designated as "primary" and other aircraft type(s) designated as "secondary." For each aircraft type for which they are maintaining qualification, the individual must accomplish the AQP Continuing Qualification Curriculum for that aircraft. Those training items that are not "fleet-specific" in nature need only be addressed in the "primary" aircraft's AQP continuing qualification program. In addition, the individual must accomplish at least one line check during the Continuing Qualification Cycle on the "primary" aircraft. The individual should then receive a line check on a different aircraft type each successive year so they are given a line check on all "secondary" aircraft types prior to reaccomplishing a line check on the first "secondary" aircraft type.

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M. Differences. (See Volume 3, Chapter 19, Section 9). Also refer to the current edition of AC 120-53, Guidance for Conducting and Use of Flight Standardization Board Evaluations, and the fleet Flight Standardization Board (FSB) report). Variations between the FSB report and a certificate holder's proposed differences training, checking, and currency requirements under an AQP must be justified, documented, and approved by the ERT.

NOTE: For every proficiency objective, the participant must designate the testing/validation/evaluation strategy. These strategies may include, but are not limited to, Train to Proficiency, Systems/Knowledge Validation, Procedures Validation, Maneuvers Validation, LOE, or Line Check.

N. Related Aircraft Differences. If a certificate holder's proposal includes related aircraft differences training, the certificate holder must first receive approval of the related aircraft designation from AFS-200 prior to initial approval of the curriculum. Variations between the FSB report and a certificate holder's proposed related aircraft differences training, checking, and currency requirements under an AQP must be justified, documented, and approved by AFS-200. Deviation from the requirements of § 121.434, § 121.439, or § 121.441, based on a designation of related aircraft, must be authorized by AFS-200. (See Volume 3, Chapter 19, Section 12 for additional information regarding related aircraft designation, related aircraft differences training, and deviations based on designation of related aircraft.)

O. Training to Proficiency.

1) The train to proficiency strategy is not unique to an AQP curriculum. Traditional part 121/135 training programs have been using the "train to proficiency" concept since the early 1980s. It is not practical or necessary to evaluate the applicant in every event in which the applicant has received training. A reasonable number of events per evaluation should accomplish the purpose of ensuring that the applicant is proficient throughout the range of objectives in which training was conducted.

2) Training to proficiency for initial qualification flightcrew members is permitted by § 121.401(e), Training Program: General, allowing that a person who progresses successfully through flight training, is recommended by his instructor, check pilot, or check FE, and successfully completes the appropriate flight check for a check pilot, check FE, or the Administrator, need not complete the programmed hours of flight training for the particular airplane. Volume 3, Chapter 19 urges POIs to emphasize that training is of primary importance, and checking is the means of verifying that training has been adequate. The POI can consider the objective to have been met when the crewmember is able to perform at the required standard of proficiency immediately before entering the next cycle of required training. Section 121.441(d) allows waiver discretion under certain conditions to the check pilot (also a qualified examiner), or the FAA inspector conducting the check for those crewmembers employed by part 121 certificate holders. This waiver authority requires that the applicant be trained to proficiency in all waiver-eligible maneuvers/procedures in the certificate holder's FAA-approved training program.

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3) When using the AQP train to proficiency concept, the training provided must ensure the trainee's performance is to a level that meets or exceeds the specific qualification standard. This concept must include enough repetition and practice to ensure that each individual can perform at the qualification standard over the entire evaluation period or continuing qualification cycle.

P. Validation.

1) Validation is a determination that the training produces the required results as identified in the qualification standards and that the individual has met the performance objectives of the training module.

2) Participants are encouraged to be innovative with their validation strategy. Any validation strategy must ensure that the level of proficiency of each individual is appropriate and adequate to move on to the next level. All validation/evaluation strategies require ERT approval.

3) The following are flightcrew member validation strategies by curriculum.

Q. Indoctrination. End of course exam, generally a written test with a required passing score of 80 percent.

R. Qualification Curriculum.

1) Systems Knowledge Validation. This is an assessment of an individual's technical systems knowledge. Systems knowledge validation may be accomplished by a written, electronic, or oral exam.

2) Procedures Validation. This is an assessment of an individual's systems integration knowledge and skill. This validation addresses the individual's ability to assimilate system and procedural knowledge into the appropriate execution of procedures. This validation session should take place in an FSTD. The intent of the Procedural Validation session is to ensure an individual's systems and procedural knowledge is at an appropriate level before progressing into the flight training phase. There is no established requirement that the systems and procedures validation have to be accomplished sequentially.

3) Maneuvers Validation (MV). This validation addresses an individual's proficiency in the execution of maneuvers. For a Qualification Curriculum, crewmembers are expected to have reached a satisfactory level of proficiency in the maneuvers prior to this validation event.

4) OE. OE provides hands-on experience in performing the duties of a newly assigned position under the supervision of an appropriately and currently qualified evaluator (check pilot or check FE). OE is conducted during actual flight operations. Part 121 subpart Y allows participants to propose alternatives to the requirements of § 121.434, subject to FAA approval. Deviation from the OE and operating cycle requirements of § 121.434 based on a designation of related aircraft must be authorized by AFS-200. (See Volume 3, Chapter 19,

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Section 12 for additional information regarding deviations based on designation of related aircraft.)

S. Continuing Qualification Curriculum.

1) First Look. First Look maneuvers are applicable only to the Continuing Qualification curriculum. First Look maneuvers are those maneuvers that are identified as likely to be sensitive to loss of proficiency due to infrequent practice and other factors. The principal purpose of First Look is to test the retention of proficiency of the flightcrews over the evaluation cycle. First Look is an AQP requirement whenever the evaluation period exceeds the checking/training interval of a traditional part 121 training program. However, First Look is a valuable tool and should be considered regardless of the length of the evaluation period. First Look proficiency assessment is graded using the same measurement methodology and rating criteria used for the maneuvers validation.

a) List of Maneuvers. The listing of First Look maneuvers is developed by the applicant and approved by the FAA. First Look items are performed, graded, and analyzed to validate that flightcrews can maintain proficiency in these items between training intervals. These may include certain items given a designation of “currency” in the qualification standard, if any, in order to facilitate initial validation that these items are being performed outside of training with sufficient frequency that proficiency is being maintained.

b) Validation Strategy. The validation strategy the applicant develops for First Look is detailed in the I&O Plan. An ideal approach would be to have a listing of several critical and/or currency items that will be sampled under a controlled sampling technique that would ensure that each of the items are adequately and evenly assessed during the evaluation period. It is important to remember that First Look is not as much an assessment of an individual’s skills, as it is a measure of the collective retention of proficiency by flightcrews. Individual assessment occurs in maneuvers validation and LOE. The data that is collected from First Look is used for trend analysis and as a tool to validate the AQP program’s overall effectiveness.

c) Administration. First Look objectives/maneuvers must not be briefed in advance of the first execution of such maneuvers. Proficiency data must be collected before the repeated execution of any such First Look item during training. There are several options as to when the First Look validation can be conducted. For example, a First Look maneuver could be introduced as the first event of a FFS training session addressing maneuvers. Other options would be to make it part of an event in a LOFT or SPOT. The common element in all such options is that proficiency is assessed the first time the First Look item occurs in training.

d) Remediation. First Look proficiency assessment is considered a no-jeopardy event, subject to the requirement that any maneuvers unsuccessfully accomplished be trained to proficiency prior to the LOE. If an applicant proposes to request maneuver validation credit for First Look maneuvers, the applicant must assure that the First Look proficiency assessment is accomplished by an AQP qualified evaluator, rather than by an instructor.

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2) MV. The MV session in the Continuing Qualification Curriculum allows assessment and attainment of technical proficiency prior to evaluation in the LOE. A Continuing Qualification Curriculum MV must be successfully completed within the time limits of the standard company-scheduled FFS session (national norm is 2 hours per crewmember) or an additional training period is required. If an individual requires additional training periods to be able to demonstrate proficiency, consideration should be given to placing the individual in Special Tracking.

T. Evaluation.

1) Qualification Curriculum. The LOE evaluation addresses the individual's ability to demonstrate technical and CRM skills appropriate to fulfilling job requirements in a full mission scenario environment. The intent of the LOE is to evaluate and verify that an individual's job knowledge, technical skills, and CRM skills are commensurate with AQP qualification standards and that the individual is qualified to begin the OE portion of the Qualification Curriculum (Refer to AC 120-35). An LOE failure is reported to the FAA. If the LOE is to result in certification, a failure will result in the issuance of FAA Form 8060-5, Notice of Disapproval of Application.

NOTE: An aircrew program designee (APD) or FAA Operations inspector must administer all Qualification Curriculum LOEs. A check pilot or check FE may administer continuing Qualification LOEs.

2) Continuing Qualification.

a) LOE. This evaluation addresses the individual's ability to demonstrate technical and CRM skills appropriate to fulfilling job requirements in a full mission scenario environment. The intent of the LOE is to evaluate and verify that an individual's job knowledge, technical skills, and CRM skills are commensurate with AQP qualification standards and that the individual is still qualified. The purpose, administration, and remediation strategy for the Continuing Qualification Curriculum LOE is the same as for a Qualification Curriculum.

b) Line Check. An annual continuing qualification line check is mandatory for each PIC. It is conducted in an aircraft during actual flight operations under part 121 or 135, or during operationally (line)-oriented flights, such as ferry flights or proving flights. A line check must be completed in the calendar-month at the midpoint of the evaluation period plus or minus 1 month.

3) No-Notice Line Check.

a) Section 121.915(b)(2)(ii) allows a "no-notice" line check strategy to be used in lieu of the line check required by the above paragraph. The certificate holder who elects to exercise this option must ensure that the "no-notice" line checks are administered so that the flightcrew members are not notified in advance of the evaluation. In addition, the certificate holder must ensure that each PIC receives at least one "no-notice" line check every 24 months. As a minimum, the number of "no-notice" line checks administered each calendar-year must equal at least 50 percent of the applicant's PIC workforce, as determined in accordance with a strategy approved by the Administrator for that purpose. In addition, the line checks to be

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conducted under this paragraph must be representatively sampled over all geographic areas flown by the certificate holder in accordance with a sampling methodology approved by the Administrator for that purpose.

b) During the line check, each person performing duties as a PIC, SIC, or FE for that flight must be individually evaluated to determine whether the person remains adequately trained and currently proficient with respect to the particular aircraft, crew position, and type of operation in which he or she serves; and that the person has sufficient knowledge and skills to operate effectively as part of a crew. The evaluator must be check pilot, an APD, or the Administrator and must hold the certificates and ratings required of the PIC.

U. Repeating Objectives/Maneuvers During Validations and Evaluations.

1) Training and repeating substandard maneuvers during a traditional proficiency check has been permitted by § 121.441 for many years. Part 61, § 61.157(f)(1)(i) allows part 121 air carriers to substitute a § 121.441 proficiency check for part 61 certification flight check requirements for the appropriate aircraft rating. Section 121.441(e) reads, “If the pilot being checked fails any of the required maneuvers, the person giving the proficiency check may give additional training to the pilot during the course of the proficiency check. In addition to repeating the maneuvers failed, the person giving the proficiency check may require the pilot being checked to repeat any other maneuvers he finds are necessary to determine the pilot’s proficiency.” Volume 3, Chapter 19 calls this repeat process “Training to Proficiency.” It also states that when a check pilot determines that an event is unsatisfactory, the check pilot may conduct training and repeat the testing of that event. This provision has been made in the interest of fairness and to avoid undue hardship and expense for pilots and certificate holders.

2) Under an AQP, repeats of objectives/maneuvers are allowed in all validations and evaluations under certain specific conditions. The conditions depend on the event and the curriculum.

V. Qualification Curriculum.

1) Systems Validation. If a written or electronic testing system is used in lieu of an oral exam, a score of 80 percent or greater corrected to 100 percent would be an acceptable validation. An overall score of less than 80 percent would require retraining and retesting. A failure of an individual module or subsection, with an 80 percent or better overall only requires retraining and retesting of the specific module. Consideration should be given to establishing a maximum number of modules or subsections that, if failed, constitute an overall failure of the validation.

2) Procedures Validation (PV). Training repeats are allowed and are not counted as a validation repeat. The PV must be successfully completed within the time limits of the standard company scheduled validation session or an additional training period is required. After additional training, the individual need only repeat the objectives that were graded unsatisfactory.

3) MV. MV must not allow more than two repeats of any one maneuver or one repeat of any two maneuvers. A debriefing of why the maneuver(s) was unsatisfactory

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is allowed, but the repeats must occur with no training, practice, or coaching. If the crewmember fails to demonstrate proficiency within the time constraints of the FFS session, the MV is considered unsatisfactory and additional training is required. After additional training, the individual need only repeat the maneuvers that were unsatisfactory. Failure of the MV does not result in the issuance of FAA Form 8060-5.

4) LOE. Grading of an LOE is at the event set level. An LOE with more than 25 percent of the event sets graded unsuccessful would constitute a failure of the LOE and will require remedial training and another LOE. For an LOE with 25 percent of the event sets or fewer graded unsuccessful, repeats may be permitted at the end of the LOE session, if time permits and if it is possible to recreate the conditions similar to the original event set for the repeat. For example, if an LOE has five, six, or seven event sets, only one set may be repeated. If an LOE has between 8 and 11 event sets, 2 may be repeated. No event set can be repeated more than once. A debriefing of why the event set(s) is unsatisfactory is allowed, but the repeat must occur with no training, practice, or coaching. If any repeated event is unsatisfactory, remedial training and another complete LOE evaluation is required. A failure of an LOE requires that the individual enter special tracking. If the LOE is to result in certification, a failure will result in the issuance of FAA Form 8060-5.

NOTE: Regardless of the number of events sets, unsafe individual or crew performance that would result in significant damage, hull loss, or loss of life (i.e., crash) during an LOE constitutes a failure of the LOE.

5) Line Check. Crewmembers receiving this evaluation are assessed for their proficiency in the duty position. Successful completion of the line check verifies that the individual is adequately trained and is capable of performing the duties and responsibilities of the crew position. If any task is unsatisfactory, the individual must receive remedial training on that task, additional OE if necessary, and, if appropriate, another line check. If a pilot receives an unsatisfactory overall performance rating on a line check, the pilot must be removed from continued line operations until the approved remediation has been successfully completed.

W. Continuing Qualification Curriculum.

1) MV. Training repeats are allowed and are not counted as an evaluation repeat. A Continuing Qualification MV must be successfully completed within the time limits of the standard company scheduled FFS session (national norm is 2 hours per crewmember) or an additional MV period is required.

2) LOE. Same as Qualification Curriculum.

3) Line Check. Same as Qualification Curriculum.

X. Remediation.

1) Remediation Strategy (§ 121.913(b)(4), (d)(3), and (e)(3)). The Qualification Standards Document must describe the methodology that will be used to remediate unsuccessful testing, validation, or evaluation sessions. This remediation strategy must detail when and what may be repeated and whether or not additional training is warranted. Remediation strategies must

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also specify when no more training will be offered to the individual and the resulting actions. This strategy may be presented in narrative or flow diagram format.

2) Special Tracking (§ 121.913(b)(4)). This is a program of monitoring the proficiency of an individual at scheduled intervals. It is applied to individuals that have failed to demonstrate proficiency during an evaluation event. There are other criteria that the certificate holder may use to place an individual on special tracking. It could include continuing difficulty in completing the MV, an extended absence from duty, for new PICs, or at the request of the individual trainee. However, the AQP participant may implement an AQP strategy such as reduced training intervals that would offset the need for a specific special tracking strategy. This section will discuss the situation(s) that requires an individual to be placed in special tracking, the strategy to be used, and when special tracking is no longer required.

Y. Certification.

1) General. AQP provides an alternative practical means to certificate pilots, FEs, and aircraft dispatchers.

2) Certification Requirements (§ 121.919). An applicant for AQP certification is eligible to receive a commercial, airline transport pilot, FE, or aircraft dispatcher certificate or appropriate rating based upon successful completion of training and evaluation events accomplished under the AQP if the following requirements are met:

a) In Accordance with the Applicable Requirements of Part 61, 63, or 65. Certificate holders may develop and implement an alternative training and evaluation strategy, as specified in the Qualification Standards, if it can be demonstrated that the new criteria represent an equivalent or better measure of competence, operational proficiency, and safety. Once approved, AQP training and evaluation strategies are used in place of the prescribed practical test requirements of parts 61, 63, and 65, § 121.441, part 121 appendix E/F, and the applicable FAA-S-8081, Practical Test Standards (PTS).

b) Competence. Applicants for certification and/or qualification, including dispatchers and F/As, must show competence in required technical proficiency objectives and CRM/DRM in actual or simulated operational scenarios (i.e., LOE) that assess both types of skills together.

c) Qualification Curriculum Completion. An applicant must have successfully completed the entire Qualification Curriculum, as appropriate.

d) Eligibility. An applicant must be eligible under the applicable requirements of part 61, 63, or 65.

e) Training. The applicant must be trained to proficiency on the certificate holder’s approved AQP Qualification Standards, as witnessed by an instructor, check pilot, check FE, or APD, and have passed a LOE administered by an APD or the FAA.

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3) Application. An applicant for FAA airman certification must make application for certification on FAA Form 8710-1, Airman Certificate and/or Rating Application. There is a signature requirement on the back of the application form. It is the block entitled "Evaluator's Record (Use for ATP Certificate and/or Type Ratings)." Signature in the AQP block constitutes verification, by a competent authority, that all of the requirements under the specific provisions of a certificate holder's AQP qualification program have been satisfactorily accomplished. In this instance, the competent authority is an APD, Air Transport Pilot Examiner (ATPE), Training Center Evaluator (TCE) authorized by the FAA, or a qualified FAA inspector.

4) Personnel Authorized to Conduct Certification Activities. POIs shall only authorize aviation safety inspectors (ASI), aircrew program managers (APM), Training Center Program Managers (TCPM), APDs, or air carrier designated examiners (ADE/ATPE) to conduct pilot examination activities that have completed the requisite AQP evaluator training. Historically, ASIs and APDs certified airmen using a maneuver-based evaluation scenario derived from the practical test requirements of part 61, 63, or 65, as appropriate. AQP replaces the traditional pilot maneuver-based certification check with a scenario-based LOE. Due to the unique characteristics and detailed scripting of LOEs, all personnel approved to conduct certification activities are required to complete AQP evaluator training. This training should consist of the indoctrination and qualification curriculums for new personnel or a differences module for ASIs and APDs who are already qualified under the certificate holder's traditional program.

NOTE: ASIs that have completed a certificate holder's AQP evaluator training may administer certification activities for ASIs from other certificate holding district offices (CHDO) without completing another certificate holder's training.

5) POI Authorization. POI authorization shall be accomplished by appropriate entry on FAA Form 8710-6, Examiner Designation and Qualification Record, block 10 (with limitations, if any, noted on side 2) and FAA Form 8430-9, Certificate of Authority, under "is authorized to act in the capacity of a," specifying the aircraft on which AQP certification activity is authorized. FAA Form 8710-6 is not required for ASIs.

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Figure 3-94. Advanced Qualification Program—Job Task Analysis Documentation

This is the section of the Job Task Analysis (JTA) that serves as the foundation document for the sample qualification standards that follow. Task 6.1 serves as the basis for the TPO-level qualification standard while subtasks 6.1.1 and 6.1.2 serve as the foundation for the SPO-level qualification standards.

Generic Airlines Inc. Operations Manual Volume 9

Chapter 3: Qualification Standards, B-757 Flight Crew

Rev. # 5 Dated 10/01/07

6. Approach Operations and Landing

6.1 Perform an Instrument Approach*

6.1.1 Perform a 2 Engine Precision Approach Cat I ILS and Landing*

6.1.2 Perform One Engine Inoperative Cat I ILS Approach*

6.1.2 Perform Cat II ILS

6.1.3 Perform Cat IIIb ILS

6.1.4 Perform Coupled Autopilot Approach and Autoland Procedures

6.1.5 Perform Non-Precision Approach Procedures (VOR, NDB, LOC, LOC/BC, LDA, SDF, ASR, RNAV/FMS, GPS)

6.1.6 Perform an IMC One Engine Inoperative Missed Approach

6.2 Visual Approach

6.3.1 Perform Visual Approach and Landing

6.3.2 Perform Visual Approach and Rejected landing

* Used as an example.

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Figure 3-95. Advanced Qualification Program—Qualification Standards Documentation

Generic Airlines Inc.	Operations Manual	Volume 9
Chapter 3: Qualification Standards, B-757 Flight Crew		
Rev. # 8		Dated 10/25/07
Task: 6.1 Perform An Instrument Approach		
Duty Position: All		
Criticality: Yes	Currency: Yes	
Curricula: Qualification & Continuing Qualification		

Performance Statement:
All instrument approach procedures will be conducted in accordance with the applicable profiles as outlined in Volume 6 of the Operations Manual (B-757 Flight Standards). During all instrument approaches, the PF will configure the airplane so as to be stabilized on the approach by 500 feet below the FAF. The PM will continuously monitor the approach and make the required instrument approach altitude calls and deviation calls based on the parameters defined in Volume 6, Chapter 3 of the Operations Manual.

Conditions:	Contingencies:	
IMC * lowest approach minimums Turbulence * light Strong Cross Winds Present * lowest approach minimums Icing Conditions Present * light rime	Flight Director Inop FMS Inop Autopilot Inoperative * Windshear Loss of ATC Communication	Engine Failure Inside of the FAF Loss of Flight/Navigation Instrument

Standards:
During all instrument approaches, the PF achieves and maintains a stable airspeed, descent rate, vertical flight path, and configuration by 500 feet below the FAF. Between 1000 feet and 500 feet above DH or MDA, only minimum deviations from the standards below occur and are corrected with the proper calls and responses as defined in Volume 6 of the Operations Manual. Below 500 feet above DH or MDA in IMC conditions, with any deviations greater than these standards, the crew calls for and executes a missed approach. The following standards apply: Prior to the FAF, the PF maintains desired altitude within +/- 100 ft., desired heading within +/- 5 degrees, and desired airspeed within +/- 10 knots; Inside the FAF or Final Segment, the PF maintains desired Airspeed within +5 or -0 knots, Localizer or VOR course within 1/2 dot either side, RMI course within +/- 5 degrees, Glideslope within 1/2 dot either side, Sink rate within 1000 fpm, and desired altitude on a non-precision approach within +50/-0 feet. The crew makes all of the required instrument approach calls and responses as detailed in Volume 6 of the Operations Manual. The crew complies with all ATC instructions and clearances or advises ATC if unable. The crew complies with the specific instrument approach profile as depicted in Volume 6 of the Operations Manual. The instrument approach procedure is flown correctly and adjusted as necessary based on equipment availability or other factors. The crew immediately initiates a missed approach upon arriving at the DH or MAP if the required visual references are not distinctly visible. The landing checklist is completed in a timely manner without errors or omissions.

At all times during the approach, the crew uses standard phraseology and procedures to improve situational awareness, and communicates changes in systems or flight profiles in a clear, timely manner. The crew demonstrates strong knowledge of, and makes sound judgments concerning instrument approach procedures and policies.

Media: Level C FFS

Evaluation Strategy: Qualification - Maneuvers Validation/Continuing Qualification – Maneuvers Validation

Reference:
Volume 6 of the Operations Manual
Airman's Information Manual Chapter: 1
Airman's Information Manual Chapter: 5
Jeppesen Airway Manual

* identifies specific condition used during qualification validation/evaluation

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Generic Airlines Inc.	Operations Manual	Volume 9
Chapter 3: Qualification Standards, B-757 Flight Crew		
Rev. # 8		Dated 10/25/07
Task: 6.1.1 Perform a 2 Engine Precision Approach Cat I ILS		
Duty Position: All		
Criticality: No	Currency: Yes	
Curricula: Qualification & Continuing Qualification		

Performance Statement:
The crew will complete the appropriate approach briefing prior to the initial approach fix. Once cleared for the approach, the PF will configure the airplane prior to the FAF per the Generic Airline B-767 Precision Approach Profile, so as to be stabilized on the approach by 500 feet below the FAF as outlined in Volume 6 of the Operations Manual. The PF will call for the configuration changes and the PM will perform each action. The landing checklist will be completed during the approach prior to landing. The PM will give the required altitude calls in reference to DH as outlined in Volume 6 of the Operations Manual. When deviations from the standards occur, the PM will give the proper correction callouts as defined in Volume 6 of the Operations Manual. With the adequate visual references in sight, the crew will execute the required calls and responses and transition to a normal landing. If, upon arriving at DH, neither the approach lights nor runway is in sight, then the PM will call for the missed approach. If upon arriving at DH and only the approach light system is visible, the PF may continue the approach down to 100 feet above touchdown zone elevation. If at this point the requirements of FAR 91.175 are not visible, the PF will call for the missed approach and the crew will perform the missed approach procedures. If the runway environment becomes visible prior to 1000 feet above DH, the PM will call the runway in sight and the PF will state “Visual Calls.” The PM will then proceed with stating the appropriate visual approach calls and the visual approach procedures may be applied.

Conditions:	Contingencies:
IMC * lowest approach minimums	Flight Director Inop
Strong Cross Winds Present * 15K	FMS Inop
Icing Conditions Present * Light Rime	*Autopilot Inoperative

Standards:
For all precision instrument approaches, the PF achieves and maintains a stable airspeed, descent rate, vertical flight path, and configuration by 500 feet below DH. Between 1000 feet and 500 feet above DH, only minimum deviations from the standards below occur and are corrected with the proper calls and responses as defined in Chapter 6, Volume 6 of the Operations Manual. Below 1000 feet above DH in IMC conditions, with any deviations greater than these standards, the crew calls for and executes a missed approach. The following standards apply: Prior to the FAF, the PF maintains desired altitude within +/- 100 ft., desired heading within +/- 5 degrees, and desired airspeed within +/- 10 knots; Inside the FAF or Final Segment, the PF maintains desired Airspeed within +5 or -0 knots, Localizer course within 1/2 dot either side, and Glideslope within 1/2 dot either side. The crew makes all of the required instrument approach calls and responses as detailed in Volume 6 of the Operations Manual. The crew complies with all ATC instructions and clearances or advises ATC if unable. The crew complies with the Generic Airlines Precision Instrument Approach Profile as depicted in Volume 6 of the Operations Manual. The instrument approach procedure is flown correctly and adjusted as necessary based on equipment availability or other factors. The crew immediately initiates a missed approach upon arriving at the DH if the required visual references are not distinctly visible.
The landing checklist is completed in a timely manner without errors or omissions. The crew demonstrates strong knowledge of, and makes sound judgments.

Media: Level C FFS

Qualifying Evaluation Event: Maneuvers Validation/Continuing Qualification – Line Check (Sample)

Reference:
Volume 6 of the Operations Manual
Airman’s Information Manual Chapter: 1
Airman’s Information Manual Chapter: 5
Jeppesen Airway Manual

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Generic Airlines Inc.	Operations Manual	Volume 9
Chapter 3: Qualification Standards, B-757 Flight Crew		
Rev. # 8		Dated 10/25/07
6.1.2 Perform One Engine Inoperative Cat I ILS Approach		
Duty Position: All		
Criticality: Yes	Currency: No	
Curricula: Qualification & Continuing Qualification		

Performance Statement:
The crew will complete the appropriate approach briefing prior to the initial approach fix. Once cleared for the approach, the PF will configure the airplane prior to the FAF per the Generic Airline B-767 Precision Approach Profile, so as to be stabilized on the approach by 500 feet below the FAF as outlined in Volume 6 of the Operations Manual. The PF will call for the configuration changes and the PM will perform each action. The landing checklist will be completed during the approach prior to landing. The PM will give the required altitude calls in reference to DH as outlined in Volume 6 of the Operations Manual. When deviations from the standards occur, the PM will give the proper correction call outs as defined in Volume 6 of the Operations Manual. With the adequate visual references in sight, the crew will execute the required calls and responses and transition to a normal landing. If, upon arriving at DH, neither the approach lights nor runway is in sight, then the PM will call for the missed approach. If upon arriving at DH and only the approach light system is visible, the PF may continue the approach down to 100 feet above touchdown zone elevation. If at this point the requirements of FAR 91.175 are not visible, the PF will call for the missed approach and the crew will perform the missed approach procedures. If the runway environment becomes visible prior to 1000 feet above DH, the PM will call the runway in sight and the PF will state "Visual Calls." The PM will then proceed with stating the appropriate visual approach calls and the visual approach procedures may be applied.

Conditions:	Contingencies:
IMC * DH +100' Strong Cross Winds Present * 15K	*Autopilot Inoperative

Standards:
The PF achieves and maintains a stable airspeed, descent rate, vertical flight path, and configuration by 500 feet below DH. Between 1000 feet and 500 feet above DH, only minimum deviations from the standards below occur, and are corrected with the proper calls and responses as defined in Chapter 6, Volume 6 of the Operations Manual). Below 1000 feet above DH in IMC conditions, with any deviations greater than these standards, the crew calls for and executes a missed approach. The following standards apply: Prior to the FAF, the PF maintains desired altitude within +/- 100 ft., desired heading within +/- 5 degrees, and desired airspeed within +/- 10 knots; Inside the FAF or Final Segment, the PF maintains desired Airspeed within +5 or -0 knots, Localizer course within 1/2 dot either side, and Glideslope within 1/2 dot either side. The crew makes all of the required instrument approach calls and responses as detailed in Volume 6 of the Operations Manual. The crew complies with all ATC instructions and clearances or advises ATC if unable. The crew complies with the Generic Airlines Precision Instrument Approach Profile as depicted in Volume 6 of the Operations Manual). The instrument approach procedure is flown correctly and adjusted as necessary based on equipment availability or other factors. The crew immediately initiates a missed approach upon arriving at the DH if the required visual references are not distinctly visible. The landing checklist is completed in a timely manner without errors or omissions. The crew demonstrates strong knowledge of, and makes sound judgments.

Media: Level C FFS

Qualifying Evaluation Event: Maneuvers Validation/Continuing Qualification: Maneuvers Validation

Reference:
Volume 6 of the Operations Manual
Airman's Information Manual Chapter: 1
Airman's Information Manual Chapter: 5
Jeppesen Airway Manual

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Figure 3-96. Advanced Qualification Program—Documentation Checklist and Review Job Aid

This AQP tool contains seven job aids for both the FAA and the certificate holder to use as simplified checklists for the development and review of the documentation requirements of AQP. Other document configurations may be appropriate to a specific certificate holder. If a certificate holder adopts a different document configuration, other than the one suggested in Advisory Circular (AC) 120-54A, then the applicant should provide clear and specific guidance as to the location of the information for each of these document topics. Certificate holders should include specific references where information can be found that addresses each item. The comment section may be used to record any remarks relative to the review and approval of the document.

There are six document types and one annual report required for each AQP certificate holder. Each document will have its own job aid:

1. Application -- One per AQP airline/training center.
2. Job Task Analysis – One for each trainee type and one for each trainee type's Instructor/Evaluators.
3. Qualification Standards -- One for each trainee type (e.g., pilot, flight attendant (F/A), and dispatcher) and one for each trainee type's instructor/evaluators.
4. Instructional Systems Development Methodology -- One per AQP airline/training center.
5. Curriculum Outline -- One per curriculum/make, model, series, variant and instructor/evaluator.
6. Implementation and Operations Plan (I&O Plan) -- One per AQP airline/training center.

NOTE: Each of the above documents must remain current throughout the life of the AQP. Each of the documents must utilize a revision control process.

Annual AQP Report – Certificate holders will monitor the status of all AQP curriculums and the performance/proficiency Data Base and will summarize their findings annually in a report to the FAA. Although there is no established format for the report, the associated job aid highlights areas that should be addressed.

Application, Phase I. The purpose of the application is to establish the applicant's methodology for developing an AQP for all of its fleets, instructors and evaluators, and for non-fleet-specific curriculum (i.e., indoctrination). The application is submitted once and is updated as information in the application changes (e.g., a change in the transition schedule, adding new aircraft, or initiating F/A or dispatcher AQP programs). In order to establish the applicant's intent and approach for developing an AQP, the application should thoroughly discuss the following topics numbered 1-9 in this job aid.

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1	**Statement of Intent**	**Y**	**N**	**Comments**
	a. Does the Statement of Intent specify the applicant's intent to develop, implement, and operate an AQP?			
	b. Does the Statement of Intent address all fleets?			
	c. Does the Statement of Intent address how and to what extent the AQP will be operated and maintained?			
	d. Does the Statement of Intent address how CRM will be integrated and measured?			
	e. Does the Statement of Intent include the use of the single visit exemption or that single visit will not be used?			
2	**The Applicant's Staff Organization**	**Y**	**N**	**Comments**
	a. AQP Coordination: Is a person identified that will be the focal point for the applicant's AQP development and contact with the FAA?			
	b. Subject Matter Expertise (SME): Are current and qualified individuals identified by name or position, who have varying levels of expertise that fairly represent the population of professionals the AQP will address?			
	c. Document and Curriculum Development: Are individual(s) identified by name or position, who interface with the AQP coordinator and the SMEs to develop the requisite AQP process, curriculum, and instructor/evaluator documents?			
	d. Document Management: Is an individual identified, who ensures AQP document control and congruence with FAA approvals?			
	e. Computer Specialist/Database Management: Is an individual identified who will develop and manage the performance/proficiency data acquisition and analysis system?			
	f. In addition, will the computer specialist/database manager be used for other computer-related issues related to the facilitation of an AQP, such as electronic document review?			

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3	**Data Collection, Submission, and Analysis Reporting**	**Y**	**N**	**Comments**
	a. Does the applicant acknowledge their understanding and acceptance of the AQP performance data requirements by stating the intended purpose for the collection, management, analysis, and reporting of AQP training/evaluation data for each curriculum?			
	b. Does the applicant defer to the I&O plan for describing the process and methodology for AQP data collection and analysis?			
	c. Does the applicant acknowledge that an electronic data management system will be developed prior to entering phase III of any AQP curriculum?			
	d. Does the applicant acknowledge the requirement for collecting SVTP data?			
	e. Does the applicant acknowledge that requirement for submitting de-identified data to the FAA no later than 2 months after collecting the data?			
	f. Does the applicant acknowledge the requirement of a more stringent collection and analysis of the data than that submitted to the FAA?			
	g. Does the applicant describe the purpose of the data analysis and how it will be used?			
	h. Does the applicant acknowledge the requirement for submitting an annual AQP report summarizing their data analysis and any resulting changes that ensued in their AQP program?			
4	**Supporting Documents and Manuals**	**Y**	**N**	**Comments**
	a. Do the supporting documents and manuals list each make, model, and series aircraft or variant?			
	b. Has the applicant provided the FAA (CHDO) with the following documents or manuals:			
	1. A current listing of company and manufacturers manuals that governs company operations?			

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	2. General descriptive summary of each aircraft type, including aircraft configuration and the performance baseline?			
	3. Flight Operations Manual (FOM)?			
	4. General Operations Manual (GOM)?			
	5. Manufacturer's Aircraft Flight Manual (AFM)?			
	6. Minimum Equipment List/Configuration Deviation List (MEL/CDL)?			
	c. Does the applicant have available the training and qualification recommendations in the FSB reports?			
5	**Operating Environment Description**	**Y**	**N**	**Comments**
	a. Does the applicant describe the operating environment, including the general meteorological and geographic factors expected to be encountered during operations?			
	b. Does this description include the weather norms and extremes expected to be encountered in operations?			
	c. Does this description include normal, abnormal, and emergency equipment operation in geographic areas that require special procedures (e.g., engine failures in mountainous terrain)?			
	d. Does this description include terminal and en route operating areas such as controlled and uncontrolled airfields?			
6	**Trainee Demographics**	**Y**	**N**	**Comments**
	a. Does the applicant provide a general summary of trainee experience and entry level by aircraft make, model, series or variant?			
	b. Does the applicant identify entry requirements for ground and flight instructors and evaluators?			
	c. Does the applicant group students in terms of previous experience (e.g., with high, low, and mean experience included)?			
	d. Does the applicant identify the current and anticipated need for replacement crewmembers by duty position? This information is necessary to determine priority on curriculum development.			

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7	**Training Equipment—Description and Location**	**Y**	**N**	**Comments**
	a. Does the applicant identify the training equipment to be used, its location, and identify the organization (vendor or applicant) responsible for its security and maintenance?			
	b. Does the applicant identify FSTDs by make, model, serial number, and/or FAA identification number assigned by the National Simulator Program?			
8	**Facilities Description**	**Y**	**N**	**Comments**
	a. Does the applicant describe the location, general type of facility, classrooms, training aids, course software, and other resources to be used to support AQP training?			
9	**Master AQP Transition Schedule (MATS)**	**Y**	**N**	**Comments**
	a. Does the MATS include all aircraft, crewmembers, instructors, evaluators, and other personnel that the applicant intends to transition to AQP?			
	b. Is the MATS complete? A partial MATS is not acceptable.			
	c. Does the MATS address how currently qualified personnel may transition between traditional recurrent training and continuing qualification curriculums or single visit training?			A simple spreadsheet, provided by the applicant, may be helpful to highlight the crew pairing requirements during the first year of AQP or Single Visit operations.
	d. Does the MATS address how personnel who have completed initial, transition, or upgrade curricula may enter a continuing qualification curriculum?			
	e. Does the MATS address personnel who have completed a traditional basic indoctrination curriculum, but have not completed an initial, transition, or upgrade curriculum?			
	f. Does the MATS address personnel who are current instructors or evaluators and how they may transition to AQP via a differences course?			

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	g. Does the MATS address the incremental implementation of the curriculums as opposed to all at once?			
	h. Does the MATS provide the timeframe necessary to withdraw from AQP if it becomes necessary to revert to the traditional 14 CFR part 121 or 135 training program?			

Job Task Analysis (JTA), Phase II. A JTA is the method or procedure used to reduce a unit of work to its base components. The JTA provides a detailed, sequential listing of tasks, subtasks, and elements with the knowledge, skill, and attitude characteristics (KSAs) that clearly define and completely describe the job.
An applicant will provide a JTA for each make, model, and series aircraft (or variant). These may be submitted as individual listings, or a single higher level listing with appendices for each aircraft, showing its unique lower level features. As a complete document, the JTA has four components: a job task list, a learning analysis (KSA), identified crew positions, and references.

1	**JTA Structure**	**Y**	**N**	**Comments**
	a. Does the JTA provide a general introduction explaining the development of the task listing and the subsequent task analysis and how it is to be used to form the basis for the qualification standards, and the AQP curriculums upon which they are built?			
	b. Is the JTA organized using a hierarchical system with the flight phases at the top level, tasks at the next level, component subtasks at the next level, elements at the next level?			
	c. Is the JTA complete with tasks, subtasks, elements, and crew positions?			
	d. Has the applicant completed full development of the JTA to the element level?			
	e. In the JTA applicable knowledge, skills, CRM markers, and (where desired) attitudes are applied at the element level?			
2	**Flightcrew Member Training Requirements**	**Y**	**N**	**Comments**
	Does the JTA incorporate all knowledge and skill requirements currently specified in the regulations?			
	a. Aircraft Systems' Subjects			
	Aircraft General			
	Equipment and Furnishings			
	Emergency Equipment			
	Powerplants			
	Electrical			

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	Pneumatic			
	Air-conditioning and Pressurization			
	APU			
	Hydraulics			
	Landing Gear and Brakes			
	Flight Controls			
	Fuel			
	Communications Equipment			
	Flight Instruments			
	Navigation Equipment			
	Autoflight			
	Warning and Detection Systems (to include TCAS, GPWS/TAWS, and WX Radar)			
	Fire and Overheat Protection			
	Oxygen			
	Aircraft Performance & Limitations			
	MEL/CDL			
	b. System-Operations Integration Training	**Y**	**N**	**Comments**
	Preflight Visual Inspection			
	Prestart Checklist and Procedures			
	Powerplant Start			
	Taxi to include lowest visibility allowed by OpSpecs			
	Pre-Takeoff Checks and Procedures			
	Normal Takeoff			
	Crosswind Takeoff			
	Instrument Takeoff (Low Visibility)			
	Powerplant Failure on Takeoff (at or near V1)			
	Powerplant Failure After V2			
	Rejected Takeoff			
	Area Departure			
	Cruise Procedures			
	Holding			
	Area Arrival			
	RNAV, RNP, SAAAR			
	Normal ILS			
	Engine-out ILS			
	Autopilot-Coupled ILS—CATII/III			
	Non-precision Approach			
	ILS missed Approach			
	Second Missed Approach			
	Precision Radar Monitored Approaches/Missed			
	Circling Approach			
	No-flap Landing			

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	Crosswind Landing			
	Landing With Engine Out			
	Landing From Circling Approach			
	Rejected Landing			
	Landing With 50% Power Loss			
	LAHSO			
	Stall Prevention (Approach to Stall)			
	Steep Turns			
	Powerplant Failure			
	Windshear Training			
	Mis-Trim Situations			
	Selected Events - Unusual Attitudes			
	TCAS and GPWS -Escape			
	Normal and Abnormal Procedures			
	Emergency Procedures			
	c. Company Operations Manual Content	**Y**	**N**	**Comments**
	Company Policy or Procedures (dispatch and flight release requirements)			
	Regulations, Operations Specifications, and Standards Operating Procedures (SOP)			
	Weather Requirements (seasonal changes, flight into various geographic locations and temperature-related requirements)			
	Hazardous Material			
	Security			
	Special Operations (special airports, special approaches, and departures)			
	Emergency crew assigned duties and procedures			
	Operation of emergency equipment/systems			
	Operation of ditching/evacuation equipment/systems			
	Crew Resource Management (CRM)			
	Emergency Situation Training – Rapid Decompression, Fire (Flight/Surface), and smoke control procedures			
	Assistance of Persons to Exits during Emergency			
	Illness, Injury, or Other Abnormal Situations Involving Passengers or Crew (use of medical kit)			
	Flight Physiology (i.e., Hypoxia or Respiration)			
	Use of Checklist (SOP)			
	Cockpit Familiarization			
	Preflight Planning and FMS			
	In-flight Planning LNAV, VNAV, RNAV, and GPS			

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	Required Navigation Procedures/SAAAR			
	Navigation Systems Integration			
	Autoflight and Flight Director Integration			
	Use of Radar/CRTs			
	TCAS			
	GPWS/TAWS			
	Communication Systems Integration (ACARS/FMS/CPDLC)			
	Surface Movement Guidance Systems (SMGS)			
	Runway Incursion Prevention Strategy			
	Stabilized Approach Strategy			
	Precision Radar Monitoring (PRM) Procedures			
	Land and Hold Short (LAHSO) Procedures			
	CAT II/III			

Qualification Standards (QS), Phase II. The qualification standards document has four parts, the prologue, a regulatory comparison, the evaluation/remediation methodology, and the specific terminal proficiency objectives (TPO)/supporting proficiency objectives (SPO) qualification standard.

1. Prologue: This is an introductory section that explains the methodology, format, and terminology of the document.
2. Regulatory Requirements Comparison: The qualification standards document must also include regulatory comparison information. The comparison must meet the requirement of AQP regulatory guidance, which states that the AQP program "...must indicate specifically the requirements of parts 61, 63, 65, 121, or 135, as applicable, that would be replaced by an AQP curriculum." The comparison should be comprehensive and understandable so that a reader can discern the scope and appropriateness of the training.
3. Testing/Validation/Evaluation & Remediation Methodology: This section is a detailed plan describing the point in the curriculum when a test, validation, or evaluation will be applied. It must identify what constitutes a failure and/or unsatisfactory performance. This section will also describe the remediation strategy to be used to correct unsatisfactory performance and special tracking provisions.
4. The Qualification Standard: The qualification standard is constructed by applying a performance statement, conditions, and standards to a task or subtask, thereby creating a TPO or an SPO.

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1	**Qualification Standards Prologue**	**Y**	**N**	**Comments**
	a. Does the prologue discuss the methodology used to develop the qualification standards document?			
	b. Does the methodology explain how any aspect, from curriculum outline to lesson elements or gradesheet items, is be traceable to an item in the qualification standard?			
	c. Does the prologue discuss the format (structure) that used for the qualifications standards?			
	d. Does the prologue define terms used for the qualification standards?			
2	**Regulatory Comparison**	**Y**	**N**	**Comments**
	a. Does the regulatory comparison specify the requirements of the applicable practical test standards and parts 61, 63, 65, 121, or 135 that would be replaced by an AQP curriculum and how they will be addressed?			
	b. Are departures from those requirements identified and justified?			
	c. Are any standards specifications used that differ from practical test standards (FAA-S-8081)?			
3	**Testing/Validation/Evaluation & Remediation Methodology**	**Y**	**N**	**Comments**
	a. Does the applicant describe where to ascertain how, when, where, and who will assess a student's proficiency on each terminal and supporting objective?			
	b. Does this section identify the points in the curriculum where the testing, validation, or evaluation will be applied?			
	Systems Validation			
	Procedures Validation			
	Maneuvers Validation			
	LOE			
	Line Checks			

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	c. Does the applicant clearly define the different strategies that will be used to test, validate, or evaluate performance?			
	First Look			
	Train to Proficiency			
	Systems/Knowledge Validation			
	Procedures Validation			
	Maneuvers Validation			
	Line Operational Evaluation			
	Initial Line Check			
	Line Check			
	d. Does this section describe how the criticality and currency ratings translate into testing strategies for TPOs and SPOs in the continuing qualification cycle?			
	e. Does this section describe how a TPO with several SPOs may be alternatively sampled over multiple evaluation periods or continuing qualification cycles? e.g., TPO (Non-Precision Approaches) SPOs (NDB, VOR, BC, etc.)			
	f. Does the applicant specify and clearly describe the rating scale that will be used by instructors/evaluators to score performance?			
	g. Do the rating scale definitions clearly discriminate performance levels? Are they clear?			
	h. Does the applicant identify what constitutes a failure and/or unsatisfactory performance for each validation/evaluation point?			
	i. Does the applicant specify the strategy for remedying unsatisfactory performance?			
	j. Does this remediation strategy detail when and what may be repeated and whether or not additional training is warranted?			
	k. Does the applicant describe the methodology that will be used to remediate unsuccessful testing, validation, or evaluation sessions?			
	l. Does the applicant describe the level of FSTDs or aircraft to be used to evaluate the proficiency objective at each point in the curriculum?			

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	m. Does the remediation strategy specify when no more training will be offered to the individual and the resulting actions such as "Referred to Director of Training," "returned to previous position," etc.?			
	n. Does the remediation strategy describe the criteria for placing an individual on special tracking?			
	o. Does the remediation strategy describe the strategy that will be used for an individual on special tracking?			
	p. Does the remediation strategy describe what must take place for an individual to be removed from special tracking?			
4	**Qualification Standards**	**Y**	**N**	**Comments**
	a. Does each individual qualification standard contain the following:			
	A header identifying the certificate holder and the document?			
	Page revision control dates and revision numbers?			
	Consecutive page numbers?			
	Phase of Operations: Number and title from task listing?			
	Qualification Standard Title: Either TPOs or SPOs?			
	Task or Subtask: Number and title from task listing?			
	Crew duty positions?			
	Criticality/Currency Rating: From the task factors analysis?			
	Curriculum: This field identifies the curriculum(s) in which the task will be trained and evaluated.			
	Evaluation Strategy: The evaluation point for this particular qualification standard: e.g., train to proficiency, procedures validation, maneuvers validation, LOE, or line check?			
	Media: The specific media in which training and/or evaluation will be conducted. For qualification, the media is the lowest media used for final evaluation. For continuing qualification, the media is the range of media used for training.			

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	Performance Statement: An expanded statement of expected behavior, which, when executed, will complete the work required for a specific portion of a job?			
	Conditions operational and environmental? Are the specific conditions to be used for the qualification curriculum specified?			
	Contingencies. Are the specific contingencies to be used for the qualification curriculum specified?			
	Maneuver Standards: Are they specific and do they correspond to the standards listed in the practical test standards?			
	Procedural Standards: They may be specific or general. If they are specific, do they correspond to the standards listed in the manuals listed in the reference block? If general, do they reference information in a document or manual to chapter or section (page numbers are not required)?			
	References: Identify the primary references from which performance statements and associated standards were derived. Cite documents by title and where applicable, chapter or section. Page numbers are not required.			
	b. Are there any operations specifications requirements other than those listed above?			

The Instructional Systems Development Methodology. This document describes the approach to be used by applicants to develop and maintain all Advanced Qualification Program (AQP) curriculums. This document is divided into two sections. The first section, Development Procedures, describes the applicant's approach for using the Job Task Analyses and Qualification Standards as baseline documents to construct their general training curriculums across all AQP courses. The second section, Line Operational Simulation Methodology, describes the approach for developing line operational simulation (LOS) scenarios.

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1	**Development Procedures**	**Y**	**N**	**Comments**
	a. Is the procedure for allocating TPOs and SPOs to lessons, selecting media and methods, and developing the curriculums described?			
	b. Does the applicant describe how enabling objectives (EO) are developed to support their higher level objectives?			
	c. Does the applicant describe how learning and evaluation activities are developed to support these objectives?			
	d. Does the applicant describe how instructional media and methods to are assigned to objectives?			
	e. Does the applicant describe how objectives are clustered and sequenced into lessons, modules, segments, and curriculums?			
	f. Does the applicant describe how an audit trail will be maintained to link proficiency objectives, lesson activities/content, and test items?			
2	**Line Operational Simulation (LOS) Methodology**	**Y**	**N**	**Comments**
	a. Does the applicant describe how the typical scenario is constructed?			
	b. Does the applicant describe how each event set relates to a phase of operation?			
	c. Does the applicant describe how each event set consists of a series of proficiency objectives that include both technical and CRM activities?			
	d. Does the applicant describe the use of event conditions, triggers, and distracters, as well as supporting events?			
	e. Does the applicant identify possible sources of incidents that will elicit the behavior required by the proficiency objectives selected for the scenario?			
	f. Does the applicant define the basic success criteria for the LOS, and each event set within it?			
	g. Does the applicant describe the scenario development process?			
	Drafting - who will do the work?			

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	Use of gradesheets?			
	Testing - who will be involved?			
	Training instructors/evaluators to administer LOS scenario?			

The Curriculum Outline. This is a listing of course content. It should be arranged from curriculum into segments, segments into modules, modules into lessons, and lessons into elements. Each part of the curriculum outline must clearly indicate the subject matter to be taught and correspond directly to the hierarchical system of the task analysis. A curriculum outline provides the basis for the curriculum footprint, which is a high-level graphical overview of the curriculum content depicting the training and evaluation activities and the proposed hours for each day of the curriculum.

1	Curriculum Outline	Y	N	Comments
	a. Does the certificate holder have indoctrination, qualification, and continuing qualification curriculums for each duty position in each make, model, and series/variant aircraft?			
	b. Does the certificate holder have separate indoctrination, qualification, and continuing qualification curriculums for the instructors and evaluators?			
	c. Does the certificate holder have any special curriculums (transition, upgrade, requalification or refresher)?			
	d. Is each curriculum constructed in the following order: curriculum, segment, module, lesson, and lesson element?			
	e. Does the curriculum outline provide a level of detail that will allow the AQP applicant to make changes to the syllabus without submitting a new document for each syllabus change?			
	f. Does the curriculum outline include:			
	1. Operator's Name?			
	2. Type of Aircraft?			
	3. Duty Position(s)?			
	4. Title of curriculum and/or curriculum segment?			
	5. A listing of numbered (coded) objectives organized into lessons, modules, and segments?			Numbers (codes) must allow AFS-200 to track objectives back to qualification standards and Job Task Analysis.

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	6. An outline of each training module within each curriculum segment?			Each module should contain sufficient detail to ensure that the main features of the principal elements or events will be addressed during instruction.
	7. The checking and qualification modules of the qualification curriculum segment used to determine successful course completion, including any regulation qualification requirements for crewmembers to serve in part 121 or part 135 operations (such as operating experience (OE), line checks, operating familiarization)?			
	g. Does the curriculum outline indicate that it is part of the revision control system by page format?			
	h. Do the curriculum outlines provide a hierarchical link (proficiency objectives) between the qualification standards and a curriculum?			
	i. Does each part of the curriculum outline clearly indicate the subject matter to be taught and correspond directly to the hierarchical numbering system of the task analysis?			
2	**Curriculum Footprint**	**Y**	**N**	**Comments**
	a. Does the curriculum footprint describe the training and evaluation activities conducted each day of the curriculum?			
	b. Does the curriculum footprint include the planned hours?			

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Implementation and Operations Plan (I&O Plan). This document is a milestone schedule detailing the transition to an AQP for crewmembers, dispatchers, instructors, evaluators, and other operations personnel and a blueprint describing provisions for maintenance, administration, data management, and continuing quality control of curriculums. The I&O Plan can be sectioned into two parts. The first part spells out how the operator proposes to implement the AQP. Included in this proposal is the schedule for the phase III training evaluation to include instructor/evaluator training and small group tryouts. It should also include provisions for evaluating the effectiveness of performance measurement tools, and provisions for evaluating facilities, courseware, and equipment before starting the plans for the small group tryouts. The second part explains how the certificate holder intends to operate the AQP in phases IV and V. Included in this section are strategies for maintaining the program, crew pairing policy, First Look administration, and instructor/evaluator requirements. The operations plan should also describe in detail the data management plan. This plan includes a statement of understanding addressing the collection and analysis of performance/proficiency data and a description of the Performance/Proficiency Database (PPDB), the data management collection process, and the FAA data submission, analysis, and reporting requirements.

1	Implementation – Phase III	Y	N	Comments
	a. Does this section include schedules for the implementation of the each of the AQP curriculums?			
	b. Do the schedules correlate to the MATS?			
	c. Do the schedules include dates for training the instructor/evaluators?			
	d. Does the instructor/evaluator training include difference training for those previously qualified (if applicable)?			
	e. Does this section include provisions for evaluating facilities, courseware, and equipment before starting the phase III training?			
	f. Does this section describe a plan for evaluating and observing the instructors and evaluators during the phase III small group tryout?			
	g. Does the instructor/evaluator training include provisions for evaluating the effectiveness performance measurements such as the application of the rating scale, use of gradesheets, and student feedback?			
	h. Does this section indicate that the applicant will request no-jeopardy credit for the small group tryout course graduates in a separate letter addressed to the Air Transportation Division (AFS-200) and the POI?			

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2	**Operations Phases IV & V—AQP Maintenance**	**Y**	**N**	**Comments**
	a. Does this section describe the methodology for maintaining control of the AQP approval documents?			
	b. Does this methodology include a procedure for providing document copies to the POI and AFS-200 after the receiving the approval stamp from the POI?			
	c. Does this section describe the strategy to be employed for curriculum maintenance and update?			
	d. Does the strategy for curriculum maintenance and update include plans for acquiring and measuring data for tracking curricula?			
	e. Does the strategy for curriculum maintenance and update identify the person(s) responsible making changes in the AQP?			
	f. Does this section describe the strategy for monitoring and responding to demographic changes?			
	g. Does this section describe using training and evaluation feedback to maintain and improve the AQP?			
	h. Does this section describe how student and instructor feedback will be obtained?			
	i. Does this section describe any plans to upgrade training equipment?			
3	**Operations Phases IV & V—First Look Maneuvers Administration**	**Y**	**N**	**Comments**
	a. Does the applicant define First Look maneuvers, their purpose, and the strategy that will be used to administer them?			
	b. Does this strategy indicate who will administer the First Look maneuvers and at what point in the curriculum?			
	c. Does this strategy state that First Look will not be briefed prior to the first execution of these items?			
	d. Does this section describe how First Look maneuvers are selected?			

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	e. Does this section describe how the First Look maneuvers would be updated?			
	f. Does the applicant describe how First Look maneuvers will be analyzed to determine trends of degraded proficiency?			
4	**Operations Phases IV & V—LOFT/LOE Crew Scheduling and Pairing Policy**	**Y**	**N**	**Comments**
	a. Does this section describe the circumstances that would require a seat substitute?			
	b. Does this section describe the decision rules that would apply in obtaining a seat substitute?			
	c. Does the decision rules that would apply in obtaining a seat substitute ensure that in all cases, the seat substitute must be task familiar with the duty position?			
	d. Does this section describe at what point in the curriculum that a seat substitute would be used?			
	e. Does the applicant acknowledge that all occurrences of seat position substitution including the qualification of the seat substitute must be reported?			
5	**Operations Phases IV & V—Instructor/Evaluator Requirements**	**Y**	**N**	**Comments**
	a. Does the applicant identify by title each instructor or evaluator position?			
	b. Does the applicant describe the job function(s) that each instructor or evaluator is authorized to perform?			
6	**Data Plan**	**Y**	**N**	**Comments**
	a. Does the data plan have a prologue that establishes the intended purpose and methods for the collection, management, analysis, and reporting of AQP training/evaluation data for each curriculum?			
	b. Does the prologue specify how the data plan will be maintained and updated?			

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	c. Does the prologue acknowledge the certificate holder's responsibility to collect and analyze more data than is required to be submitted to the FAA in order to adequately identify performance trends and make changes to factors that impact the crewmember performance?			
	d. Does the data plan address the methods (e.g., gradesheets or computer-input screens) used to collect performance/proficiency data for all curriculums?			
	e. Does the data plan address data input quality control, security, and usability?			
	f. Does the data plan address data management as the means and strategy the certificate holder intends to employ to store, access, and assimilate the AQP/SVTP performance/proficiency data that is collected?			
	g. Does the data plan address the type of software the data management system employs (e.g., relational database or spreadsheet), the organization of the information in the electronic medium (e.g., database definition, database table relationships, or spreadsheet description) and a description of the user interface to this data management system?			
	h. Does the data plan address the type of analysis it will employ to facilitate the AQP performance information needs of the certificate holder and the FAA? This discussion of the data analysis must address how each type of AQP data will be analyzed.			
	i. Does the data plan address the FAA data submission requirements including format and frequency?			
	j. Does the data plan address the type of data format it will employ for the reports, (e.g., tabular reports, graphs)?			
	k. Does the data plan address the frequency of the reports, both internal and FAA?			
	l. Does the data plan identify the internal certificate holder personnel that will receive the reports?			
	m. Does the data plan include copies of all forms used for data acquisition and grading?			

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	n. Does the data plan include a database description of data field types and a graphical depiction of the Database table relationships?			
	o. Does the data plan address a quality assurance strategy for ensuring data integrity? Does this strategy include instructor and evaluator grading calibration?			

Annual AQP Report – Phases IV & V. AQP requires that each certificate holder prepare an annual AQP report for the FAA. This report is based on the certificate holder's analysis of the data that is collected during training and at strategic points (validation/evaluation gates) in each curriculum and maintained in the proficiency/performance data base (PPDB). AQP requires data collection and analysis in order to establish and maintain quality control of curricula for crewmembers, instructors, and evaluators. The annual AQP report should summarize the lessons learned and adjustments made to the curriculum(s) during the reporting period. The report should also include projected or proposed changes to the curriculum(s) based on the certificate holder's current analysis. The actual adjustments made to the AQP are reflected in revisions to the approved AQP documents. The report should be submitted to the FAA no later than 60 days past the end of the report period. The reporting period is usually based on the approval date for a particular curriculum in either phase IV or V. During AQP development, particularly for multiple fleet operators, with different approval dates for multiple curriculums, the reporting period may be modifiable as agreed upon by the FAA and the certificate holder. Copies of the report should be distributed the principal operations inspector (POI) and AFS-200 at least 2 weeks prior to the annual AQP review meeting.

	Annual AQP Report	**Y**	**N**	**Comments**
	a. Is there a prologue or introduction to the report that addresses how each type of AQP data was analyzed? This prologue should corroborate the information in the I&O Plan.			
	b. Does the report discuss data reliability and consistency?			
	c. Does the report summarize the internal quality assurance reports as addressed in the I&O Plan?			
	d. Does the report validate the effectiveness of the AQP with supporting evidence of successful training and evaluation?			
	e. Is the report supported by the FAA analysis of the submitted data?			
	f. Does the report identify any trends, problem areas, and potential deficiencies that could result in decreased proficiency?			
	g. Does the report include a description of corrective measures taken and any resulting changes to curriculums?			
	h. Does the report include any projected corrective measures to be taken and provide rationale for these changes?			
	i. Does the report indicate a need for changes to the AQP maintenance strategy as described in the I&O Plan?			

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	j. Does the report indicate a need for changes to the certificate holder's data plan as described in the I&O Plan?			
	k. Does the report provide an analytical comparison of data between equivalent periods in preceding years?			
	l. Does the report identify any future operational changes that will affect the AQP (operational changes or trainee demographics)?			
	m. Does the report analyze training and evaluation feedback as part of the collected data to determine the effectiveness of the training program?			
	n. Does the report analyze on-time completion rates for training curriculums and OE?			
	o. Does the report analyze special tracking rates?			
	p. Does the report analyze instructor/evaluator (I/E) rater reliability training results?			
	q. Does the report analyze instructor comments as part of the collected data to determine the effectiveness of the training program?			
	r. Does the report analyze First Look data?			
	s. Does the report analyze maneuvers data?			
	t. Does the report analyze LOE data by technical topics and CRM elements?			
	u. Does the report analyze line check data (exclusive of OE)?			
	v. Does the report address progress towards phases III, IV, & V in other fleets (as applicable)?			
	w. Does the report address seat substitution rates?			
	x. Does the report address recordkeeping?			
	y. Does the report address adherence to the I&O Plan?			
	z. Does the report address the validity and usefulness of the qualification standards?			
	aa. Does the report address internal audit or FAA surveillance findings?			
	bb. Does the report address related safety programs (i.e., FOQA/ASAP)?			

RESERVED. Paragraphs 3-1501 through 3-1525.

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VOLUME 3 GENERAL TECHNICAL ADMINISTRATION

CHAPTER 21 THE ADVANCED QUALIFICATION PROGRAM

Section 4 Safety Assurance System: The Advanced Qualification Program Approval Process

3-1566 GENERAL. This section establishes how the Federal Aviation Administration (FAA) will grant or withdraw approval of all or part of an Advanced Qualification Program (AQP). This section is related to Safety Assurance System (SAS) Element 2.1.6 (OP), Advanced Qualification Program.

A. Scope. The approval process applies to qualified Title 14 of the Code of Federal Regulations (14 CFR) parts 121, 135, and 142 certificate holders that apply for an AQP.

B. Extended Review Team (ERT). The review and surveillance of an AQP prior to final approval is equivalent to a recertification of the applicant's training program. To ensure the maintenance of an effective and standardized process, the Air Carrier Training Systems and Voluntary Safety Programs Branch (AFS-280) will lead a team to conduct the review and certification of the AQP.

1) The ERT may include (but is not limited to) the following personnel:

- FAA manager (AFS-280).
- Principal operations inspector (POI) (or a designated representative).
- Training Center Program Manager (TCPM) (if applicable).
- Aviation safety inspector (ASI) staff program manager (AFS-280).
- Aircrew program manager (APM) (if applicable).
- Aviation Safety Inspector – Cabin Safety (ASI-CS) (if applicable).
- Aviation Safety Inspector – Aircraft Dispatcher (ASI-AD) (if applicable).
- Instructional system design specialist (AFS-280).
- Data management specialist (AFS-280).

2) Additional technical personnel can be added to the ERT (as required):

- Principal security inspector (PSI).
- National Simulator Program (NSP).
- Flight Standardization Board (FSB) or Flight Operations Evaluation Board (FOEB).

C. Role of AFS-280. AFS-280 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 approved certificate holder's AQP application will initiate the AFS-280/FSDO/CMO/CMU partnership. AFS-280 will provide assistance in the development, implementation, and review as well as follow-on reviews of the certificate holder's AQP. AFS-280 and the FSDO/CMO/CMU will manage program approvals and revisions through an ERT process. Since team members are not

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co-located, maintaining effective communications is an essential part of the ERT process. AFS-280 will provide the ERT with collaborative program management tools to improve and facilitate the review process.

D. Role of the AFS-280 Manager. The FAA manager is the person responsible for ensuring that the regulatory requirements for AQP are met and approved AQP standards are maintained. In this capacity, the FAA AFS-280 manager provides oversight of the AQP process and documentation through all phases. The manager will also chair the AQP ERT. The manager will retain a quality assurance (QA) role and coordinate with the POI any modifications and subsequent approvals throughout the life of the AQP.

E. Role of the POI and/or TCPM. The POI and/or TCPM are responsible for ensuring that AQP regulatory requirements are met and that through surveillance the AQP provides a satisfactory level of safety and airman competence. The POI and/or TCPM will provide oversight of the instructor/evaluator program and adherence to approved documentation for all AQP curricula. The POI and/or TCPM will coordinate with the manager of AFS-280 any modifications and subsequent approvals throughout the life of the AQP.

Table 3-78. Approval Authority Matrix for Each AQP Curriculum

Document Title	Approval Authority by Phase				
	I	II	III	IV Initial	V Final
Application	AFS-280				
Task Analysis		ERT	ERT	ERT	ERT
Qualification Standards		ERT	ERT	ERT	ERT
Instructional Development Methodology		ERT	ERT	ERT	ERT
Curriculum Outline		ERT	ERT	ERT	Revision POI
Implementation and Operations Plan (I&O Plan)		ERT	ERT	ERT	ERT

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F. Approval Authority. Table 3-78, Approval Authority Matrix for Each AQP Curriculum, summarizes the approval authority by phase and AQP document. Except for the Phase I application, Line Operational Evaluation (LOE) scenario content, and Phase V curriculum outline revisions, the ERT is the approving authority for all AQP documents and document revisions in all phases. All ERT AQP approval letters will be forwarded through the POI/TCPM to the certificate holder. For all AQP documents and phases for which the ERT is designated as the approval authority, the FAA AFS-280 manager and the POI/TCPM will cosign the approval letters. Following approval for continuing operation (Phase V), approval of curriculum outline changes will be managed and signed by the POI. (See Figure 3-99, Sample Approval Letter—Phase II; Figure 3-100, Sample Approval Letter—Phase III; Figure 3-101, Sample Approval Letter—Phase IV; and Figure 3-102, Sample Approval Letter—Phase V).

G. Training Center Requirements (Part 121, § 121.923). A training center may apply to develop a provisionally approved AQP prior to the establishment of a contract, agreement, or other arrangement to provide such training to a specific part 121 or 135 certificate holder, but may not implement an AQP training program until FAA approval specific to a certificate holder has been received.

3-1567 PHASED APPROVAL PROCEDURES. The following paragraphs describe how the FAA will work with an applicant to review or analyze material and to provide guidance for phased approvals. Applicants must develop and implement their AQP in five sequential phases:

- Phase I—Initial Application.
- Phase II—Curriculum Development.
- Phase III—Training System Implementation.
- Phase IV—Initial Operations.
- Phase V—Continuing Operations.

A. Phase I—Initial Application. Refer to the current edition of Advisory Circular (AC) 120-54, Advanced Qualification Program, and Volume 3, Chapter 21, Section 1, Figure 3-96, Advanced Qualification Program—Documentation Checklist and Review Job Aid.

1) Applicant. The applicant must submit a written application to the manager of AFS-280 and to the POI/TCPM, consisting of an application cover letter stating intent to develop, implement, and operate an AQP.

2) FAA Review. AFS-280 will accomplish the review and analysis of the application as follows:

- The applicant’s proposed methodology for program development.
- The applicant’s ability to execute the processes of development, implementation, and operation.
- Missing or incomplete application information.

3) Application Approval. After determining that the applicant’s submittal is satisfactory, the AFS-280 manager, in collaboration with the POI/TCPM, will approve acceptance of the application. This approval will permit the applicant to proceed to Phase II.

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B. Phase II—Curriculum Development. Refer to AC 120-54 and Figure 3-96.

1) Required Documents. The applicant must submit the following documents to the ERT:

- A current, complete copy of the flight operations training manual (or comparable document), with permanent distribution to the certificate-holding district office (CHDO) and AFS-280 of future changes/revisions.
- Such other publications, certificate holder/applicant manuals, and manufacturer documentation as requested by the ERT to assist in the team's activities.
- Supporting task analysis.
- Qualification standards.
- Instructional systems development methodology.
- Curriculum outline(s).
- AQP Implementation and Operations Plan (I&O Plan).

2) Review and Evaluation.

a) The ERT must evaluate all documents for completeness and accuracy of technical content. The content of the supporting task analysis and qualification standards must be reviewed for comparison to the 14 CFR sections they replace (e.g., 14 CFR parts 61, 63, 65, 121, 121 appendices E and F, and 135 (see Figure 3-105, Qualifications Standards Document—Regulatory Comparison Chart)), the practical test standards (PTS), FSB reports, and the air carrier's operations specifications (OpSpecs). (See Figure 3-96.)

b) The ERT must review the applicant's instructional systems development methodology with respect to the means proposed for ensuring that the content of the supporting task analysis will be incorporated into the curriculum, and for consistency with the guidelines of Volume 3, Chapter 19. (See Figure 3-96 (Job Aid)).

c) The ERT must review the I&O Plan for completeness, feasibility, and adequacy of the applicant's resources to support and maintain the proposed AQP curriculum. (See Figure 3-96 (Job Aid)).

d) Upon satisfactory completion by the applicant of all requested changes, the AFS-280 manager and the POI/TCPM will jointly approve the applicant's documentation (see Figure 3-96 (Job Aid)). This approval will allow the applicant to proceed to Phase III.

C. Phase III—Implementation. In this phase, the applicant will complete development of required courseware and conduct preliminary assessment of training resources and materials, such as dry running new Line-Operational Simulation (LOS) and LOE scenarios, testing the feasibility of proposed data acquisition strategies, or other such activities as are called for in the applicant's I&O Plan. AQP qualification and observation of instructors and evaluators must be accomplished in this phase. Similarly, if not already completed, flight training equipment must be qualified by the FAA in accordance with 14 CFR part 60 policies and procedures.

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1) FAA Review and Evaluation. FAA activities in this phase will consist principally of observing or participating in new LOS/Special Purposed Operational Training (SPOT)/LOE scenarios and monitoring and observing the AQP training provided to instructors and evaluators.

a) Surveillance of Phase III activities.

b) Assigned CMO inspectors must accomplish this surveillance. Inspectors must also attend the applicant's evaluator training for their own qualification. Surveillance must be augmented with visits from representatives of AFS-280. Flight simulation training device (FSTD) evaluation and qualification will be conducted in accordance with part 60 regulations and guidance. ERT activities in this phase will consist of observing, monitoring, and participating in the AQP training programs. Particular emphasis will be placed on:

- Instructor/evaluator training and observation.
- Training scenarios.
- Validation.
- LOE.

c) The I&O Plan.

1. The ERT must evaluate the applicant's readiness to conduct and maintain the proposed AQP curriculum.

2. Once Phase III has concluded, the applicant will provide the ERT with an updated I&O Plan.

3. The ERT must coordinate the resolution of any remaining concerns as required. Based on the recommendations of the ERT, the AFS-280 manager and the POI will approve or deny Phase IV—Initial Operations.

4. Initial approval permits the applicant to execute the updated I&O Plan through the qualification or continuing qualification cycle (usually 24 months). The AQP curriculum's Phase IV expiration will be set by the ERT in the approval letter. (See Volume 3, Chapter 19, Section 2, Figure 3-71, Letter of Initial Approval (Part 135), and Figure 3-72, Letter of Initial Approval (Part 121)).

5. The ERT will then notify the certificate holder/applicant that the AQP has been approved under part 121 subpart Y for initial operations.

2) OpSpecs Entry.

3) Approval of Initial Operations. Phase IV requires the air carrier to add an entry into the automated OpSpecs through Web-based Operations Safety System (WebOPSS):

4) OpSpec A034, Advanced Qualification Program (AQP). (See Figure 3-103, Operations Specification.)

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D. Phase IV—Initial Operations.

1) Applicant. The applicant operates and maintains an approved AQP curriculum, submits updated training program evaluation results through the ERT as appropriate, and submits digital performance proficiency data directly to AFS-280 in accordance with the requirements specified for the applicant's program.

2) Review and Evaluation. AFS-280 and the certificate holder or applicant must accomplish trend analysis of the AQP data. Surveillance of all of the certificate holder's or applicant's Phase IV operations must be accomplished by inspectors who are knowledgeable of the applicant's approved AQP, and by other FAA representatives, as appropriate.

3) Focus. The focus of this phase is validating the AQP curriculum through the acquisition of performance/proficiency data, surveillance, and lessons learned during the course of conducting the curriculum. Applicants will summarize the lessons learned and adjustments made to the curriculums in the annual report. In addition, adjustments made to the AQP will be reflected in revisions to the approved AQP documents. A joint ERT and certificate holder or applicant program review is recommended after completion of the first qualification curriculum or continuing qualification evaluation period, with periodic reviews as required thereafter during the first continuing qualification cycle. The purpose of these reviews is to identify, recommend, and plan needed changes. At the midpoint of Phase IV, the first annual report will be submitted to the ERT. A joint review and annual report will be accomplished prior to Phase V approval.

4) Notification. The ERT will notify the certificate holder or applicant by letter that the AQP has been approved for Phase V (see Figure 3-102).

5) OpSpec A034. The POI and the certificate holder must modify the previously issued A034 OpSpec paragraph to include the Phase V approval date.

E. Phase V—Continuing Operations. Phase V involves continuing operation of the certificate holder's AQP. The certificate holder's procedures for curriculum maintenance, as documented in the I&O Plan, must be executed on a continuing basis and will be reviewed periodically by the FAA, as appropriate. The certificate holder will submit student proficiency data to AFS-280 on a continuing basis for trend analysis purposes. AFS-280 will provide POIs with periodic reports on the results of those analyses, as required.

3-1568 METHOD OF GRANTING INITIAL OR PROVISIONAL APPROVAL.

A. Approval by Letter. The ERT will grant initial or provisional AQP approval by letter. The AFS-280 manager and POI/TCPM must sign all letters of initial/provisional approval. The approval letter must include at least the following information:

- The specific identification of the curriculums and curriculum segments initially or provisionally approved, including page numbers and/or revision control dates (date of List of Effective Pages (LEP)).
- A statement that initial or provisional approval is granted, including expiration date(s).

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- Any specific conditions affecting the approval.
- A request that the applicant provide the FAA with advanced notice of scheduled activities so evaluations may be planned.
- Directions to enter OpSpec A034, if appropriate.

B. Copies. A copy of the approval letter must be maintained by the certificate holder, the CHDO, and by AFS-280. For a training center, copies of a provisional approval letter must be maintained at the training center, at the FAA district office responsible for oversight of the training center, and by AFS-280. When a training center's AQP is approved for a specific air carrier, copies of the approval letter must be maintained by the above three offices, as well as by the CHDO and the certificate holder.

C. Stamped Approval Endorsement or an Acceptable Substitute (i.e., Electronic Stamp). For initial and final approval, the LEP of all AQP required documents are stamped approved, dated, and signed by the POI.

Figure 3-97. Example Initial Approval Stamp

FAA INITIAL APPROVAL
OFFICE DESIGNATOR:
EFFECTIVE DATE:
NAME:
SIGNATURE:

D. Provisional Approval for a Training Center.

1) Section 121.923 provisional approval allows a training center to engage with a part 121 or 135 certificate holder in tailoring a generic AQP curriculum to a given air carrier's specific operations. The major difference between the development of an AQP by a training center and by an air carrier is that the training center can develop generic AQP documentation and individual curriculum segments through Phase II. This documentation is given a provisional approval. A provisional AQP allows a training center to accomplish front-end AQP development through Phase II and to offer its services as an approved AQP provider before establishing a contract or other arrangements with a specific certificate holder. An application for provisional approval must contain the same information as that specified in this chapter for a certificate holder, except that certificate holder-specific information may be omitted.

2) A provisional AQP cannot be employed for use with a specific certificate holder without additional development to tailor the program to the needs of a specific air carrier.

E. Request and Approval for Use of a Training Center.

1) A certificate holder or applicant that wishes to use a training center for AQP training must submit a letter of request directly to the AFS-280 manager, with a copy to the POI and TCPM. The letter of request should specify the training center, identify the AQP curriculum, and cite the time frame for which such AQP services would be conducted.

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2) The AQP review process and curriculum documentation required for a training center to obtain approval to conduct an AQP for a specific certificate holder is identical to that required of an air carrier. All documentation must be consistent with the multi-phased development process outlined in this guidance, and must be specific to the certificate holder for whom such training will be conducted.

3) AQP documentation developed by a training center for a specific certificate holder or applicant will be submitted directly by the training center to the AFS-280 manager for review and approval. The AFS-280 manager will then form an AQP ERT as appropriate. Once formed, the ERT review and approval process is identical to the review and approval process outlined in this section.

3-1569 METHOD OF DENYING INITIAL OR PROVISIONAL APPROVAL. If the FAA determines that initial approval (or provisional approval for training centers) must be denied, the FAA must notify all the affected certificate holders/applicants in writing. The letter must identify any deficiency that was the cause of denial. The principal applicant may redevelop or correct the deficiencies and resubmit the AQP for approval.

3-1570 REVISION CONTROL PROCESS.

A. Program Revisions. After a certificate holder begins training and qualification under an AQP, the FAA may require the certificate holder, pursuant to § 121.405(e), to make program revisions. AQP document revisions are submitted to the FAA AFS-280 manager and the POI. In Phases II through IV, the revision is reviewed by the ERT and approved using the notification process for the appropriate curriculum phase. The process is identical in Phase V, except that review and approval of revisions to the curriculum outline are made directly by the POI.

B. Copies of Revisions. Copies of all revisions in all phases, including the curriculum outline, will be provided to both the AFS-280 manager and the POI. Each revision must indicate which AQP documents are being revised, and must include the following items:

- A brief synopsis of each change and what pages/items are affected.
- Change bars or acceptable substitute identifying the text/chart that has been changed.
- The date of the revision and revision number on each page or graphic.
- The LEP.

NOTE: If a certificate holder chooses to integrate the required AQP documents into an established manual structure, each document's location must be identified and each revision request must identify the AQP document that is being revised and which manual contains the document.

C. Revising Approved Portions of an AQP. A revision to an approved portion (initial or final) of an AQP cannot be implemented until the applicant receives FAA approval.

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3-1571 WITHDRAWAL OF INITIAL OR PROVISIONAL APPROVAL. The FAA may decide to withdraw initial or provisional approval at any time the AQP is not in regulatory compliance, does not provide for safe operations, or does not effectively prepare crewmembers or dispatchers to meet qualification standards. The FAA will withdraw initial or provisional approval in writing, stating the reasons for the withdrawal and the effective date of withdrawal. An applicant who receives a letter of withdrawal may revise or refine the curriculum and resubmit it for initial or provisional approval.

3-1572 FINAL APPROVAL. Based on the results of evaluations accomplished during the period of initial approval, the FAA will grant or deny final approval of an AQP. Final approval is accomplished by stamped endorsement of AQP documents and by approval letter.

A. Stamped Approval Endorsement or an Acceptable Substitute (i.e., Electronic Stamp). For final approval, the LEPs of all AQP required documents are stamped approved, dated, and signed by the POI. As approved changes are made to AQP documents, the "Final Approval" endorsement must be reaccomplished on each revised page of the LEP.

Figure 3-98. Example Final Approval Stamp

FAA FINAL APPROVAL
OFFICE DESIGNATOR:
EFFECTIVE DATE:
NAME:
SIGNATURE:

B. Approval Letter. The ERT will grant final AQP approval by letter. The AFS-280 manager and POI/TCPM must sign all letters of final approval. After final approval is granted, the POI will sign all curriculum outline approvals. The letter must contain the same information as the initial approval letter except the expiration date.

C. Copies. A copy of the approval letter must be kept on file in the CHDO, at AFS-280, by the certificate holder or applicant, and, where applicable, at the location designated as the principal training site of a training center approved under § 121.923.

3-1573 GENERAL PROVISIONS FOR WITHDRAWAL OF FINAL APPROVAL. The FAA may withdraw final approval of a curriculum at any time if the FAA determines that sufficient safety reasons exist or that required data is not being maintained and provided. Before withdrawing approval, the FAA will make reasonable efforts to convince an applicant to correct its AQP. The FAA will withdraw approval by letter. The letter must identify the affected curriculums, state the reasons for the withdrawal, and state the effective date of the withdrawal (except in an emergency, not less than 7 days after receipt of the letter). The letter must advise the certificate holder that withdrawal may be appealed and provide instructions on how to appeal.

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3-1574 APPEAL OF A WITHDRAWAL. To appeal withdrawal of final approval, a certificate holder should petition the Director of Flight Standards Service (AFS-1) for reconsideration within 30 days after receiving withdrawal notification. The petition should be in writing and should explain in detail why the certificate holder believes the withdrawal should not occur.

A. Denial of Appeal. The Director may immediately deny the petition after considering all relevant information presented if the Director believes that an emergency exists that directly affects aviation safety. In this case, the Director will inform the certificate holder, by letter, of the decision to deny the appeal due to the existence of an emergency. The letter must state that an emergency exists and describe the deficiencies and the actions necessary to correct them.

B. Stay of Withdrawal. If the Director does not believe that an emergency exists, the Director will carefully consider both the certificate holder's petition for appeal and the FAA's reason for withdrawal of approval. In this case, the certificate holder's petition, provided it goes out within 30 days, stays withdrawal, and the certificate holder may continue to use the AQP curriculum pending the decision of the Director. The Director may find it necessary to conduct additional evaluations of the certificate holder's AQP.

C. Director's Final Decision. In any case, the Director will make a final decision within 60 days of receiving the certificate holder's petition. The Director may rescind or modify the letter of withdrawal or uphold the withdrawal. If the decision is to modify or uphold the withdrawal, the certificate holder will be notified by letter. The letter must contain the reasons for denying all or part of the petition.

3-1575 DATABASE MANAGEMENT AND ANALYSIS.

A. Data Collection and Analysis. Data collection and analysis are fundamental parts of an AQP. Data collection is required for all AQP curricula (§ 121.917(c)) as defined by each carrier's approved AQP data collection and analysis section of the certificate holder's I&O Plan. Data collection and analysis processes must ensure that the certificate holder obtains performance information on its personnel, instructors, and evaluators that will enable the certificate holder and the FAA to determine whether the form and content of training and evaluation activities are satisfactorily accomplishing the overall objectives of the curriculum.

B. AQP Quality Control (QC) Requirements. An AQP requires data collection in order to establish and maintain QC of curricula for crewmembers, dispatchers, instructors, and evaluators. Good data management practices are necessary to determine whether an AQP is meeting its objectives. Considerations for data entry include the method, the hardware/software required for data input, and the hardware/software required for data storage and manipulation. Database design is at the discretion of the carrier, providing that the design can generate the required report tables specified.

C. Data Collection Requirements. Data collection requirements for the AQP vary with the curriculum, the type of curriculum activity (training, validation, or evaluation), the type of participant (crewmember, dispatcher, instructor, or evaluator), and the overall management objectives for use of the data. All performance data collected on each proficiency objective must

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be relative to the applicable AQP qualification standards defined for the training and evaluation activities.

D. Collecting and Storing Data. Data is collected from each student's performance and is de-identified and stored in aggregate in a Performance/Proficiency Data Base (PPDB). This data is used to analyze training programs and/or groups of participants, not to track individual accomplishment. Collection and analysis of this data is designed to identify and correct problems, validate AQP curriculums, and identify developing trends.

E. Participant Data Collection. AQP requires that the data collection conducted by a participant for its own use in monitoring training will support more analytical detail and diagnostic functions than the data collected for submission to the FAA. The participant must do an analysis of the effectiveness of the training.

F. Submitting De-identified Data. The FAA has established the requirements for the submission of de-identified data by curriculum. Specific guidance for data management is found in AC 120-54 and the AQP Data Management Guide produced by the Airlines for America's (A4A) Data Management Focus Group. Copies are available from AFS-280 or can be downloaded from the AQP website (http://www.faa.gov/training_testing/training/aqp/). The list of data analysis questions/queries maintained in the AFS-280 Data Analysis and Reporting Tool (DART) are shown in Figure 3-104, Data Analysis Questions.

G. Data Submission Requirements. Submission requirements are defined in three tables; the Performance Data Report Table (PDRT), the Skill Reason Table (SklRsn), and the Training Objectives Report Table (TORT). The information in these tables is downloaded from the carrier's PPDB. The submissions are forwarded to the FAA AFS-280 manager electronically in calendar-month blocks using a Microsoft Access (.mdb) format.

H. Gradesheet Maintenance. The ERT should maintain copies of all gradesheets used in the validations and evaluations. Although gradesheets are not approved, the ERT must be able to compare them to the approved curriculum outlines and to ensure correlation between the data collecting requirements and the final product.

I. Analyzing Data. AFS-280 will accomplish proficiency analysis, validation of performance measures, and other statistical analysis and research for approved AQPs. AFS-280 analyzes the de-identified data using standard automated queries and reports to identify AQP performance trends.

J. Web-Based Data Sites. SharePoint websites have been created to facilitate the exchange of AQP performance data between AFS-280 and CHDO using a Web-based electronic library. The library contains:

- AFS-280 QC reports on data files submitted by the airline each month.
- All performance data submitted by the airline for a given year.
- Quarterly and annual performance data assessments completed by AFS-280.
- Pivot tables containing 6 months of PDRT data.
- Quick reports that are designed to provide a quick overview of an airline's AQP.

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Figure 3-99. Sample Approval Letter—Phase II

Date

Name

Director, Flight Standards and Training
Airlines, Inc.
747 Aviation Blvd.
Houston, TX 77032

Dear:

This letter is to notify you that the Federal Aviation Administration (FAA) Extended Review Team (ERT) (Air Carrier Training Systems and Voluntary Safety Programs Branch (AFS-280) and ____ certificate management office (CMO)) has completed its review of the B-757 Advanced Qualification Program (AQP) Phase II documents listed below.

The following documents are approved:

B-757 Pilot Task List, LEP dated 08/01/04.
B-757 Qualification Standards, LEP dated 08/20/04.
B-757 Curriculum Segment Outlines, LEP dated 08/30/04.
Instructional System Design Methodology, LEP dated 08/01/04.
Implementation and Operations Plan, LEP dated 08/01/04.

Contact Inspector _____ or Inspector _____if you have any questions.

Sincerely,

_____ _____
Manager, AFS-280 Principal Operations Inspector

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Figure 3-100. Sample Approval Letter—Phase III

Date

Name

Director, Flight Standards and Training
Airlines, Inc.
747 Aviation Blvd.
Houston, TX 77032

Dear:

This letter is to notify you that the Federal Aviation Administration (FAA) Extended Review Team (ERT) (Air Carrier Training Systems and Voluntary Safety Programs Branch (AFS-280) and _____ certificate management office (CMO)) has completed its review of the B-757 Advanced Qualification Program (AQP) qualification and continuing qualification curriculums. This letter certifies that _____ Airlines AQP, B-757 qualification/continuing qualification, are approved for Phase III Implementation (Small Group Tryouts), under Title 14 of the Code of Federal Regulations (14 CFR) part 121 subpart Y, and in accordance with the approved _____ Airlines Implementation and Operations Plan (I&O Plan). This approval is effective 7 January 2005 and is valid for a period of 120 days.

Please provide a master schedule of events to AFS-280 and the principal operations inspector (POI) as soon as possible so the ERT may offer assistance and review as needed. Contact Inspector _____ or Inspector _____ if you have any questions.

Sincerely,

_____ _____
Manager, AFS-280 Principal Operations Inspector

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Figure 3-101. Sample Approval Letter—Phase IV

Date

Name

Director, Flight Standards and Training
Airlines, Inc.
747 Aviation Blvd.
Houston, TX 77032

Dear:

This letter is to notify you that the Federal Aviation Administration (FAA) Extended Review Team (ERT) (Air Carrier Training Systems and Voluntary Safety Programs Branch (AFS-280) and _____ certificate management office (CMO)) has completed its review of the B-757 Advanced Qualification Program (AQP). We are pleased to inform you that your B-757 Continuing Qualification curriculum has been approved under Title 14 of the Code of Federal Regulations (14 CFR) part 121 subpart Y for AQP Phase IV, Initial Operations, effective 7 June 2005.

The expiration date of this initial approval is _____. Please provide the CMO with advance notice of any training or evaluation conducted under this curriculum to allow for surveillance of the training in accordance with part 121 subpart Y. Future page changes to this curriculum must be accomplished in accordance with the approved revision control methodology.

The following documents are approved:

B-757 Pilot Task List, Revision 2, LEP dated 05/20/05.
B-757 Qualification Standards, Revision 2, LEP dated 05/15/05.
B-757 Curriculum Segment Outlines, Revision 2, LEP dated 05/15/05.
Instructional System Design Methodology Revision 2, LEP dated 05/15/05.
Implementation and Operations Plan, Revision 2, LEP dated 05/15/05.

Note: Approval to conduct this curriculum will require the appropriate entry in Operations Specification (OpSpec) A034.

Contact Inspector _____ or _____ if you have any questions.

Sincerely,

_____ _____
Manager, AFS-280 Principal Operations Inspector

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Figure 3-102. Sample Approval Letter—Phase V

Date

Name

Director, Flight Standards and Training
Airlines, Inc.
747 Aviation Blvd.
Houston, TX 77032

Dear:

This letter is to notify you that the Federal Aviation Administration (FAA) Extended Review Team (ERT) (Air Carrier Training Systems and Voluntary Safety Programs Branch (AFS-280) and _____ certificate management office (CMO)) has completed its review of the B-757 Advanced Qualification Program (AQP). We are pleased to inform you that your B-757 Continuing Qualification curriculum has been approved under Title 14 of the Code of Federal Regulations (14 CFR) part 121 subpart Y for AQP Phase V, Continuing Operations, effective _____.

Please provide the CMO with advance notice of any training or evaluation conducted under this curriculum to allow for surveillance of the training in accordance with part 121 subpart Y. Future page changes to this curriculum must be accomplished in accordance with the approved revision control methodology.

The following documents are approved:

B-757 Pilot Task List, Revision 5, LEP dated 10/01/07.
B-757 Qualification Standards, Revision 8, LEP dated 10/25/07.
B-757 Curriculum Segment Outlines, Revision 18, LEP dated 05/03/08.
Instructional System Design Methodology Revision 2, LEP dated 05/15/05.
Implementation and Operations Plan, Revision 3, LEP dated 09/01/06.

Note: Approval to conduct this curriculum will require the appropriate entry in Operations Specification (OpSpec) A034.

Contact Inspector _____or Inspector _____if you have any questions.

Sincerely,

_____ _____
Manager, AFS-280 Principal Operations Inspector

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Figure 3-103. Operations Specification

Following initial/Phase IV approval, all AQP air carriers are required to be issued Operations Specification (OpSpec) A034.

Sample OpSpec A034, Advanced Qualification Program (AQP).

a. The certificate holder is authorized to conduct operations of an Advanced Qualification Program (AQP) under Title 14 of the Code of Federal Regulations (14 CFR) Special Federal Aviation Regulation (SFAR) 58 in accordance with the following provisions:

b. The certificate holder is authorized to conduct operations under an AQP with the following indoctrination curriculum:

Indoctrination Curriculum Initial Approval Date	Final Approval Date
05/10/04	05/31/06

Indoctrination Curriculum. Only one entry is required (not fleet-specific) with an entry for initial and final approval, as applicable.

c. The certificate holder is authorized to conduct operations in accordance with the following aircraft fleets and AQP curricula:

Aircraft	Qualification Curriculum Dates:		Continuing Curriculum Dates:		Instructor Evaluator Dates:		Comment
M/M/S	Initial	Final	Initial	Final	Initial	Final	
B737-200	5/19/04	5/31/06	2/20/05		4/09/04	5/1/06	
B737-800	11/1/05		7/1/04	6/30/06	7/1/04	6/30/06	
B757 B767	9/20/05		1/15/06		9/20/05		
B747-400	11/1/05		7/1/04	6/30/06	4/10/04	4/30/06	
B747-200	1/15/06				1/15/06		
A319 A320			5/20/06		4/30/06		

Enter the date of initial (Phase IV) and final (Phase V) approval for each make, model, and series (M/M/S) fleet type. Multiple fleet types that are considered one fleet type for certification and/or training can be entered on one line or separate entries can be entered. The differences curriculums do not have to be accounted for in the OpSpec.

(1) Instructor/Evaluator–Instructors and evaluators must be trained prior to conducting an AQP curriculum. Consequently, the first date entered in the initial approval block for an instructor/evaluator curriculum should coincide with, or be prior to, the first entry made in the fleet qualification or continuing qualification initial approval column. The date of final approval simply reflects the date final approval of the instructor/evaluator curriculum was granted.

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Figure 3-104. Data Analysis Questions

Data Analysis Questions
Which records in the Performance and Objective tables contain incomplete data values?
How many pilots and evaluations were graded for each evaluation type?
Which measured items are being performed for each evaluation type and how often are they being performed?
Which training objectives are evaluated for each Advanced Qualification Program (AQP) measured item?
Which measured items listed in the Training Objective Report Table (TORT) were not performed in this data set?
What ratings were given for each measured item, by evaluation type?
What is the diagnostic content for each drill-down layer of performance data?
What is the MRate distribution of MItems?
Which measured items are receiving unsatisfactory ratings?
How many measured items with unsatisfactory ratings did each pilot receive?
Which training objectives support measured items receiving unsatisfactory ratings?
Are any currency measured items receiving unsatisfactory ratings?
Are any critical measured items receiving unsatisfactory ratings?
How many unsat First Look MItems were reported?
What measured item ratings are being assigned to each crew position?
What eval type ratings are being assigned for each crew position?
What measured item ratings are being assigned for each flight simulation training device (FSTD)?
What measured item ratings are being assigned to pilots flying with and without seat substitutes?
What measured item ratings are being assigned to pilots flying with seat substitutes as pilot in command (PIC), second in command (SIC), or Flight Engineer (FE)?
How often are seat substitutes being used?
What measured item ratings were given for each evaluation type?
What evaluation ratings are given for each evaluation type?
What measured item ratings were assigned by each evaluator?
What is the MRate grading average among evaluators?
What are MRate average statistics for evaluators?
What percent of sessions were observed by FAA inspectors?
What measured item ratings were assigned for sessions with and without FAA inspectors present?
What geographic areas are being covered in the random line checks?
What measured item ratings are being assigned for each geographic area?
What are the most frequent skill/reasons for measured item ratings?
Which Skill/Reasons are given for each MItem?
What comments are provided for each evaluation type?

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Figure 3-105. Qualifications Standards Document—Regulatory Comparison Chart

Part of the Qualifications Standards Document.

Regulatory Variances.

The Advanced Qualification Program (AQP) allows development of proficiency-based training programs that encourage innovation in the methods and technologies used during instruction and evaluation, as well as efficient management of the training systems. Since these innovations may require some departures from the current regulations, the approved qualification standards replace the applicable portions of the existing Title 14 of the Code of Federal Regulations (14 CFR) part 121 regulations and other Federal Aviation Administration (FAA) training guidance as the definitive basis for the training program. This section describes the variance from current regulations approved for XYZ's AQP qualification and continuing qualification curriculums.

Part 121, § 121.401(c).

Requires instructor or evaluator verification of qualification. AQP allows completion of distributed training (e.g., home study) to be verified by an entry into XYZ's flight operations computer system. Upon successful completion of a computer-generated, random question exam, completion of the exam is logged electronically to each pilot's records. In this way, qualification on distributed training is verified automatically, rather than an instructor certifying crewmember completion of the training at the training center.

Section 121.419(c)(2).

Specifies that initial ground training for pilots and Flight Engineers (FE) of Group II airplanes must be 120 programmed hours unless the FAA approves a reduction under § 121.405 guidance. XYZ's AQP initial/transition curriculum includes all subjects listed in § 121.419(a), but for most airplanes is planned for less than 120 hours. Refer to the curriculum outlines in the appendix for the specific hours planned for each curriculum in each fleet. The days of training and classroom hours planned for AQP are approximately the same number of days/hours in the currently approved part 121 programs, with principal operations inspector (POI) approval letter of hourly reduction under § 121.405.

Sections 121.424 and 121.441.

Refers to part 121 appendix E for the maneuvers and procedures to be included in flight training, and part 121 appendix F for the maneuvers and procedures to be included in the flight check. The maneuvers and procedures for training and checking in XYZ's AQP curricula are tailored for each airplane type and crew position and comply with the guidance in part 121 subpart Y, the current edition of Advisory Circular (AC) 120-54, Advanced Qualification Program, and as approved by FAA for training and checking under AQP. Refer to the paragraph below titled Section 121.441(b)(1) and part 121 appendices E & F for an explanation of the maneuver variances.

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Section 121.427(c)(1)(iii).

Specifies that recurrent ground training for pilots and FEs on Group II airplanes must consist of at least 25 hours unless reduced under § 121.405. XYZ's AQP continuing qualification (recurrent) ground training curriculum incorporates a total of 18 planned hours. This includes 5 hours of distributed training and 13 hours of self-study/classroom instruction in aircraft specific, human factors, general subjects, security, and emergency drill training. The enabling objectives to be trained and validated in the continuing qualification curriculum are presented in module format in accordance with this order, and described in the objectives section of this document. The days of training and classroom hours planned for AQP are approximately the same number of days/hours in the currently approved part 121 program, with POI approval letter of hourly reduction under § 121.405.

Section 121.433(a).

Specifies the crewmember must complete a training program approved under part 121 subpart N for the type airplane and crew position. XYZ's flight crewmembers will complete the training program approved under part 121 subpart Y (AQP).

Section 121.433(c)(1)(iii).

Specifies a 6-month pilot-in-command (PIC) recurrent training requirement. XYZ will conduct annual recurrent training and checking under the part 121 subpart Y full crew concept guidelines. Refer to the recurrent training curriculum outline in the appendix.

Section 121.433(c)(2).

Specifies that the proficiency check for pilots be as provided for under § 121.441. XYZ pilots in an AQP will complete the proficiency check as a Line Operational Evaluation (LOE) under the part 121 subpart Y full crew concept guidelines.

Section 121.434(g)(2).

References the § 121.441 proficiency check as the start of the 120 days for pilots to accomplish 100 hours of flight time for consolidation of knowledge and skills. In XYZ's AQP, the start of the 120 days for completion of consolidation of knowledge and skills will be completion of the LOE.

Section 121.441(a)(1)(i).

Specifies that the PIC accomplish a proficiency check within the preceding 12 months and in addition, within the preceding 6 months, either a proficiency check or an approved simulator course of training under § 121.409. In XYZ's AQP, PICs will be scheduled for an annual crew-oriented training and check (LOE) within the required 12 months (plus or minus 1 month). However, the PIC requirement at 6 months for either a proficiency check or a simulator training session will be eliminated. Exception: PICs in certain situations will be required training at the 6-month point (plus or minus 1 month).

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Part 121 appendices E & F; & FAA Order 8900.1.

Require an Air Transportation flight instructor to train pilots in the interior and exterior visual inspection. XYZ' s AQP allows the interior and exterior inspection (Supporting Proficiency Objectives (SPO) 1.1.6.2, Aircraft Inspection) to be trained and validated by a ground instructor during the ground training segment of the qualification curriculum using advanced pictorials.

Section 121.441(b)(1) and part 121 appendices E & F.

Specifies that the proficiency check for pilots include at least the procedures and maneuvers in part 121 appendix F. All appendix F events are included in appendix E. In addition, appendix E includes the following six additional events not listed for the proficiency check in appendix F:

Night takeoff and landings [II & IV];

Zero flap approaches [III(o), PIC only];

Missed approaches that include a power plant failure [III(p)(4)];

Landing and go around with the horizontal stabilizer out of trim [IV(b), PIC only];

Zero flap landings if the Administrator finds that event appropriate [IV(h), PIC only]; and

Manual reversion (if appropriate) [IV(i)].

In accordance with part 121 subpart Y and AC 120-54, the events to be trained and validated/evaluated in XYZ's AQP are the Terminal Proficiency Objectives (TPO) and SPO described in the Proficiency Objectives section of this document. While occasionally labeled differently, these TPOs and SPOs are very similar to the events listed in appendices E and F, and all appendix E and F events are included, except steep turns and circling approaches. Circling approaches are not authorized in XYZ's operations and are not included in the curriculum. See the Training & Evaluation Strategy section of this document for more information on training and evaluation procedures.

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Maneuvers	Part 121 Appendix E Air Carrier Training	Practical Test Standards (PTS) FAA-S-8081-5F	Part 121 Appendix F Proficiency Check	AQP Qualification Curriculum	AQP Continuing Qualification Curriculum
Preflight					
Equipment Examination	N/A	Required (Page 27)	Required	Written/ETS/ Oral	Written/ETS/Oral
Interior Preflight Inspection	Required	Required (Page 35)	Required	Maneuvers Validation (MV)/LOE	Line check
Exterior Preflight Inspection	Required	Required (Page 35)	Required	MV/LOE	Line check
Taxiing	Required	Required (Page 37)	Required	MV/LOE	Line check
Powerplant Checks	Required	Required (Page 39)	Required	MV/LOE	Line check
Takeoffs					
Normal Takeoffs	Required	Required (Page 40)	Required	MV/LOE	Line check
Instrument Takeoff	Required	Required (Page 43)	Required	MV/LOE	MV/LOE
Crosswind Takeoff	Required	Required (Page 40)	Required	MV/LOE	Line check
Takeoff with Powerplant Failure	Required	Required (Page 45)	Required	MV/LOE	MV/LOE
Rejected Takeoff	Required	Required (Page 46)	Required	MV/LOE	MV/LOE
Instrument Procedures					
Area Departure and Arrival	Required	Required (Pages 47 and 54)	Required [1 Waivable]	MV/LOE	Line check
Holding	Required	Required (Page 55)	Required [Waivable]	MV/LOE	Brief
Normal Instrument Landing System (ILS)	Required	Required (Page 56)	Required	MV/LOE	MV/LOE
Autopilot Coupled ILS	Not Required	Not Required	Not Required	Train to Proficiency	MV/LOE
Manually Controlled ILS with Powerplant Failure	Required	Required (Page 64)	Required	MV/LOE	MV/LOE
Non-Precision Approach	Required	Required (Page 58)	Required	MV/LOE	MV/LOE

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Maneuvers	Part 121 Appendix E Air Carrier Training	Practical Test Standards (PTS) FAA-S-8081-5F	Part 121 Appendix F Proficiency Check	AQP Qualification Curriculum	AQP Continuing Qualification Curriculum
Second Non-precision Approach	Required	Required (Page 58)	Required	Train to Proficiency	Train to Proficiency
Circling Approach	Required	Required (Page 59)	Required [Waivable]	Train to Proficiency	Brief
Missed Approach from ILS	Required	Required (Pages 60)	Required	MV/LOE	MV/LOE
Additional Missed Approach	Required	Required (Page 60)	Required	Train to Proficiency	Train to Proficiency
Missed Approach with Powerplant Failure	Required	Required (Page 60)	Examiner Discretion	MV/LOE	MV/LOE
In-Flight Maneuvers					
Steep Turns	Required	Required (Page 49)	Required	Train to Proficiency	N/A
Stall Prevention	Required	Required (Page 49)	Required [2 Waivable]	Train to Proficiency	Train to Proficiency
Flight Characteristics	As Necessary	As Necessary	As Necessary	Train to Proficiency	N/A
Powerplant Failures	Required	Required (Page 51)	Required	MV/LOE	MV/LOE
Abnormal and Emergency Procedures will include all systems maneuvers and procedures as required by Airplane Flight Manual (AFM)	Required	Required (Pages 71 and 72)	Required	A sampling of Abnormals and Emergencies will be trained in the full flight simulator (FFS) and evaluated during MV and LOE.	Abnormals and Emergencies will be evaluated during ground school, trained in the FFS, and evaluated during MV and LOE.
Landings					
Normal Landings	Required	Required (Page 62)	Required	MV/LOE	Line Check
Landing from an ILS	Required	Required (Page 63)	Required	MV/LOE	MV/LOE
Crosswind Landing	Required	Required (Page 62)	Required	MV/LOE	MV/LOE

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Maneuvers	Part 121 Appendix E Air Carrier Training	Practical Test Standards (PTS) FAA-S-8081-5F	Part 121 Appendix F Proficiency Check	AQP Qualification Curriculum	AQP Continuing Qualification Curriculum
Landing with Powerplant Failure	Required	Required (Page 64)	Required	MV/LOE	MV/LOE
Landing from a Circling Approach	Required	Required (Page 65)	Required	Train to Proficiency	N/A
Rejected Landing	Required	Required (Page 69)	Required	MV/LOE	MV/LOE
Zero Flap Landing	Required	Required (Page 69)	Not Required	FSB Report	FSB Report
Postflight					
After Landing	Not Required	Required (Page 73)	Not Required	Line Check	Line Check
Parking and Security	Not Required	Required (Page 75)	Not Required	Line Check	Line Check
Training					
Windshear/Microburst				Train to Proficiency	Train to Proficiency
Ground Proximity Warning System (GPWS) Escape				Train to Proficiency	Train to Proficiency
Low Visibility Taxi				Train to Proficiency	Train to Proficiency
Precision Runway Monitor (PRM)				Train to Proficiency	Train to Proficiency
Upsets/Catastrophic Failures				Train to Proficiency	Train to Proficiency
Mis Trim				Train to Proficiency	Train to Proficiency
Area Navigation (RNAV) Approach				Train to Proficiency	Train to Proficiency

Part 121 appendix H(6), Advanced Simulation Training Program.

Specifies that a special Line-Oriented Flight Training (LOFT) program is required, consisting of at least a 4-hour course of training for each flightcrew, including at least 2 flight segments of the operator's route: 1 segment of normal operating procedures and 1 segment in appropriate abnormal and emergency flight operations. XYZ's AQP is structured to comply with the guidance contained in part 121 subpart Y and AC 120-54. As such, training, validation, and evaluation are conducted with a complete crew using the concepts of LOS. While XYZ's AQP

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does not currently include a LOFT, it does include Special Purpose Operational Training (SPOT) sessions and incorporates an LOE as the final performance evaluation to confirm operational proficiency. In all respects, the LOE resembles the traditional LOFT scenarios currently used in the approved advanced simulation training program.

RESERVED. Paragraphs 3-1576 through 3-1590.

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VOLUME 3 GENERAL TECHNICAL ADMINISTRATION

CHAPTER 21 THE ADVANCED QUALIFICATION PROGRAM

Section 5 Safety Assurance System: Crew Resource Management (CRM)/Dispatch Resource Management (DRM) Integration and Assessment

3-1591 GENERAL. This section is related to Safety Assurance System (SAS) Element 2.1.6 (OP), Advanced Qualification Program (AQP).

A. Background. The origins of Crew Resource Management (CRM) training can be traced to research conducted by the National Aeronautics and Space Administration (NASA) during the 1970s. This research sought to determine the causes of accidents in commercial aviation and came up with the startling (at that time) finding that the majority of accidents had causal factors related to crew interaction, communication, leadership, and decisionmaking. The outcome of this awareness was the development of training that addressed these aspects of flight. The training was initially called Cockpit Resource Management, but the name changed to Crew Resource Management as the scope changed to include interfaces with the cabin crew and other components of the system. NASA records much of the early development of CRM in the proceedings of two industry workshops hosted in 1978 and 1986.

B. CRM Training. CRM training develops skills that enhance flight safety through the effective use of all available resources: human, hardware, and information. CRM training increases awareness of human and system error and provides techniques and skills that will minimize their effects. This is accomplished through awareness of crewmember attitudes and behavior as well as the use of practical flight management skills. CRM training has achieved a greater degree of integration through the Advanced Qualification Program (AQP).

3-1592 CURRICULUM INTEGRATION. One of the major objectives of AQP is the seamless integration of CRM/dispatch resource management (DRM) and technical training, such that CRM/DRM becomes an integral part of the training and the job. Where appropriate, CRM/DRM procedures are identified, documented, integrated, and accorded the same weight as the technical procedures required for the execution of a given phase and its associated tasks.

A. CRM/DRM in Procedures. Integration does not mean that only those aspects of CRM/DRM that can be proceduralized are addressed in operations, technical training, and evaluation. However, some aspects of CRM are inherent to maneuver performance and have already been proceduralized. For example, communication procedures for coordinating callouts during takeoffs, approaches, and other maneuvers are specified in terms of what should be said and when it should be said. These callouts take place during most flight phases and are performed at fixed points in the flight-phase sequence of task activities. Similarly, some aspects of communication during the management of non-normal conditions can be easily positioned within the sequence of activities performed to manage the non-normal condition.

B. CRM/DRM on an As-Needed Basis. Other equally important CRM/DRM activities, in contrast, are performed on an as-needed basis, in order to manage the work load, work well as a team, or respond to unique situations. Recognizing the need for and effectively executing these activities is critical to coordinating the various duties the crew must perform during the flight.

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For example, certain communications should be performed in order to maintain crew awareness of flight status. Regardless of the phase of flight, it is critical that the crew recognize this communication requirement and effectively act upon it in a timely manner to maintain crew situational awareness.

C. Use as a Template. These global activities do not fit neatly within a hierarchical list of technical activities organized by phase of flight. Instead, they act as a "shell" or "template" that overlays and organizes the activities that may need to be performed during any phase of flight. These skills as a whole constitute a management strategy that represents a critically important part of the inventory of defenses against error that crews bring with them to the flight deck. In particular, they can provide the crew with the tools needed to resolve problematic situations to which they may never have been previously exposed in training or in flight operations. It is important, therefore, that training activities seek to fully instill these skills, in order to provide a basis for generalization to a potentially wide variety of situations.

3-1593 ASSESSING THE EFFECTIVENESS OF CRM/DRM PROGRAMS.

A. Use of Data. AQP stresses the use of data to develop and validate its components. Similarly, the success of CRM/DRM and human factors training rests on data showing its effectiveness and identifying areas of strength and weakness.

B. Determining Effectiveness. Because of the complexity of the aviation system, multiple sources of data are needed to reach valid conclusions about the effectiveness of programs. Data on individual and crew practices in the form of observable behaviors in the training environment, as well as student feedback, provide organizations with essential information on the strengths and weaknesses of training programs. Operational data indicating the frequency and nature of human factors problems encountered in line operations allow determination of how CRM/DRM is being practiced in an organization.

1) Evaluation and Validation. Training of CRM/DRM is mandatory. A means of evaluating the effectiveness of such training is also mandatory, but pass/fail CRM/DRM standards are not required. Applicant-developed evaluation strategies must at least include provisions for assessing the extent to which poor CRM/DRM skills are a contributory factor in a failure to meet technical standards of operational performance in validations and evaluations.

2) Assessment. Assessment, on the other hand, carries no jeopardy for individuals or crews and can be employed to gain an overall understanding of complex issues and to assist in the development of more effective training. The Performance/Proficiency Database (PPDB), built on the assessment of performance during training, also serves as a feedback loop for organizations on the effectiveness of their AQP. Non-jeopardy assessment can also provide critical information from line operations as described below.

3) Line Checks/Surveillance. The line check/observation provides not only an opportunity to observe and evaluate crew performance but also the chance to provide feedback and reinforcement of crew behaviors. The limitation of line check/surveillance data is that they document crew mastery of skills but indicate nothing about the likelihood they will be

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applied in an unmonitored environment. Nevertheless, these data form an important component of understanding crew performance.

4) Incident Reports. A number of sources of data can be used to monitor CRM/DRM in line operations.

5) Flight Operations Quality Assurance (FOQA). Through the use of quick access digital recorders, FOQA provides important information on instances where aircraft operational parameters exceed predetermined operational limits (e.g., unstable approaches). Through agreements between airlines, pilots' organizations, and the regulator, confidentiality of data is maintained and the data are used proactively for safety initiatives. For example, FOQA can indicate if "slam dunk" approaches are prevalent at certain airports. Awareness of this can lead to changes in control practices, if further investigation suggests that compliance with air traffic control (ATC) clearances necessitate such action, or to changes in charting, procedures, or automation guidance if other culprits become suspect. The major limitation of FOQA data is that they indicate when, but not why, events occur.

6) Safety Audits. Performance during training and formal evaluations provides evidence that skills have been learned but no information about whether the lessons have been internalized and incorporated into daily operational practices. Safety audit data are a valuable data source because they provide the strongest evidence regarding how much of the material taught in training and published corporate policy makes its way to the operation. In a line audit, trained observers record their observations of crew behaviors associated with threat recognition, error avoidance, and error management under non-jeopardy conditions. These data can provide an accurate picture of the acceptance and practice of CRM concepts across an organization, fleet, or operation, as well as the prevalence of threats, errors, and deviations from standard operating procedures (SOP). It must be noted that if there is no trust between the employee group and organizational management, the safety audit may be perceived as having the same jeopardy as an evaluation and an accurate snapshot of the operation may not be obtained.

7) Aviation Safety Action Program (ASAP) Reports and Surveys. ASAP reports and anonymous surveys of employees can provide additional, direct data on the status of CRM/DRM. Such reports and surveys are also helpful in identifying areas in need of additional training and in providing feedback on the operational relevance of training. Non-punitive incident reporting systems such as ASAP provide incentives for employees to share their experiences (and errors) on the job. Such data provide more immediately useful information than national, de-identified programs such as NASA's Aviation Safety Reporting System (ASRS), although the two programs are complementary and both are essential to monitoring the aviation system.

RESERVED. Paragraphs 3-1594 through 3-1605.

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VOLUME 3 GENERAL TECHNICAL ADMINISTRATION

CHAPTER 25 OPERATIONAL CONTROL FOR AIR CARRIERS

Section 5 Safety Assurance System: Part 135 Flight Locating Systems and Operating Rules

3-2021 GENERAL. This section contains direction and guidance to be used by inspectors concerning Title 14 of the Code of Federal Regulations (14 CFR) part 135 flight-locating systems and operating rules. Inspectors should use this section along with Section 1 of this Chapter when reviewing an operator's General Operations Manual (GOM) and when conducting inspections of part 135 operators. This section is related to Safety Assurance System (SAS) Elements 2.2.1 (OP), Airmen Duties/Flight Deck Procedures; 3.3.1 (OP), Operational Control; and 4.2.5 (AW), Maintenance Control.

3-2022 GENERAL REQUIREMENTS. Although part 135, § 135.77 explicitly requires that each operator exercise operational control, the method by which an operator does so is not closely defined by 14 CFR. Part 135 operations range from visual flight rules (VFR) operations in simple aircraft to extended overwater operations in highly sophisticated jet transports. Section 135.77 provides operators with the latitude necessary to design systems that fit the conditions surrounding the operations they conduct. Operators and principal operations inspectors (POI) must ensure, however, that each operator's system provides adequate control of the operation being conducted. Inspectors should be aware of the following requirements regarding operational functions:

A. Formal Releases. Part 135 does not require operators to prepare a formal release authorizing a specific flight. Section 135.69 does require that the operator restrict or suspend operations when either the pilot in command (PIC) or the operator becomes aware of a hazardous condition. One acceptable means an operator may use to comply with this requirement is to use a formal release system.

B. GOM Requirements. The operator's GOM must contain adequate briefing and trip planning procedures to ensure that all safety requirements are fulfilled. POIs shall ensure that each operator's GOM contains detailed policies, conditions, and specific procedures for each category of employee responsible for the authorization or planning of a flight.

C. Delegation of Authority. Part 135 operators commonly delegate the authority to PICs for initiating flights. Such delegation has generally proven to be adequate for the operation of general purpose, single-engine, and multiengine airplanes and helicopters in on-demand operations. Such systems may be inappropriate, however, for commuter operations, air ambulance services, jet transport operations, operations conducted beyond the contiguous states, extended overwater operations, and complex operations requiring extensive planning or coordination. POIs should strongly recommend that operators establish operational control systems that require the concurrence of an individual authorized to exercise operational control and the PIC for all flight release decisions. National Aeronautics and Space Administration (NASA) statistics show that police and air ambulance service operators who have adopted such systems have had significantly better safety records than operators of the same type who have not had such systems.

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3-2023 FLIGHT-LOCATING SYSTEMS. Section 135.79 requires that each operator maintain a flight-locating system. The system must provide for the timely notification of a Federal Aviation Administration (FAA) facility or a search-and-rescue facility if an aircraft is overdue or missing. The operator's notification must be at least as prompt as notifications provided by FAA procedures and facilities.

A. Flight Plans Filed by PICs. Part 135 operators may require PICs to file and activate air traffic control (ATC) flight plans as one means of complying with § 135.79. In this case, the operator's GOM must prohibit the PIC from operating without an activated flight plan until arrival at the destination airport. Operators may find that requiring the PIC to file a flight plan to satisfy the requirements of § 135.79 precludes certain operations. For example, it is impractical for a PIC to conduct a flight to a non-controlled field by cancelling instrument flight rules (IFR) at the last radio navigation fix and then proceeding under VFR to destination on a VFR flight plan. ATC does not accept composite IFR/VFR flight plans. Normally, ATC will not activate a VFR flight on an ATC frequency. A PIC who cancels IFR and then changes to a flight-watch frequency to activate a VFR flight plan is not in compliance with § 135.79. One acceptable means an operator may use to comply with § 135.79 is to require the PIC to telephone the person exercising operational control upon arrival at a destination not served by an ATC facility.

B. Procedures in Lieu of Flight Plans. When an FAA flight plan is not filed, operators must have established procedures for following and locating each flight. The individual authorized to conduct operational control must be provided with at least the information required in a VFR flight plan.

C. Flight-Locating Information When Radio Contact Cannot Be Maintained. Part 135 operators are not required to maintain the capability to contact flights while they are airborne. When operations are conducted in an area in which radio contact cannot be maintained with ATC, the individual authorized to exercise operational control must be provided with the location, date, and estimated time at which the PIC will reestablish radio or telephone communications. Flight-locating information must be retained at the operator's principal base of operations, or at other places designated by the operator, until the completion of the flight. Operators should maintain sufficient records to show compliance with these requirements.

D. Flight Followers. Part 135 does not specify the qualifications or titles of individuals authorized to authorize or follow flights. Section 135.77 does, however, require the operator to list the name of each individual authorized to perform these duties in the GOM.

E. Contractors. Part 135 operators may contract with other operators or organizations to perform direct operational control functions. The operator remains fully responsible for ensuring that the operations conducted comply with 14 CFR, the operator's GOM, and safe operating practices. The name of each employee of the contractor authorized to perform operational control functions for the operator must be placed in the operator's GOM.

F. Training. Operators are responsible for ensuring that individuals authorized to exercise operational control are adequately trained to perform their assigned duties. One acceptable means an operator may use to meet this requirement is to establish a training and qualification program such as that described in Volume 3, Chapter 22.

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NOTE: Individuals exercising operational control must be knowledgeable of, and have access to, appropriate sections of the operator's GOM while performing their assigned duties.

3-2024 PART 135 FUEL-PLANNING REQUIREMENTS. The fuel-planning requirements of 14 CFR parts 91 and 135 are based on IFR and VFR Class I navigation within the contiguous states. Other types of operations or operations outside of the contiguous states may require additional or special planning.

A. VFR Operations in Airplanes. Section 135.209(a) prohibits takeoff in an airplane under VFR rules unless the airplane has enough fuel to fly to the airport of first intended landing. Thereafter the airplane must have enough fuel (computed at normal cruise) to either fly for 30 minutes during the day or for 45 minutes at night.

B. VFR Operations in Helicopters. Section 135.209(b) prohibits takeoff in a helicopter under VFR rules unless the helicopter has enough fuel to fly to the airport of first intended landing, and then to fly for 20 minutes at normal cruising fuel consumption.

C. IFR Operations in Airplanes. Section 135.223 prohibits takeoff in an airplane in IFR conditions unless the airplane has enough fuel to complete the flight to the airport of first intended landing. Thereafter, the airplane must have enough fuel to fly to the alternate airport, and then to fly for 45 minutes at normal cruise fuel consumption.

D. IFR Operations in Helicopters. Section 135.223 prohibits takeoff in a helicopter in IFR conditions unless the helicopter has enough fuel to complete the flight to the airport of first intended landing. Thereafter, the helicopter must have enough fuel to fly to the designated alternate airport, and then to fly for 30 minutes at normal cruise fuel consumption.

E. Contingency Fuel. Part 135 does not specifically require a specific increment of contingency fuel. Part 91, § 91.103, however, does require that such contingencies be considered in preflight planning. Therefore, an increment of fuel to compensate for foreseeable contingencies must be on board for takeoff. One such contingency would be a delay in receiving takeoff clearance at major terminals. The operator's GOM should contain specific policies and instructions for computing the amount of contingency fuel to be carried under the circumstances likely to be encountered in the operator's specific operation.

F. En Route Requirements. The fuel-planning requirements discussed in subparagraphs A through E above apply for takeoff. Part 135 does not specify the action the PIC must take if an alternate airport goes below minimums when the flight is en route, or how much fuel must be on board when the flight arrives overhead a destination or alternate airport. Section 135.69(b) allows a PIC to continue toward a destination when a hazard to safe operations may reasonably be expected to be corrected before arrival. Section 135.69(b) does prohibit a PIC from continuing a flight toward a destination, however, when the operator or the PIC knows of conditions that make continuation of the flight hazardous. The operator's GOM should contain specific policies and instructions on how the PIC is to proceed in foreseeable circumstances that may be encountered in the operator's specific operation.

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3-2025 WEATHER REQUIREMENTS. Section 135.213 requires that weather reports and forecasts used in part 135 operations be prepared by the National Weather Service (NWS), a source approved by the NWS, or a source approved by the FAA (see Volume 3, Chapter 25, Section 1). Inspectors should ensure that part 135 operators are conducting operations in compliance with 14 CFR weather provisions, as follows:

A. VFR Operations. A flight may not depart under VFR rules unless the ceiling and visibility en route are forecast to be above the applicable VFR minimums until the aircraft arrives at the destination airport.

1) All available reports and forecasts must show that the flight can be completed in visual meteorological conditions (VMC). Available reports include Pilot Weather Reports (PIREP), which must be obtained and used when available.

2) When there is no information available from an approved source, § 135.213(a) authorizes PICs to use their own observations or those of another competent person for operations under VFR. This authority is limited to only those situations in which a report from an approved source is not available. For example, these procedures might be appropriate for floatplane operations at remote lakes where no weather observer is stationed. This provision does not relieve PICs and operational control personnel from obtaining and using the information that is available, such as area forecasts and PIREPs.

3) The operator's GOM must specify the circumstances under which PICs may use the provision of § 135.213(a). If observers other than PICs are used, operators must specify the training and qualifications of these observers.

B. Point of Departure—IFR Operations. A flight may not be originated when the weather at the departure point is below that specified in paragraph C057 or paragraph H106 of the operator's operations specifications (OpSpecs).

1) Takeoff weather minimums may be below the authorized landing minimums. For takeoff in such conditions, an alternate airport must be available within 1 hour of flying time from the departure airport at normal cruise speed.

2) Operators may be authorized to use "lower-than-standard" takeoff minimums by paragraph C057(e)(1) of the OpSpecs. POIs, operators, and PICs must be aware of the limitations associated with this authority. The operator must have an approved lower-than-standard takeoff training program and qualification module. The PIC (and second in command (SIC), when applicable) must have satisfactorily demonstrated competency on their last competency check (§ 135.293) or instrument proficiency check (IPC) (§ 135.297). A single pilot may not conduct lower-than-standard takeoffs in weather conditions below Category I (CAT I) landing minimums.

C. Destination Weather—IFR. A flight may not depart under IFR or over-the-top rules unless appropriate weather reports or forecasts indicate that conditions will be at or above the minimums required by the OpSpecs at the destination airport at the estimated time of arrival (ETA). The reports or forecasts used must be the most currently available at the time of

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takeoff. CAT I weather minimums are contained in OpSpec paragraphs C053, C054, and H103. CAT II and CAT III minimums are listed in OpSpec paragraphs C059, C060, H108, and H109.

D. Designation of Alternate Airports. Section 135.223 specifies when an alternate airport is required for IFR operations or over-the-top operations. An alternate airport does not have to be designated when, for at least 1 hour before and 1 hour after the ETA at the destination airport, the appropriate weather reports or forecasts (or any combination of them), show the ceiling will be as follows:

1) At least 1,500 feet above the lowest circling minimum descent altitude (MDA), if a circling approach is authorized for the airport; or

2) If a circling approach is not authorized, at least 1,500 feet above the lowest published instrument approach minimum or 2,000 feet above the airport elevation, whichever is greater; and

3) The visibility at that airport will be at least 3 miles, or 2 miles more than the lowest applicable visibility minimums, whichever is greater, for the instrument approach procedures (IAP) to be used.

E. Alternate Airport Weather. The forecast weather at the designated alternate airport must exceed the requirements of the table in either paragraph C055 or paragraph H105 of the OpSpecs, as applicable.

3-2026 IFR PASSENGER-CARRYING, OVER-THE-TOP OPERATIONS. Part 135 contains a set of rules that limit IFR passenger-carrying, over-the-top flights. These limitations do not apply to cargo-only part 135 flights.

NOTE: Section 135.181 does not prohibit a pilot from operating an aircraft in VFR conditions on an IFR clearance. An aircraft must be IFR equipped and the pilot or pilots must be qualified according to part 135 before an IFR clearance may be requested or IFR weather conditions are entered.

A. Operation of Single-Engine Aircraft in Over-The-Top Operations. Section 135.181 prohibits the operation of single-engine aircraft (airplanes and helicopters) in over-the-top operations unless the following conditions can be met:

1) The flight may be planned to climb to VFR over-the-top conditions as described in paragraph 3-2026.

2) If a ceiling exists, VFR conditions must be forecast to exist under the ceiling along the planned route from the time the flight begins operating over the top until 1 hour after the flight is estimated to reach the destination.

3) At all points along the route, upon reaching destination, and for 1 hour thereafter, the forecast must show that the flight will be able to descend in VFR conditions (clear of clouds), should an engine fail.

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B. Operation of Multiengine Aircraft in IFR, Over-The-Top, Passenger-Carrying Operations. A multiengine aircraft (airplane or helicopter) may be released for IFR or VFR over-the-top, passenger-carrying operations under the following circumstances:

1) The flight may be operated under the conditions described in subparagraph A above, or;

2) The operator may limit the takeoff weight so that the aircraft can climb at 50 feet per minute (fpm) at the minimum en route altitude (MEA) of the route to be flown or at 5,000 feet mean sea level (MSL), whichever is higher, with the critical engine inoperative. Passenger-carrying, multiengine helicopters flying offshore may be started when the helicopter can climb at 50 fpm at the MEA or at 1,500 feet MSL, whichever is higher, with the critical engine inoperative.

3) A flight may start when weather forecasts and reports indicate that the flight will be able to operate in VFR conditions until it reaches the destination and then descend in VFR conditions to beneath the ceiling. Conditions at the destination must allow a VFR descent for the period of the ETA to 1 hour after ETA. While operating over the top, the flight must be able to comply with subparagraph B1) or B2) above.

4) A flight may start when it can be operated clear of the clouds until it reaches the final approach fix (FAF) at the initial approach altitude under VFR conditions and then conduct an instrument approach.

3-2027 OVERWATER, PASSENGER-CARRYING OPERATIONS. Except for takeoffs, landings, and operations within gliding distance of land, all passenger-carrying flights operated over water must be operated as follows:

A. Airplanes. Operators must limit the takeoff weight of an airplane so that it can climb at 50 fpm at an altitude of 1,000 feet above the surface with the critical engine inoperative.

B. Helicopters. Helicopters must be equipped with flotation devices.

3-2028 PART 135 EXTENDED OVERWATER OPERATIONS. Although part 135 does not specifically address the requirements for extended overwater operations, § 135.21(a) requires that each operator develop a manual establishing the policies and procedures for operations that are acceptable to the FAA Administrator. One means, but not the only means, that a part 135 operator may use to develop acceptable extended overwater operations procedures is to show compliance with those portions of 14 CFR part 121 that correspond to the operation conducted.

A. Flight Planning and Navigation. Flight planning and navigational requirements do not differ from those of part 121 operators conducting operations in the same airspace (see Volume 3, Chapter 25, Sections 1 and 4).

B. Fuel Planning. The operator must provide adequate procedures for compensating with the limitations of forecast winds. One acceptable means an operator may use is to comply with the requirements of part 121, § 121.641 for reciprocating or turbopropeller aircraft and with

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the requirements of § 121.645 for turbojet aircraft. These sections provide for appropriate en route reserves.

C. Engine-Out En Route Performance Limits. The operator must develop procedures to comply with the engine-out performance limitations of part 135 subpart I. The operator's analysis must show compliance at the most critical point on the route. Under most conditions, engine-out operations require driftdown procedures. Inspectors must ensure that the operator's analysis considers how oxygen and aircraft systems are affected by engine loss.

3-2029 OPERATIONAL CONTROL.

A. Certificate Holder. A direct air carrier or commercial operator (certificate holder) certificated by the FAA includes any person or entity that provides or offers to provide transportation by air and who maintains control over the operational functions performed in providing that transportation. To legally act as a direct air carrier, a person or entity must hold an FAA 14 CFR part 119 certificate and comply with applicable regulations. Throughout this section, the terms "air carrier," "certificate holder," or "operator" will mean the holder of either an air carrier certificate or operating certificate issued with OpSpecs authorizing operations under part 135, including those authorized operations under both parts 121 and 135.

NOTE: A person or entity that wishes to engage in interstate common carriage operations must, in addition to holding an air carrier certificate, hold appropriate economic licensing authority from the Department of Transportation's (DOT) Office of the Secretary of Transportation (OST) under Title 49 of the United States Code (49 U.S.C.) § 41101 or 14 CFR part 298.

B. Part 119 Certificate Holder. Each part 119 certificate holder conducting operations under part 135 must have a system and/or procedures for the exercise of authority over the initiation, conduct, and termination of a flight. The intent of OpSpec A008 is to promote a mutual understanding between an operator and the FAA concerning the system and procedures used by that operator.

1) Each part 119 certificate holder conducting operations under part 135 must maintain control and authority over the initiation, continuation, conduct, and termination of its part 135 flights. In addition, under § 135.77, each operator conducting operations under part 135 is responsible to list, in the manual required by § 135.21, the name and title of each person it authorizes to exercise operational control. Those operators issued OpSpec A039, Single Pilot in Command Operator, or OpSpec A040, Single Pilot Operator, may not have manuals but may list these authorized persons in OpSpec A039 or A040, as applicable. If a certificate holder is issued OpSpec A037 or A038 and has a full deviation from the manual requirements, these persons must be listed in the certificate holder's OpSpec A006. A part 135 operator may not delegate the responsibility to maintain operational control over its air transportation and commercial services to any outside entity, including any aircraft owner and/or any aircraft management company.

2) The FAA has become aware that aircraft owners and aircraft management companies have entered into contracts to carry passengers or cargo for compensation or hire.

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These aircraft owners and management companies solicit and separately contract with a certificate holder conducting operations under part 135 purportedly to allow the flight operations promised to their customers to be conducted under the auspices of the operator's air carrier certificate. Under some of these arrangements, a "certificate fee" is provided to the part 119 certificate holder conducting operations under part 135 and operational control is exercised by the aircraft owner or management company. Where the aircraft owners and management companies are not also certificated as direct air carriers or commercial operators by the FAA to engage in common carriage, such arrangements are unlawful. In addition, when one certificate holder owns an aircraft that it is not authorized to be used in common carriage and enters into an arrangement with a second certificate holder under which the second certificate holder purportedly operates the aircraft, such an arrangement is unlawful if the aircraft owner/certificate holder actually conducts the flights in air transportation.

3) The FAA cautions each air carrier or commercial operator that holds a part 119 certificate authorizing part 135 operations that it may not franchise or lease out its authority to engage in part 135 operations to third parties. Persons not certificated by the FAA to engage in part 135 operations, or persons certificated by the FAA but not authorized to use the type of aircraft used in an operation, or to conduct the kind of operation being conducted, may not be directly or indirectly authorized by a part 135 operator to conduct flights under the authorized certificate holder's name, or under that authorized operator's fictitious business name(s) (i.e., "doing business as" (DBA)).

C. Operational Control.

1) Maintaining operational control of flights (§ 135.77) and providing flight locating functions (§ 135.79) are two distinct responsibilities of each part 135 operator. Flight locating requires procedures by the operator to locate each flight for which an FAA flight plan is not filed. Having a sufficient flight locating system does not mean that the part 135 operator is properly maintaining operational control of a part 135 flight. Operational control also requires that an operator has the knowledge to make those decisions perform those actions on an ongoing basis that are necessary to operate flights safely and in compliance with the regulations, and be held accountable for those decisions and actions.

2) Maintaining operational control requires the part 135 operator to, among other things:

a) Ensure that it alone conducts operations authorized in its OpSpecs.

b) Ensure that only its crewmembers that are trained and qualified in accordance with the applicable regulations and the certificate holder's approved training program are assigned to conduct a flight in accordance with the limitations in § 135.95.

c) Before initiation of a flight or series of flights, know the identity of each crewmember and affirmatively determine that the crewmember is qualified to function as a required crewmember on the flight. Absent such knowledge and determination, the part 135 operator must not assign a crewmember to a flight or series of flights.

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d) Ensure that all of its crewmembers are in compliance with all applicable flight, duty, and rest requirements before assigning the crewmembers to a flight.

e) Designate a PIC for each flight before the flight commences.

f) Specify the conditions under which a flight may be operated, such as determining the weather minimums, proper aircraft loading, center of gravity limitations, icing conditions, and fuel requirements.

g) Put procedures in place to ensure that when safety conditions specified for a flight cannot be met, the flight is canceled, delayed, rerouted, or diverted.

h) Ensure that an aircraft is Airworthy and is in compliance with the conditions and limitations specified by the FAA-approved inspection/maintenance program for the certificate holder before it is allowed to depart on a part 135 flight.

i) Have a system for locating each flight if a flight plan has not been filed.

3) The manner in which each part 119 certificate holder conducting operations under part 135 ensures operational control of flights conducted under its certificate will necessarily vary with the size and scope of the operations and the kind of aircraft flown by the operator. It is impractical, however, for an individual to exercise operational control over flights without the assistance of others in any but the simplest and most basic flight operations. Thus, each part 135 operator must have an organization and system in place—including all the necessary tools such as recordkeeping and management surveillance/oversight—that is sufficient to ensure that all functions have been accomplished before a flight or a series of flights is authorized to depart. This includes establishing effective internal communications, operating procedures, and administrative controls to accomplish regulatory requirements. In addition, the part 135 operator must publish these procedures in the operator's GOM for use by the certificate holder's flight, ground, and maintenance personnel. For those issued OpSpec A037, A038, A039 or A040 that have a full deviation from the manual requirement, abbreviated procedures may be entered into OpSpec A008.

4) Ordinarily, base inspections and operational control evaluations focus on the structure and effectiveness of the certificate holder's operational control system, as revealed by evaluations of the factors identified in subparagraph C2), above. If these evaluations, or other factors, reveal potential inadequacy or loss of operational control, further investigation may be warranted. Factors to be considered in such investigations include, but are not limited to:

a) Who is in actual or legal possession of the aircraft?

b) The business relationship between the part 119 certificate holder conducting operations under part 135 and the crewmembers. In addition, under part 119, § 119.53(b), an aircraft owner is prohibited from leasing an aircraft and a pilot to a certificate holder. If the certificate holder decides to use a pilot who is employed by the aircraft owner, that pilot must become the direct employee or agent of the certificate holder. The certificate holder is not required to provide any monetary compensation to the pilot. However, if the pilot receives additional monetary compensation specifically for serving as a flightcrew member on a revenue

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flight operated by the certificate holder, the certificate holder, and not the aircraft owner, must pay that monetary compensation to the pilot.

c) Insurance arrangements. The required OST Form 6410, U.S. Air Carriers—Certificate of Insurance, must certify that certificate holder is insured in accordance with DOT regulations.

d) Other payments, such as fuel payments, insurance payments, administrative payments, and the method of customer payment for air transportation services may be helpful in understanding the relationship between the certificate holder and other entities. For example, it may be completely acceptable for a lease between an aircraft owner and a certificate holder to place the burden for fuel payments on the owner of the aircraft. However, owner fuel payment responsibility, in combination with other circumstances (e.g., the aircraft owner directly collecting payments from the customer and disbursing such payments to the certificate holder after deducting fuel and other costs) could indicate that the owner is in operational control and not the certificate holder.

D. Fictitious Business Names: DBA.

1) Under § 119.9(a), a certificate holder may operate an aircraft under part 121 or part 135 only under a business name appearing in the certificate holder's OpSpecs. OpSpec A001, Issuance and Applicability, identifies the name of the certificate holder to whom the OpSpecs are issued. The name of the certificate holder that is issued the OpSpecs must be the legal name of the certificate holder.

2) OpSpec A001 also provides for authorization to conduct operations under a DBA. The addition of an aircraft owner's and/or management company's name (or close likeness to its name) as a DBA on an air carrier's OpSpecs does not constitute an authorization for the aircraft owner or management company to conduct business as the air carrier. Indeed, such arrangements have the potential to create confusion as to who is exercising operational control of the part 135 flight.

3) Aircraft owners, management companies, and other persons that do not hold part 119 certificates are reminded that air carrier operations can only be conducted by air carriers that have been issued an FAA part 119 certificate and that certificate holder is in direct control of the operations. The addition of a DBA that is the name of another company or corporation that has no part 119 certificate will not be allowed without concurrence from the Air Transportation Division (AFS-200). The required OST Form 6410 must be submitted in accordance with subparagraph C4)c) above.

E. OpSpec A008. The system and procedures to maintain operational control used by an operator must be described or referenced in OpSpec A008. It is preferable to complete OpSpec A008 with references to an operator's manual or sections of an operator's manual that describe the system and/or procedures used by that operator. It is not necessary to control these references by date. The references should be changed only when a revision to the operator's manual makes the reference in the OpSpecs incorrect. In the case of a certificate holder issued a

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deviation from the manual requirements, (e.g., a certificate holder issued OpSpec A037, A038, A039, or A040) those procedures may be entered directly into OpSpec A008 itself.

1) Often, it may not be appropriate to use references in OpSpec A008. In these cases narrative descriptions 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.

2) The description of the systems and/or procedures for controlling flight movement as described in the operator's manual (which is referenced in OpSpec A008), or described in a narrative in OpSpec A008, must include the following information, as appropriate to the kind of operation:

a) Methods and procedures for initiating, diverting, and terminating flights.

b) Persons or duty positions authorized to, and responsible for, exercise of operational control.

c) Facilities and location of facilities used by the operator in the exercise of operational control.

d) Communication systems and procedures used by the operator.

e) The methods and/or procedures used by the operator to ensure all authorized aircraft are Airworthy.

f) Emergency notification procedures.

g) Methods and procedures for ensuring that assigned crewmembers are qualified before and during all flight operations.

h) Methods and procedures to ensure the assigned PIC knows the certificate holder's responsibilities to exercise operational control.

3) The POI, in coordination with the principal maintenance inspector (PMI) and principal avionics inspector (PAI), must evaluate and substantiate submitted information. If the POI does not concur with the operator's proposal, he or she will forward a letter to the operator denying the proposed system with an explanation of the reasons for denial. The operator should contact the POI to address the POI's concerns. If the POI concurs that the operational control system should be approved, he or she will prepare and forward a letter to the operator accepting the proposed system.

F. Operational Control Failures. Failure in operational control requires action by both the certificate holder and the FAA. (See Volume 14, Chapter 1.) In cases of suspected renting or franchising of a certificate by the holder to either an uncertificated entity or a certificated entity that is not authorized to conduct flights for compensation or hire using the type of aircraft being operated, please contact AFS-200 at 202-267-8166 for guidance. The FAA has identified several failure modes of operational control, including at least the following basic conditions:

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1) Loss of operational control within the air carrier—hands-off management results in inadequate controls over its own operations.

2) Loss of operational control within the air carrier—exercise of operational control by an unapproved person.

3) Loss or surrender of operational control externally (e.g., an air carrier's illegal renting/franchising-out the use of its air carrier certificate to one or more uncertificated entities).

G. Operational Control Systems Key Concepts. Operational control affects each aspect of a certificate holder's activities, such as, operations, training, aircraft maintenance, advertising, personnel management, capital asset management, aircraft leases, financing, and insurance.

1) The key concepts of operational control are that the certificate holder retains authority and responsibility for operations conducted under its certificate and is capable of conducting such operations. To exercise that authority and meet that responsibility, the certificate holder has to have knowledge of its flight operations, and control those operations through its management personnel for functions described in OpSpec A008, subparagraph d(6)(a). When the certificate holder performs the functions described in OpSpec A008, subparagraph d(6)(b), those functions must be performed by a certificate holder's employees or agents.

2) Basic operational control questions.

a) The basic questions that must be answered in any review of operational control are:

- "Who makes the decisions to assign flightcrew members and aircraft, accept customer requests, and initiate, conduct, and terminate flights?" and
- "For whom do the pilots work as direct employees or agents?"

b) In both cases, the answer must be "the certificate holder."

NOTE: For contracted maintenance, the certificate holder can direct its action through an appropriate chain of command such as through a contracted 14 CFR part 145 repair station's management chain to the actual individual conducting aircraft maintenance. Also, the certificate holder may contract to an individual for aircraft maintenance. In either case, the actual work being conducted must be in accordance with the certificate holder's approved maintenance and inspection program and under the oversight of the certificate holder's management.

3) Similarly, a certificate holder may contract with a 14 CFR part 142 training center to conduct a portion of the operator's approved training program. During such training the training center and its employees are acting on the behalf of the certificate holder and are subject to the certificate holder's guidance, direction, and standards as communicated through the training center's management.

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4) Regardless of the relationship between a certificate holder and another entity (customer, aircraft owner, broker, etc.), the certificate holder must make the flightcrew and aircraft assignments, and determinations regarding the initiation, conduct, and termination of the flight.

5) Whether the pilot or mechanic is a direct employee or an agent, or works for a part 145 repair station or part 142 training center, he or she is doing the certificate holder's work and must adhere to the directions of the certificate holder's management in matters related to flight operations and the air carrier's maintenance, inspection, or training program, as appropriate.

6) In on-demand operations, no flight occurs unless the customer makes a request. This is not the initiation of a flight. Also, a customer may request that specific aircraft and/or pilots be assigned to flights where the customer is a passenger. This is not, by itself, the exercise of operational control by an uncertificated entity, but rather a customer preference in negotiating a service. In such cases, the certificate holder must apply the regulations, its OpSpecs, standards, procedures, policies, and processes to determine if the customer request can be met safely and in compliance with the regulations.

7) The same is true of customer-requested diversions in flight, whether for general customer preference (change in destination for business reasons, for example) or medical reasons (such as in the case of an air ambulance flight). Again, if the certificate holder determines that the request can be satisfied safely and within the regulations, and the certificate holder controls the decisionmaking process and is (through its authorized employees and agents) the decisionmaker, operational control is not necessarily lost.

H. Two-Tiered Operational Control Concept. OpSpec A008 contains a two-tiered approach to operational control.

1) The First Tier. All first-tier actions must be taken by the certificate holder's direct employees.

a) The first tier is the assignment of flightcrew member(s) and aircraft for revenue service under the operating certificate. The assignment of crew and release of aircraft to revenue service is the responsibility of the certificate holder, and must be made by the management of the certificate holder or management delegates. In order to be delegated the authority to make these decisions, the management delegates must be trained, found competent, and designated by the certificate holder, be listed in the GOM (or in OpSpec A006, A039 or A040, if applicable), and be under management supervision.

b) Management supervision means, for example, that the certificate holder tracks the actions of the management delegate or employee, samples the work of that employee (reviews a sample of the decisions made), and has the ability to enforce the certificate holder's standards through corrective actions such as retraining, requalification, or disciplinary actions such as disqualification, demotion, suspension, or termination. Because the certificate holder is responsible for the conduct of its employees or agents, it must have the ability to monitor and control their performance.

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2) The Second Tier. All second-tier actions may be taken either by the certificate holder's direct employees or by the certificate holder's agents. The second tier of operational control is more tactical. This involves the decisions made by personnel (such as the PIC) in the day-to-day conduct of operations. This may include the initiation of flights upon the PIC receiving a request from the customer directly (often the case in on-demand operations being conducted under a dedicated service contract, such as offshore operations or emergency medical service (EMS)). This is acceptable if the PIC is authorized by the certificate holder to make those decisions on behalf of the certificate holder. To do so would require that the PIC be trained, found competent by the certificate holder, designated, be listed in the GOM (or in OpSpec A006, A039, or A040, if applicable), and be under management supervision. If maintaining a list of these personnel in the GOM is too cumbersome, a list of these personnel may be maintained at the air carrier's principal base of operations and referenced in the GOM. The method of maintaining and distributing this list to all affected parties must be described in OpSpec A008 or in the GOM.

3) The GOM (or other appropriate documentation) must contain guidance which describes the certificate holder's operational control system. The training program must provide the certificate holder's personnel with the knowledge and skills required to ensure that the operational control system is effective.

I. Surveillance.

1) In conducting all surveillance activities, inspectors should consider if the management structure, training, procedures, and practices of the certificate holder provide for effective operational control. When conducting certification and surveillance activities, principal inspectors (PI) should evaluate the effectiveness of the certificate holder's or applicant's operational control system.

2) Seldom does a single factor determine if an operator has lost operational control. The following factors are offered to provide insight to the effectiveness and regulatory compliance of a certificate holder's operational control system. When factors exist that indicate that operational control may be ineffective or lost, further investigation is required to ascertain the compliance level of the certificate holder (see Volume 14, Chapter 1, Section 2). Upon further investigation, the relative value of the individual factors will be determined and an accurate assessment can be made of the operational control system.

3) Some specific questions to consider in these evaluations are:

a) Who scheduled crew and aircraft?

b) Who accepted charter flights from the public?

c) Who reviews weather and Notices to Airmen (NOTAM)?

d) Who performs flight planning?

e) Who designates PIC for each flight?

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f) Who ensures that crews comply with flight and duty requirement prior to departure?

g) How is the flightcrew compensated? See subparagraph C4)b) above. Is an obligation placed on the air carrier, by lease or other arrangement or mechanism with the aircraft owner, to use the aircraft owner's pilots (e.g., a wet lease)?

h) Who specifies conditions under which a flight may be dispatched or released, e.g., weather minimums, flight planning, airworthiness of aircraft, aircraft loading, and fuel requirements?

i) Who ensures that only trained and qualified crews are assigned to conduct flights?

j) Whether the air carrier ensures that only those operations authorized by its OpSpecs are conducted?

k) Prior to departure, who ensures that the flight complies with the conditions specified in the release?

l) When conditions specified for a flight's release cannot be met, who ensures that the flight is canceled, delayed, rerouted, or diverted?

m) Who monitors the progress of each flight, and initiates timely actions when the flight cannot be completed as planned, including diverting or terminating the flight?

n) Has the certificate holder shifted financial accountability for its operations or the conduct or safety of the part 135 flight from the air carrier to the aircraft owner or others?

o) Does an uncertificated entity (one that does not hold a part 119 certificate) or an entity that is not authorized or permitted by the DOT to act as an indirect air carrier receive the direct payment for air transportation from the customer?

J. Leases and Other Agreements.

1) OpSpec A008 requires the certificate holder to determine that all leases and other agreements affecting the aircraft and personnel of the certificate holder are reviewed to ascertain that they are in compliance with regulatory requirements and limitations. The limitations are centered on illegal wet leases (i.e., leases in which an uncertificated entity provides possession of a specific aircraft and at least one crewmember to a certificate holder for a specified period of time). Other nonleasing arrangements could raise operational control red flags, especially those agreements where an aircraft owner dictates which pilot the air carrier can use on part 135 flights with third-party passengers or cargo.

2) Should inspections or surveillance reveal possible or potential loss or transfer of operational control, further examination may involve the review of leases and other agreements relative to the operation.

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3) A determination of who exercises operational control is not dependent solely on the wording of such leases or other agreements or arrangements. Such agreements cannot be viewed in a vacuum. A dry lease, in and of itself, does not shift responsibility for operational control to the lessee. Examination of the substance of a transaction, rather than the form, is essential to determine who actually exercises operational control. Case law has established that the substance, not the form, of contractual agreements establishes the nature of the relationship between parties, and that taking action against those who effectively operate for compensation or hire in violation of FAA safety regulations is appropriate. When necessary, PIs should seek the assistance of their respective regional counsel for review of leases and other agreements.

K. Summary of Operational Control. Only approved persons may exercise operational control on the certificate holder's behalf.

1) The certificate holder must have adequate controls in place to ensure that officials in a position of authority over flights conducted under the certificate do so safely, and in compliance with the regulations, OpSpecs, GOM, as applicable, and accepted or approved procedures.

2) Management of operations should never be inattentive, distracted, or careless. Hands-off management is not a legitimate excuse for failing to maintain operational control.

L. Specific Policies and Procedures. The following notes describe the FAA's position on the subjects as they relate to operational control.

1) Advertising by Indirect Air Carriers.

a) Indirect air carriers, including air charter brokers, may not purport to directly provide transportation by air.

b) Indirect air carrier advertising must indicate the name of the certificate holder providing transportation by air. This does not mean that all pages of a Web site, or a brochure or any other advertising vehicle must identify the certificate holder. If more than one certificate holder is used, language to the effect that the advertiser uses FAA-certificated air carriers or operators is acceptable. The test is that a casual reader of the advertisement would understand who is actually conducting the transportation by air.

c) The OST considers it to be an unfair and deceptive practice and unfair method of competition under its economic regulatory authority for any person or entity that is not a direct air carrier to hold out or provide air transportation as a direct air carrier.

2) Aircraft Marking. Must comply with § 119.9(b).

a) The aircraft must be marked so that the "… name of the certificate holder… or the … certificate number of the certificate holder who is operating the aircraft, is legibly displayed on the aircraft and is clearly visible and readable from the outside of the aircraft."

b) In some cases of contractual service (e.g., helicopter emergency medical service (HEMS), offshore, and oil and gas), the customer may desire that the aircraft have

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markings such as the oil company or hospital logo and/or name displayed on the aircraft. In such cases, the operator must ensure that it is clear to the passengers and crew that the certificate holder is conducting the air transportation service. Adherence to § 119.9(b) is still required.

c) Regulations of the OST prohibit air charter brokers and other ticket agents from permitting their names or logos to be used in a manner that misleads the public into thinking they are an airline. (Refer to 14 CFR part 399, § 399.80(b).)

3) Billing.

a) There may be circumstances when billing may be accomplished by the indirect air carrier.

b) If possible, the billing should indicate that the air transportation was provided by the certificate holder (by name).

c) In some circumstances, such as insurance or Medicare/Medicaid billing by medical service providers, it is highly impractical for the bill to reflect the name of the certificate holder (transportation by air provider). This is acceptable if other literature, Web sites, advertising, etc., adequately reflect that transportation by air is provided by the certificate holder.

4) Delegation of Authority.

a) Authority and duty, but never responsibility, may be delegated.

b) Functions may be contracted to personnel or organizations in accordance with paragraph 3-2023, Flight-Locating Systems, and Volume 3, Chapter 25, Section 1, subparagraph 3-1921G, Services Provided by Contractors.

c) Persons to whom authorities or duties (functions) have been delegated must be trained and found competent by the certificate holder; be designated; be listed in the GOM, or in OpSpec A006, A038, or A040, as applicable; and be under management supervision and oversight to ensure performance (management must have disciplinary authority over its contractors).

d) Some functions may never be delegated outside the air carrier (e.g., refer to OpSpec A008, subparagraph d(6)(a)).

5) Flight Locating.

a) The certificate holder must accomplish flight locating unless FAA flight plans are filed for each flight.

b) The certificate holder may delegate flight-locating duties to employees of, or agents for, the certificate holder.

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c) Again, these persons must be trained and competent, be designated in writing, be listed in the GOM (or in OpSpec A006, A039 or A040, if applicable), be provided with procedures, policies, and guidance, and be under certificate holder management oversight.

d) The certificate holder must have knowledge of all flight operations.

6) Crew Resource Management (CRM)/Air Medical Resource Management (AMRM).

a) Operational control concepts do not counter CRM and AMRM concepts.

b) In any decisionmaking process, there is a designated decisionmaker.

c) In air transportation matters, that decisionmaker is the certificate holder.

d) Operational control ensures that the certificate holder exercises that decisionmaking authority and meets its regulatory responsibilities.

e) The PIC is directly responsible for, and is the final authority as to, the operation of the aircraft (§ 91.3). The PIC serves in this regulatory capacity and as an agent for the certificate holder after assignment to PIC duty by management.

7) Initiation and Diversion.

a) If authorized by the certificate holder, in accordance with the FAA-approved operational control system, the PIC may receive a request from a customer, and, within his or her documented authorities, accept or decline the request in accordance with certificate holder's policies.

b) The PIC must be trained and competent, designated in writing, and listed in the GOM (or in A006, A039 or A040, if applicable), be provided with procedures, policies and guidance, and be under certificate holder management oversight. If maintaining a list of these personnel in the GOM is too cumbersome, a list of these personnel may be maintained at the air carrier's principal base of operations and referenced in the GOM. The method of maintaining and distributing this list to all affected parties must be described in OpSpec A008 or in the GOM.

8) Operations Control Center (OCC).

a) Section 135.619 requires certificate holders authorized to conduct helicopter air ambulance (HAA) operations to have an OCC if 10 or more HAAs are assigned to the certificate holder's OpSpecs.

b) While not required by regulation, certificate holders with less than 10 HAAs assigned to the certificate holder's OpSpecs are encouraged to make use of an appropriately scaled OCC.

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c) Refer to § 135.619 and the current edition of Advisory Circular (AC) 120-96, Operations Control Center (OCC) for Helicopter Air Ambulance (HAA) Operations, for further information on OCCs.

9) Remote Area Operations.

a) Remote area operations often involve extended operations outside of communications with the certificate holder. Using the two-tiered system of operational control, these operations may be conducted if the certificate holder's management or management designees make the assignment of the crew and the release of the aircraft at the beginning of the remote area operation assignment. Because such assignments may extend over several days, the certificate holder must determine that the crew and aircraft will remain in deployable status (pilot checks, medical examinations, aircraft inspection, and maintenance requirements will all be satisfied) during the assignment period. The crew must receive specific instructions on how to monitor and control operational control elements that it will be authorized to control for the certificate holder when outside communication with company management. In such cases, the certificate holder must establish procedures and alternatives for the PIC to use in the conduct of flight operations, including, but not limited to:

1. Flight, duty, and rest requirements.

2. Airport landing site requirements.

3. Weather limitations.

4. Weight and Balance (W&B) control.

5. Maintenance and servicing requirements.

6. Communications alternatives (relay with airborne aircraft, etc.).

7. Hazardous materials (hazmat).

8. Emergency operations.

b) Before operating in an area outside of communications with the certificate holder, the certificate holder and PIC must agree on a time, place, and date where communications will be reestablished and the emergency plan if they are unable to establish communications.

c) When applicable, remote area operational control procedures must be described in the GOM (or in OpSpec A008 for those certificate holders issued OpSpec A037, A038, A039, or A040). Furthermore, remote operational control procedures must be addressed in the training program for certificate holders that are not issued OpSpec A037, A038, A039, or A040, and for those certificate holders that do hold OpSpec A037, A038, A039, or A040, it also must be addressed in the training program unless they have a full deviation that includes training. In addition, the certificate holder must identify the area(s) in which remote area operational

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control procedures will be utilized, and such areas must be described in the FAA-accepted GOM (or in OpSpec A008 for those certificate holders issued OpSpec A037, A038, A039, or A040).

10) The Air Ambulance Operators: Civil Aeronautics Board (CAB) Exemption (83-1-86). It does not permit uncertificated entities to conduct flights in air transportation.

a) The air medical (EMS) community secured a blanket exemption from the economic authority requirements of the DOT on January 12, 1983.

b) This exemption is still valid.

c) It pertains only to the economic authority to act as an indirect air carrier.

d) The actual flight operations and the operational control must be accomplished by a certificate holder.

RESERVED. Paragraphs 3-2030 through 3-2045.

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VOLUME 3 GENERAL TECHNICAL ADMINISTRATION

CHAPTER 25 OPERATIONAL CONTROL FOR AIR CARRIERS

Section 5 Safety Assurance System: Part 135 Flight Locating Systems and Operating Rules

3-2021 GENERAL. This section contains direction and guidance to be used by inspectors concerning Title 14 of the Code of Federal Regulations (14 CFR) part 135 flight-locating systems and operating rules. Inspectors should use this section along with Section 1 of this Chapter when reviewing an operator's General Operations Manual (GOM) and when conducting inspections of part 135 operators. This section is related to Safety Assurance System (SAS) Elements 2.2.1 (OP), Airmen Duties/Flight Deck Procedures; 3.3.1 (OP), Operational Control; and 4.2.5 (AW), Maintenance Control.

3-2022 GENERAL REQUIREMENTS. Although part 135, § 135.77 explicitly requires that each operator exercise operational control, the method by which an operator does so is not closely defined by 14 CFR. Part 135 operations range from visual flight rules (VFR) operations in simple aircraft to extended overwater operations in highly sophisticated jet transports. Section 135.77 provides operators with the latitude necessary to design systems that fit the conditions surrounding the operations they conduct. Operators and principal operations inspectors (POI) must ensure, however, that each operator's system provides adequate control of the operation being conducted. Inspectors should be aware of the following requirements regarding operational functions:

A. Formal Releases. Part 135 does not require operators to prepare a formal release authorizing a specific flight. Section 135.69 does require that the operator restrict or suspend operations when either the pilot in command (PIC) or the operator becomes aware of a hazardous condition. One acceptable means an operator may use to comply with this requirement is to use a formal release system.

B. GOM Requirements. The operator's GOM must contain adequate briefing and trip planning procedures to ensure that all safety requirements are fulfilled. POIs shall ensure that each operator's GOM contains detailed policies, conditions, and specific procedures for each category of employee responsible for the authorization or planning of a flight.

C. Delegation of Authority. Part 135 operators commonly delegate the authority to PICs for initiating flights. Such delegation has generally proven to be adequate for the operation of general purpose, single-engine, and multiengine airplanes and helicopters in on-demand operations. Such systems may be inappropriate, however, for commuter operations, air ambulance services, jet transport operations, operations conducted beyond the contiguous states, extended overwater operations, and complex operations requiring extensive planning or coordination. POIs should strongly recommend that operators establish operational control systems that require the concurrence of an individual authorized to exercise operational control and the PIC for all flight release decisions. National Aeronautics and Space Administration (NASA) statistics show that police and air ambulance service operators who have adopted such systems have had significantly better safety records than operators of the same type who have not had such systems.

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3-2023 FLIGHT-LOCATING SYSTEMS. Section 135.79 requires that each operator maintain a flight-locating system. The system must provide for the timely notification of a Federal Aviation Administration (FAA) facility or a search-and-rescue facility if an aircraft is overdue or missing. The operator's notification must be at least as prompt as notifications provided by FAA procedures and facilities.

A. Flight Plans Filed by PICs. Part 135 operators may require PICs to file and activate air traffic control (ATC) flight plans as one means of complying with § 135.79. In this case, the operator's GOM must prohibit the PIC from operating without an activated flight plan until arrival at the destination airport. Operators may find that requiring the PIC to file a flight plan to satisfy the requirements of § 135.79 precludes certain operations. For example, it is impractical for a PIC to conduct a flight to a non-controlled field by cancelling instrument flight rules (IFR) at the last radio navigation fix and then proceeding under VFR to destination on a VFR flight plan. ATC does not accept composite IFR/VFR flight plans. Normally, ATC will not activate a VFR flight on an ATC frequency. A PIC who cancels IFR and then changes to a flight-watch frequency to activate a VFR flight plan is not in compliance with § 135.79. One acceptable means an operator may use to comply with § 135.79 is to require the PIC to telephone the person exercising operational control upon arrival at a destination not served by an ATC facility.

B. Procedures in Lieu of Flight Plans. When an FAA flight plan is not filed, operators must have established procedures for following and locating each flight. The individual authorized to conduct operational control must be provided with at least the information required in a VFR flight plan.

C. Flight-Locating Information When Radio Contact Cannot Be Maintained. Part 135 operators are not required to maintain the capability to contact flights while they are airborne. When operations are conducted in an area in which radio contact cannot be maintained with ATC, the individual authorized to exercise operational control must be provided with the location, date, and estimated time at which the PIC will reestablish radio or telephone communications. Flight-locating information must be retained at the operator's principal base of operations, or at other places designated by the operator, until the completion of the flight. Operators should maintain sufficient records to show compliance with these requirements.

D. Flight Followers. Part 135 does not specify the qualifications or titles of individuals authorized to authorize or follow flights. Section 135.77 does, however, require the operator to list the name of each individual authorized to perform these duties in the GOM.

E. Contractors. Part 135 operators may contract with other operators or organizations to perform direct operational control functions. The operator remains fully responsible for ensuring that the operations conducted comply with 14 CFR, the operator's GOM, and safe operating practices. The name of each employee of the contractor authorized to perform operational control functions for the operator must be placed in the operator's GOM.

F. Training. Operators are responsible for ensuring that individuals authorized to exercise operational control are adequately trained to perform their assigned duties. One acceptable means an operator may use to meet this requirement is to establish a training and qualification program such as that described in Volume 3, Chapter 22.

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NOTE: Individuals exercising operational control must be knowledgeable of, and have access to, appropriate sections of the operator's GOM while performing their assigned duties.

3-2024 PART 135 FUEL-PLANNING REQUIREMENTS. The fuel-planning requirements of 14 CFR parts 91 and 135 are based on IFR and VFR Class I navigation within the contiguous states. Other types of operations or operations outside of the contiguous states may require additional or special planning.

A. VFR Operations in Airplanes. Section 135.209(a) prohibits takeoff in an airplane under VFR rules unless the airplane has enough fuel to fly to the airport of first intended landing. Thereafter the airplane must have enough fuel (computed at normal cruise) to either fly for 30 minutes during the day or for 45 minutes at night.

B. VFR Operations in Helicopters. Section 135.209(b) prohibits takeoff in a helicopter under VFR rules unless the helicopter has enough fuel to fly to the airport of first intended landing, and then to fly for 20 minutes at normal cruising fuel consumption.

C. IFR Operations in Airplanes. Section 135.223 prohibits takeoff in an airplane in IFR conditions unless the airplane has enough fuel to complete the flight to the airport of first intended landing. Thereafter, the airplane must have enough fuel to fly to the alternate airport, and then to fly for 45 minutes at normal cruise fuel consumption.

D. IFR Operations in Helicopters. Section 135.223 prohibits takeoff in a helicopter in IFR conditions unless the helicopter has enough fuel to complete the flight to the airport of first intended landing. Thereafter, the helicopter must have enough fuel to fly to the designated alternate airport, and then to fly for 30 minutes at normal cruise fuel consumption.

E. Contingency Fuel. Part 135 does not specifically require a specific increment of contingency fuel. Part 91, § 91.103, however, does require that such contingencies be considered in preflight planning. Therefore, an increment of fuel to compensate for foreseeable contingencies must be on board for takeoff. One such contingency would be a delay in receiving takeoff clearance at major terminals. The operator's GOM should contain specific policies and instructions for computing the amount of contingency fuel to be carried under the circumstances likely to be encountered in the operator's specific operation.

F. En Route Requirements. The fuel-planning requirements discussed in subparagraphs A through E above apply for takeoff. Part 135 does not specify the action the PIC must take if an alternate airport goes below minimums when the flight is en route, or how much fuel must be on board when the flight arrives overhead a destination or alternate airport. Section 135.69(b) allows a PIC to continue toward a destination when a hazard to safe operations may reasonably be expected to be corrected before arrival. Section 135.69(b) does prohibit a PIC from continuing a flight toward a destination, however, when the operator or the PIC knows of conditions that make continuation of the flight hazardous. The operator's GOM should contain specific policies and instructions on how the PIC is to proceed in foreseeable circumstances that may be encountered in the operator's specific operation.

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3-2025 WEATHER REQUIREMENTS. Section 135.213 requires that weather reports and forecasts used in part 135 operations be prepared by the National Weather Service (NWS), a source approved by the NWS, or a source approved by the FAA (see Volume 3, Chapter 25, Section 1). Inspectors should ensure that part 135 operators are conducting operations in compliance with 14 CFR weather provisions, as follows:

A. VFR Operations. A flight may not depart under VFR rules unless the ceiling and visibility en route are forecast to be above the applicable VFR minimums until the aircraft arrives at the destination airport.

1) All available reports and forecasts must show that the flight can be completed in visual meteorological conditions (VMC). Available reports include Pilot Weather Reports (PIREP), which must be obtained and used when available.

2) When there is no information available from an approved source, § 135.213(a) authorizes PICs to use their own observations or those of another competent person for operations under VFR. This authority is limited to only those situations in which a report from an approved source is not available. For example, these procedures might be appropriate for floatplane operations at remote lakes where no weather observer is stationed. This provision does not relieve PICs and operational control personnel from obtaining and using the information that is available, such as area forecasts and PIREPs.

3) The operator's GOM must specify the circumstances under which PICs may use the provision of § 135.213(a). If observers other than PICs are used, operators must specify the training and qualifications of these observers.

B. Point of Departure—IFR Operations. A flight may not be originated when the weather at the departure point is below that specified in paragraph C057 or paragraph H106 of the operator's operations specifications (OpSpecs).

1) Takeoff weather minimums may be below the authorized landing minimums. For takeoff in such conditions, an alternate airport must be available within 1 hour of flying time from the departure airport at normal cruise speed.

2) Operators may be authorized to use "lower-than-standard" takeoff minimums by paragraph C057(e)(1) of the OpSpecs. POIs, operators, and PICs must be aware of the limitations associated with this authority. The operator must have an approved lower-than-standard takeoff training program and qualification module. The PIC (and second in command (SIC), when applicable) must have satisfactorily demonstrated competency on their last competency check (§ 135.293) or instrument proficiency check (IPC) (§ 135.297). A single pilot may not conduct lower-than-standard takeoffs in weather conditions below Category I (CAT I) landing minimums.

C. Destination Weather—IFR. A flight may not depart under IFR or over-the-top rules unless appropriate weather reports or forecasts indicate that conditions will be at or above the minimums required by the OpSpecs at the destination airport at the estimated time of arrival (ETA). The reports or forecasts used must be the most currently available at the time of

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takeoff. CAT I weather minimums are contained in OpSpec paragraphs C053, C054, and H103. CAT II and CAT III minimums are listed in OpSpec paragraphs C059, C060, H108, and H109.

D. Designation of Alternate Airports. Section 135.223 specifies when an alternate airport is required for IFR operations or over-the-top operations. An alternate airport does not have to be designated when, for at least 1 hour before and 1 hour after the ETA at the destination airport, the appropriate weather reports or forecasts (or any combination of them), show the ceiling will be as follows:

1) At least 1,500 feet above the lowest circling minimum descent altitude (MDA), if a circling approach is authorized for the airport; or

2) If a circling approach is not authorized, at least 1,500 feet above the lowest published instrument approach minimum or 2,000 feet above the airport elevation, whichever is greater; and

3) The visibility at that airport will be at least 3 miles, or 2 miles more than the lowest applicable visibility minimums, whichever is greater, for the instrument approach procedures (IAP) to be used.

E. Alternate Airport Weather. The forecast weather at the designated alternate airport must exceed the requirements of the table in either paragraph C055 or paragraph H105 of the OpSpecs, as applicable.

3-2026 IFR PASSENGER-CARRYING, OVER-THE-TOP OPERATIONS. Part 135 contains a set of rules that limit IFR passenger-carrying, over-the-top flights. These limitations do not apply to cargo-only part 135 flights.

NOTE: Section 135.181 does not prohibit a pilot from operating an aircraft in VFR conditions on an IFR clearance. An aircraft must be IFR equipped and the pilot or pilots must be qualified according to part 135 before an IFR clearance may be requested or IFR weather conditions are entered.

A. Operation of Single-Engine Aircraft in Over-The-Top Operations. Section 135.181 prohibits the operation of single-engine aircraft (airplanes and helicopters) in over-the-top operations unless the following conditions can be met:

1) The flight may be planned to climb to VFR over-the-top conditions as described in paragraph 3-2026.

2) If a ceiling exists, VFR conditions must be forecast to exist under the ceiling along the planned route from the time the flight begins operating over the top until 1 hour after the flight is estimated to reach the destination.

3) At all points along the route, upon reaching destination, and for 1 hour thereafter, the forecast must show that the flight will be able to descend in VFR conditions (clear of clouds), should an engine fail.

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B. Operation of Multiengine Aircraft in IFR, Over-The-Top, Passenger-Carrying Operations. A multiengine aircraft (airplane or helicopter) may be released for IFR or VFR over-the-top, passenger-carrying operations under the following circumstances:

1) The flight may be operated under the conditions described in subparagraph A above, or;

2) The operator may limit the takeoff weight so that the aircraft can climb at 50 feet per minute (fpm) at the minimum en route altitude (MEA) of the route to be flown or at 5,000 feet mean sea level (MSL), whichever is higher, with the critical engine inoperative. Passenger-carrying, multiengine helicopters flying offshore may be started when the helicopter can climb at 50 fpm at the MEA or at 1,500 feet MSL, whichever is higher, with the critical engine inoperative.

3) A flight may start when weather forecasts and reports indicate that the flight will be able to operate in VFR conditions until it reaches the destination and then descend in VFR conditions to beneath the ceiling. Conditions at the destination must allow a VFR descent for the period of the ETA to 1 hour after ETA. While operating over the top, the flight must be able to comply with subparagraph B1) or B2) above.

4) A flight may start when it can be operated clear of the clouds until it reaches the final approach fix (FAF) at the initial approach altitude under VFR conditions and then conduct an instrument approach.

3-2027 OVERWATER, PASSENGER-CARRYING OPERATIONS. Except for takeoffs, landings, and operations within gliding distance of land, all passenger-carrying flights operated over water must be operated as follows:

A. Airplanes. Operators must limit the takeoff weight of an airplane so that it can climb at 50 fpm at an altitude of 1,000 feet above the surface with the critical engine inoperative.

B. Helicopters. Helicopters must be equipped with flotation devices.

3-2028 PART 135 EXTENDED OVERWATER OPERATIONS. Although part 135 does not specifically address the requirements for extended overwater operations, § 135.21(a) requires that each operator develop a manual establishing the policies and procedures for operations that are acceptable to the FAA Administrator. One means, but not the only means, that a part 135 operator may use to develop acceptable extended overwater operations procedures is to show compliance with those portions of 14 CFR part 121 that correspond to the operation conducted.

A. Flight Planning and Navigation. Flight planning and navigational requirements do not differ from those of part 121 operators conducting operations in the same airspace (see Volume 3, Chapter 25, Sections 1 and 4).

B. Fuel Planning. The operator must provide adequate procedures for compensating with the limitations of forecast winds. One acceptable means an operator may use is to comply with the requirements of part 121, § 121.641 for reciprocating or turbopropeller aircraft and with

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the requirements of § 121.645 for turbojet aircraft. These sections provide for appropriate en route reserves.

C. Engine-Out En Route Performance Limits. The operator must develop procedures to comply with the engine-out performance limitations of part 135 subpart I. The operator's analysis must show compliance at the most critical point on the route. Under most conditions, engine-out operations require driftdown procedures. Inspectors must ensure that the operator's analysis considers how oxygen and aircraft systems are affected by engine loss.

3-2029 OPERATIONAL CONTROL.

A. Certificate Holder. A direct air carrier or commercial operator (certificate holder) certificated by the FAA includes any person or entity that provides or offers to provide transportation by air and who maintains control over the operational functions performed in providing that transportation. To legally act as a direct air carrier, a person or entity must hold an FAA 14 CFR part 119 certificate and comply with applicable regulations. Throughout this section, the terms "air carrier," "certificate holder," or "operator" will mean the holder of either an air carrier certificate or operating certificate issued with OpSpecs authorizing operations under part 135, including those authorized operations under both parts 121 and 135.

NOTE: A person or entity that wishes to engage in interstate common carriage operations must, in addition to holding an air carrier certificate, hold appropriate economic licensing authority from the Department of Transportation's (DOT) Office of the Secretary of Transportation (OST) under Title 49 of the United States Code (49 U.S.C.) § 41101 or 14 CFR part 298.

B. Part 119 Certificate Holder. Each part 119 certificate holder conducting operations under part 135 must have a system and/or procedures for the exercise of authority over the initiation, conduct, and termination of a flight. The intent of OpSpec A008 is to promote a mutual understanding between an operator and the FAA concerning the system and procedures used by that operator.

1) Each part 119 certificate holder conducting operations under part 135 must maintain control and authority over the initiation, continuation, conduct, and termination of its part 135 flights. In addition, under § 135.77, each operator conducting operations under part 135 is responsible to list, in the manual required by § 135.21, the name and title of each person it authorizes to exercise operational control. Those operators issued OpSpec A039, Single Pilot in Command Operator, or OpSpec A040, Single Pilot Operator, may not have manuals but may list these authorized persons in OpSpec A039 or A040, as applicable. If a certificate holder is issued OpSpec A037 or A038 and has a full deviation from the manual requirements, these persons must be listed in the certificate holder's OpSpec A006. A part 135 operator may not delegate the responsibility to maintain operational control over its air transportation and commercial services to any outside entity, including any aircraft owner and/or any aircraft management company.

2) The FAA has become aware that aircraft owners and aircraft management companies have entered into contracts to carry passengers or cargo for compensation or hire.

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These aircraft owners and management companies solicit and separately contract with a certificate holder conducting operations under part 135 purportedly to allow the flight operations promised to their customers to be conducted under the auspices of the operator's air carrier certificate. Under some of these arrangements, a "certificate fee" is provided to the part 119 certificate holder conducting operations under part 135 and operational control is exercised by the aircraft owner or management company. Where the aircraft owners and management companies are not also certificated as direct air carriers or commercial operators by the FAA to engage in common carriage, such arrangements are unlawful. In addition, when one certificate holder owns an aircraft that it is not authorized to be used in common carriage and enters into an arrangement with a second certificate holder under which the second certificate holder purportedly operates the aircraft, such an arrangement is unlawful if the aircraft owner/certificate holder actually conducts the flights in air transportation.

3) The FAA cautions each air carrier or commercial operator that holds a part 119 certificate authorizing part 135 operations that it may not franchise or lease out its authority to engage in part 135 operations to third parties. Persons not certificated by the FAA to engage in part 135 operations, or persons certificated by the FAA but not authorized to use the type of aircraft used in an operation, or to conduct the kind of operation being conducted, may not be directly or indirectly authorized by a part 135 operator to conduct flights under the authorized certificate holder's name, or under that authorized operator's fictitious business name(s) (i.e., "doing business as" (DBA)).

C. Operational Control.

1) Maintaining operational control of flights (§ 135.77) and providing flight locating functions (§ 135.79) are two distinct responsibilities of each part 135 operator. Flight locating requires procedures by the operator to locate each flight for which an FAA flight plan is not filed. Having a sufficient flight locating system does not mean that the part 135 operator is properly maintaining operational control of a part 135 flight. Operational control also requires that an operator has the knowledge to make those decisions perform those actions on an ongoing basis that are necessary to operate flights safely and in compliance with the regulations, and be held accountable for those decisions and actions.

2) Maintaining operational control requires the part 135 operator to, among other things:

a) Ensure that it alone conducts operations authorized in its OpSpecs.

b) Ensure that only its crewmembers that are trained and qualified in accordance with the applicable regulations and the certificate holder's approved training program are assigned to conduct a flight in accordance with the limitations in § 135.95.

c) Before initiation of a flight or series of flights, know the identity of each crewmember and affirmatively determine that the crewmember is qualified to function as a required crewmember on the flight. Absent such knowledge and determination, the part 135 operator must not assign a crewmember to a flight or series of flights.

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d) Ensure that all of its crewmembers are in compliance with all applicable flight, duty, and rest requirements before assigning the crewmembers to a flight.

e) Designate a PIC for each flight before the flight commences.

f) Specify the conditions under which a flight may be operated, such as determining the weather minimums, proper aircraft loading, center of gravity limitations, icing conditions, and fuel requirements.

g) Put procedures in place to ensure that when safety conditions specified for a flight cannot be met, the flight is canceled, delayed, rerouted, or diverted.

h) Ensure that an aircraft is Airworthy and is in compliance with the conditions and limitations specified by the FAA-approved inspection/maintenance program for the certificate holder before it is allowed to depart on a part 135 flight.

i) Have a system for locating each flight if a flight plan has not been filed.

3) The manner in which each part 119 certificate holder conducting operations under part 135 ensures operational control of flights conducted under its certificate will necessarily vary with the size and scope of the operations and the kind of aircraft flown by the operator. It is impractical, however, for an individual to exercise operational control over flights without the assistance of others in any but the simplest and most basic flight operations. Thus, each part 135 operator must have an organization and system in place—including all the necessary tools such as recordkeeping and management surveillance/oversight—that is sufficient to ensure that all functions have been accomplished before a flight or a series of flights is authorized to depart. This includes establishing effective internal communications, operating procedures, and administrative controls to accomplish regulatory requirements. In addition, the part 135 operator must publish these procedures in the operator's GOM for use by the certificate holder's flight, ground, and maintenance personnel. For those issued OpSpec A037, A038, A039, or A040 that have a full deviation from the manual requirement, abbreviated procedures may be entered into OpSpec A008.

4) Ordinarily, base inspections and operational control evaluations focus on the structure and effectiveness of the certificate holder's operational control system, as revealed by evaluations of the factors identified in subparagraph C2), above. If these evaluations, or other factors, reveal potential inadequacy or loss of operational control, further investigation may be warranted. Factors to be considered in such investigations include, but are not limited to:

a) Who is in actual or legal possession of the aircraft?

b) The business relationship between the part 119 certificate holder conducting operations under part 135 and the crewmembers. In addition, under part 119, § 119.53(b), an aircraft owner is prohibited from leasing an aircraft and a pilot to a certificate holder. If the certificate holder decides to use a pilot who is employed by the aircraft owner, that pilot must become the direct employee or agent of the certificate holder. The certificate holder is not required to provide any monetary compensation to the pilot. However, if the pilot receives additional monetary compensation specifically for serving as a flightcrew member on a revenue

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flight operated by the certificate holder, the certificate holder, and not the aircraft owner, must pay that monetary compensation to the pilot.

c) Insurance arrangements. The required OST Form 6410, U.S. Air Carriers—Certificate of Insurance, must certify that certificate holder is insured in accordance with DOT regulations.

d) Other payments, such as fuel payments, insurance payments, administrative payments, and the method of customer payment for air transportation services may be helpful in understanding the relationship between the certificate holder and other entities. For example, it may be completely acceptable for a lease between an aircraft owner and a certificate holder to place the burden for fuel payments on the owner of the aircraft. However, owner fuel payment responsibility, in combination with other circumstances (e.g., the aircraft owner directly collecting payments from the customer and disbursing such payments to the certificate holder after deducting fuel and other costs) could indicate that the owner is in operational control and not the certificate holder.

D. OpSpec A008. The system and procedures to maintain operational control used by an operator must be described or referenced in OpSpec A008. It is preferable to complete OpSpec A008 with references to an operator's manual or sections of an operator's manual that describe the system and/or procedures used by that operator. It is not necessary to control these references by date. The references should be changed only when a revision to the operator's manual makes the reference in the OpSpecs incorrect. In the case of a certificate holder issued a deviation from the manual requirements, (e.g., a certificate holder issued OpSpec A037, A038, A039, or A040) those procedures may be entered directly into OpSpec A008 itself.

1) Often, it may not be appropriate to use references in OpSpec A008. In these cases narrative descriptions 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.

2) The description of the systems and/or procedures for controlling flight movement as described in the operator's manual (which is referenced in OpSpec A008), or described in a narrative in OpSpec A008, must include the following information, as appropriate to the kind of operation:

a) Methods and procedures for initiating, diverting, and terminating flights.

b) Persons or duty positions authorized to, and responsible for, exercise of operational control.

c) Facilities and location of facilities used by the operator in the exercise of operational control.

d) Communication systems and procedures used by the operator.

e) The methods and/or procedures used by the operator to ensure all authorized aircraft are Airworthy.

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f) Emergency notification procedures.

g) Methods and procedures for ensuring that assigned crewmembers are qualified before and during all flight operations.

h) Methods and procedures to ensure the assigned PIC knows the certificate holder's responsibilities to exercise operational control.

3) The POI, in coordination with the principal maintenance inspector (PMI) and principal avionics inspector (PAI), must evaluate and substantiate submitted information. If the POI does not concur with the operator's proposal, he or she will forward a letter to the operator denying the proposed system with an explanation of the reasons for denial. The operator should contact the POI to address the POI's concerns. If the POI concurs that the operational control system should be approved, he or she will prepare and forward a letter to the operator accepting the proposed system.

E. Operational Control Failures. Failure in operational control requires action by both the certificate holder and the FAA. (See Volume 14, Chapter 1.) In cases of suspected renting or franchising of a certificate by the holder to either an uncertificated entity or a certificated entity that is not authorized to conduct flights for compensation or hire using the type of aircraft being operated, please contact the Air Transportation Division (AFS-200) at 202-267-8166 for guidance. The FAA has identified several failure modes of operational control, including at least the following basic conditions:

1) Loss of operational control within the air carrier—hands-off management results in inadequate controls over its own operations.

2) Loss of operational control within the air carrier—exercise of operational control by an unapproved person.

3) Loss or surrender of operational control externally (e.g., an air carrier's illegal renting/franchising-out the use of its air carrier certificate to one or more uncertificated entities).

F. Operational Control Systems Key Concepts. Operational control affects each aspect of a certificate holder's activities, such as, operations, training, aircraft maintenance, advertising, personnel management, capital asset management, aircraft leases, financing, and insurance.

1) The key concepts of operational control are that the certificate holder retains authority and responsibility for operations conducted under its certificate and is capable of conducting such operations. To exercise that authority and meet that responsibility, the certificate holder has to have knowledge of its flight operations, and control those operations through its management personnel for functions described in OpSpec A008, subparagraph d(6)(a). When the certificate holder performs the functions described in OpSpec A008, subparagraph d(6)(b), those functions must be performed by a certificate holder's employees or agents.

2) Basic operational control questions.

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a) The basic questions that must be answered in any review of operational control are:

- "Who makes the decisions to assign flightcrew members and aircraft, accept customer requests, and initiate, conduct, and terminate flights?" and
- "For whom do the pilots work as direct employees or agents?"

b) In both cases, the answer must be "the certificate holder."

NOTE: For contracted maintenance, the certificate holder can direct its action through an appropriate chain of command such as through a contracted 14 CFR part 145 repair station's management chain to the actual individual conducting aircraft maintenance. Also, the certificate holder may contract to an individual for aircraft maintenance. In either case, the actual work being conducted must be in accordance with the certificate holder's approved maintenance and inspection program and under the oversight of the certificate holder's management.

3) Similarly, a certificate holder may contract with a 14 CFR part 142 training center to conduct a portion of the operator's approved training program. During such training the training center and its employees are acting on the behalf of the certificate holder and are subject to the certificate holder's guidance, direction, and standards as communicated through the training center's management.

4) Regardless of the relationship between a certificate holder and another entity (customer, aircraft owner, broker, etc.), the certificate holder must make the flightcrew and aircraft assignments, and determinations regarding the initiation, conduct, and termination of the flight.

5) Whether the pilot or mechanic is a direct employee or an agent, or works for a part 145 repair station or part 142 training center, he or she is doing the certificate holder's work and must adhere to the directions of the certificate holder's management in matters related to flight operations and the air carrier's maintenance, inspection, or training program, as appropriate.

6) In on-demand operations, no flight occurs unless the customer makes a request. This is not the initiation of a flight. Also, a customer may request that specific aircraft and/or pilots be assigned to flights where the customer is a passenger. This is not, by itself, the exercise of operational control by an uncertificated entity, but rather a customer preference in negotiating a service. In such cases, the certificate holder must apply the regulations, its OpSpecs, standards, procedures, policies, and processes to determine if the customer request can be met safely and in compliance with the regulations.

7) The same is true of customer-requested diversions in flight, whether for general customer preference (change in destination for business reasons, for example) or medical reasons (such as in the case of an air ambulance flight). Again, if the certificate holder determines that the request can be satisfied safely and within the regulations, and the certificate holder controls

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the decisionmaking process and is (through its authorized employees and agents) the decisionmaker, operational control is not necessarily lost.

G. Two-Tiered Operational Control Concept. OpSpec A008 contains a two-tiered approach to operational control.

1) The First Tier. All first-tier actions must be taken by the certificate holder's direct employees.

a) The first tier is the assignment of flightcrew member(s) and aircraft for revenue service under the operating certificate. The assignment of crew and release of aircraft to revenue service is the responsibility of the certificate holder, and must be made by the management of the certificate holder or management delegates. In order to be delegated the authority to make these decisions, the management delegates must be trained, found competent, and designated by the certificate holder, be listed in the GOM (or in OpSpec A006, A039 or A040, if applicable), and be under management supervision.

b) Management supervision means, for example, that the certificate holder tracks the actions of the management delegate or employee, samples the work of that employee (reviews a sample of the decisions made), and has the ability to enforce the certificate holder's standards through corrective actions such as retraining, requalification, or disciplinary actions such as disqualification, demotion, suspension, or termination. Because the certificate holder is responsible for the conduct of its employees or agents, it must have the ability to monitor and control their performance.

2) The Second Tier. All second-tier actions may be taken either by the certificate holder's direct employees or by the certificate holder's agents. The second tier of operational control is more tactical. This involves the decisions made by personnel (such as the PIC) in the day-to-day conduct of operations. This may include the initiation of flights upon the PIC receiving a request from the customer directly (often the case in on-demand operations being conducted under a dedicated service contract, such as offshore operations or emergency medical service (EMS)). This is acceptable if the PIC is authorized by the certificate holder to make those decisions on behalf of the certificate holder. To do so would require that the PIC be trained, found competent by the certificate holder, designated, be listed in the GOM (or in OpSpec A006, A039, or A040, if applicable), and be under management supervision. If maintaining a list of these personnel in the GOM is too cumbersome, a list of these personnel may be maintained at the air carrier's principal base of operations and referenced in the GOM. The method of maintaining and distributing this list to all affected parties must be described in OpSpec A008 or in the GOM.

3) The GOM (or other appropriate documentation) must contain guidance which describes the certificate holder's operational control system. The training program must provide the certificate holder's personnel with the knowledge and skills required to ensure that the operational control system is effective.

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H. Surveillance.

1) In conducting all surveillance activities, inspectors should consider if the management structure, training, procedures, and practices of the certificate holder provide for effective operational control. When conducting certification and surveillance activities, principal inspectors (PI) should evaluate the effectiveness of the certificate holder's or applicant's operational control system.

2) Seldom does a single factor determine if an operator has lost operational control. The following factors are offered to provide insight to the effectiveness and regulatory compliance of a certificate holder's operational control system. When factors exist that indicate that operational control may be ineffective or lost, further investigation is required to ascertain the compliance level of the certificate holder (see Volume 14, Chapter 1, Section 2). Upon further investigation, the relative value of the individual factors will be determined and an accurate assessment can be made of the operational control system.

3) Some specific questions to consider in these evaluations are:

a) Who scheduled crew and aircraft?

b) Who accepted charter flights from the public?

c) Who reviews weather and Notices to Airmen (NOTAM)?

d) Who performs flight planning?

e) Who designates PIC for each flight?

f) Who ensures that crews comply with flight and duty requirement prior to departure?

g) How is the flightcrew compensated? See subparagraph C4)b) above. Is an obligation placed on the air carrier, by lease or other arrangement or mechanism with the aircraft owner, to use the aircraft owner's pilots (e.g., a wet lease)?

h) Who specifies conditions under which a flight may be dispatched or released, e.g., weather minimums, flight planning, airworthiness of aircraft, aircraft loading, and fuel requirements?

i) Who ensures that only trained and qualified crews are assigned to conduct flights?

j) Whether the air carrier ensures that only those operations authorized by its OpSpecs are conducted?

k) Prior to departure, who ensures that the flight complies with the conditions specified in the release?

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l) When conditions specified for a flight's release cannot be met, who ensures that the flight is canceled, delayed, rerouted, or diverted?

m) Who monitors the progress of each flight, and initiates timely actions when the flight cannot be completed as planned, including diverting or terminating the flight?

n) Has the certificate holder shifted financial accountability for its operations or the conduct or safety of the part 135 flight from the air carrier to the aircraft owner or others?

o) Does an uncertificated entity (one that does not hold a part 119 certificate) or an entity that is not authorized or permitted by the DOT to act as an indirect air carrier receive the direct payment for air transportation from the customer?

I. Leases and Other Agreements.

1) OpSpec A008 requires the certificate holder to determine that all leases and other agreements affecting the aircraft and personnel of the certificate holder are reviewed to ascertain that they are in compliance with regulatory requirements and limitations. The limitations are centered on illegal wet leases (i.e., leases in which an uncertificated entity provides possession of a specific aircraft and at least one crewmember to a certificate holder for a specified period of time). Other nonleasing arrangements could raise operational control red flags, especially those agreements where an aircraft owner dictates which pilot the air carrier can use on part 135 flights with third-party passengers or cargo.

2) Should inspections or surveillance reveal possible or potential loss or transfer of operational control, further examination may involve the review of leases and other agreements relative to the operation.

3) A determination of who exercises operational control is not dependent solely on the wording of such leases or other agreements or arrangements. Such agreements cannot be viewed in a vacuum. A dry lease, in and of itself, does not shift responsibility for operational control to the lessee. Examination of the substance of a transaction, rather than the form, is essential to determine who actually exercises operational control. Case law has established that the substance, not the form, of contractual agreements establishes the nature of the relationship between parties, and that taking action against those who effectively operate for compensation or hire in violation of FAA safety regulations is appropriate. When necessary, PIs should seek the assistance of their respective regional counsel for review of leases and other agreements.

J. Summary of Operational Control. Only approved persons may exercise operational control on the certificate holder's behalf.

1) The certificate holder must have adequate controls in place to ensure that officials in a position of authority over flights conducted under the certificate do so safely, and in compliance with the regulations, OpSpecs, GOM, as applicable, and accepted or approved procedures.

2) Management of operations should never be inattentive, distracted, or careless. Hands-off management is not a legitimate excuse for failing to maintain operational control.

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K. Specific Policies and Procedures. The following notes describe the FAA's position on the subjects as they relate to operational control.

1) Advertising by Indirect Air Carriers.

a) Indirect air carriers, including air charter brokers, may not purport to directly provide transportation by air.

b) Indirect air carrier advertising must indicate the name of the certificate holder providing transportation by air. This does not mean that all pages of a website, or a brochure or any other advertising vehicle must identify the certificate holder. If more than one certificate holder is used, language to the effect that the advertiser uses FAA-certificated air carriers or operators is acceptable. The test is that a casual reader of the advertisement would understand who is actually conducting the transportation by air.

c) The OST considers it to be an unfair and deceptive practice and unfair method of competition under its economic regulatory authority for any person or entity that is not a direct air carrier to hold out or provide air transportation as a direct air carrier.

2) Aircraft Marking. Must comply with § 119.9(b).

a) The aircraft must be marked so that the "… name of the certificate holder… or the… certificate number of the certificate holder who is operating the aircraft, is legibly displayed on the aircraft and is clearly visible and readable from the outside of the aircraft."

b) In some cases of contractual service (e.g., helicopter emergency medical service (HEMS), offshore, and oil and gas), the customer may desire that the aircraft have markings such as the oil company or hospital logo and/or name displayed on the aircraft. In such cases, the operator must ensure that it is clear to the passengers and crew that the certificate holder is conducting the air transportation service. Adherence to § 119.9(b) is still required.

c) Regulations of the OST prohibit air charter brokers and other ticket agents from permitting their names or logos to be used in a manner that misleads the public into thinking they are an airline. (Refer to 14 CFR part 399, § 399.80(b).)

3) Billing.

a) There may be circumstances when billing may be accomplished by the indirect air carrier.

b) If possible, the billing should indicate that the air transportation was provided by the certificate holder (by name).

c) In some circumstances, such as insurance or Medicare/Medicaid billing by medical service providers, it is highly impractical for the bill to reflect the name of the certificate holder (transportation by air provider). This is acceptable if other literature, websites, advertising, etc., adequately reflect that transportation by air is provided by the certificate holder.

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4) Delegation of Authority.

a) Authority and duty, but never responsibility, may be delegated.

b) Functions may be contracted to personnel or organizations in accordance with paragraph 3-2023, Flight-Locating Systems, and Volume 3, Chapter 25, Section 1, subparagraph 3-1921G, Services Provided by Contractors.

c) Persons to whom authorities or duties (functions) have been delegated must be trained and found competent by the certificate holder; be designated; be listed in the GOM, or in OpSpec A006, A038, or A040, as applicable; and be under management supervision and oversight to ensure performance (management must have disciplinary authority over its contractors).

d) Some functions may never be delegated outside the air carrier (e.g., refer to OpSpec A008, subparagraph d(6)(a)).

5) Flight Locating.

a) The certificate holder must accomplish flight locating unless FAA flight plans are filed for each flight.

b) The certificate holder may delegate flight-locating duties to employees of, or agents for, the certificate holder.

c) Again, these persons must be trained and competent, be designated in writing, be listed in the GOM (or in OpSpec A006, A039, or A040, if applicable), be provided with procedures, policies, and guidance, and be under certificate holder management oversight.

d) The certificate holder must have knowledge of all flight operations.

6) Crew Resource Management (CRM)/Air Medical Resource Management (AMRM).

a) Operational control concepts do not counter CRM and AMRM concepts.

b) In any decisionmaking process, there is a designated decisionmaker.

c) In air transportation matters, that decisionmaker is the certificate holder.

d) Operational control ensures that the certificate holder exercises that decisionmaking authority and meets its regulatory responsibilities.

e) The PIC is directly responsible for, and is the final authority as to, the operation of the aircraft (§ 91.3). The PIC serves in this regulatory capacity and as an agent for the certificate holder after assignment to PIC duty by management.

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7) Initiation and Diversion.

a) If authorized by the certificate holder, in accordance with the FAA-approved operational control system, the PIC may receive a request from a customer, and, within his or her documented authorities, accept or decline the request in accordance with certificate holder's policies.

b) The PIC must be trained and competent, designated in writing, and listed in the GOM (or in A006, A039 or A040, if applicable), be provided with procedures, policies and guidance, and be under certificate holder management oversight. If maintaining a list of these personnel in the GOM is too cumbersome, a list of these personnel may be maintained at the air carrier's principal base of operations and referenced in the GOM. The method of maintaining and distributing this list to all affected parties must be described in OpSpec A008 or in the GOM.

8) Operations Control Center (OCC).

a) Section 135.619 requires certificate holders authorized to conduct helicopter air ambulance (HAA) operations to have an OCC if 10 or more HAAs are assigned to the certificate holder's OpSpecs.

b) While not required by regulation, certificate holders with less than 10 HAAs assigned to the certificate holder's OpSpecs are encouraged to make use of an appropriately scaled OCC.

c) Refer to § 135.619 and Advisory Circular (AC) 120-96, Operations Control Center (OCC) for Helicopter Air Ambulance (HAA) Operations, for further information on OCCs.

9) Remote Area Operations.

a) Remote area operations often involve extended operations outside of communications with the certificate holder. Using the two-tiered system of operational control, these operations may be conducted if the certificate holder's management or management designees make the assignment of the crew and the release of the aircraft at the beginning of the remote area operation assignment. Because such assignments may extend over several days, the certificate holder must determine that the crew and aircraft will remain in deployable status (pilot checks, medical examinations, aircraft inspection, and maintenance requirements will all be satisfied) during the assignment period. The crew must receive specific instructions on how to monitor and control operational control elements that it will be authorized to control for the certificate holder when outside communication with company management. In such cases, the certificate holder must establish procedures and alternatives for the PIC to use in the conduct of flight operations, including, but not limited to:

1. Flight, duty, and rest requirements.

2. Airport landing site requirements.

3. Weather limitations.

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4. Weight and Balance (W&B) control.

5. Maintenance and servicing requirements.

6. Communications alternatives (relay with airborne aircraft, etc.).

7. Hazardous materials (hazmat).

8. Emergency operations.

b) Before operating in an area outside of communications with the certificate holder, the certificate holder and PIC must agree on a time, place, and date where communications will be reestablished and the emergency plan if they are unable to establish communications.

c) When applicable, remote area operational control procedures must be described in the GOM (or in OpSpec A008 for those certificate holders issued OpSpec A037, A038, A039, or A040). Furthermore, remote operational control procedures must be addressed in the training program for certificate holders that are not issued OpSpec A037, A038, A039, or A040, and for those certificate holders that do hold OpSpec A037, A038, A039, or A040, it also must be addressed in the training program unless they have a full deviation that includes training. In addition, the certificate holder must identify the area(s) in which remote area operational control procedures will be utilized, and such areas must be described in the FAA-accepted GOM (or in OpSpec A008 for those certificate holders issued OpSpec A037, A038, A039, or A040).

10) The Air Ambulance Operators: Civil Aeronautics Board (CAB) Exemption (83-1-86). It does not permit uncertificated entities to conduct flights in air transportation.

a) The air medical (EMS) community secured a blanket exemption from the economic authority requirements of the DOT on January 12, 1983.

b) This exemption is still valid.

c) It pertains only to the economic authority to act as an indirect air carrier.

d) The actual flight operations and the operational control must be accomplished by a certificate holder.

RESERVED. Paragraphs 3-2030 through 3-2045.

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VOLUME 3 GENERAL TECHNICAL ADMINISTRATION

CHAPTER 27 GROUND DEICING/ANTI-ICING PROGRAMS

Section 4 Safety Assurance System: Maintenance Inspector Responsibilities—Evaluate an Operator's Deicing/Anti-Icing Program

3-2236 REPORTING SYSTEM(S).

A. Program Tracking and Reporting Subsystem (PTRS). For Title 14 of the Code of Federal Regulations (14 CFR) part 125 certificate holders, use PTRS activity codes 3625 and 5625.

B. Safety Assurance System (SAS). For 14 CFR parts 121 and 135 certificate holders, use SAS automation. This section is related to SAS Element 6.2.2 (AW), Deicing Program.

3-2237 OBJECTIVE. This section provides guidance for the principal maintenance inspector (PMI) in assisting the principal operations inspector (POI) in evaluating for approval proposed deicing/anti-icing programs.

3-2238 GENERAL. The current regulations in parts 121, 125, and 135 are based on the "clean aircraft" concept. These regulations prohibit a takeoff with frost, ice, or snow (contamination) adhering to the wings, control surfaces, or propellers of an airplane. Part 121, § 121.629, part 125, § 125.221, and part 135, § 135.227 require that each part 121/135 operator that conducts operations under conditions that may produce frost, snow, or ice accumulation must have one or both of the following:

- An approved aircraft deicing program.
- An inspection program that ensures that aircraft are free of any accumulation of frost/ice/snow before takeoff.

A. Approval Process. The approval of an operator's deicing/anti-icing program involves the following steps:

1) Reviewing the Operator's Program Submission. Both the PMI and the POI initially review the proposed program to ensure that all required elements have been submitted. After the PMI and the POI are satisfied that all of the required elements are suitably addressed, they will distribute copies of the program to all involved aviation safety inspectors (ASI).

2) Evaluating the Operator's Program Submission. Conduct a detailed analysis of the proposed program, training, equipment, and facilities.

3) Validation Testing. Validate the operator's performance during actual operations.

B. Issuance of Operations Specifications (OpSpecs). At the conclusion of the process, the POI with primary responsibility for this job task approves the OpSpecs. The OpSpecs

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authorize the operator to conduct operations under the program in ground icing conditions in which frost, ice, or snow may reasonably be expected to adhere to the operator's aircraft.

C. Provisions and Exceptions. Section 121.629(d) includes an exception to the requirements for a complete deicing/anti-icing program. This section provides that an air carrier is not required to have an approved deicing/anti-icing program if an Outside-the-Aircraft Check (OTAC) is completed within 5 minutes before beginning the takeoff. An OTAC must be performed from outside the aircraft to ensure that the "wings, control surfaces, and other critical surfaces are free of frost, ice, and snow" when the certificate holder is operating in ground icing conditions. If a certificate holder chooses to operate in accordance with § 121.629(d), the requirement for an OTAC must be contained in its OpSpecs.

D. Use of Infrared Deicing Facilities. An operator wishing to use an infrared deicing facility should ensure that the infrared deicing system used by that facility meets the criteria presented in this section or provides an alternative, acceptable means of assuring the operational safety of the deicing facility. Once an operator has determined that the infrared deicing system to be used by a deicing facility meets the criteria presented in this chapter, the operator should present their findings to their certificate-holding district office (CHDO) for review. Once the Federal Aviation Administration (FAA) determines, from the findings presented, that the infrared deicing system meets all criteria, then the system may become part of the operator's ground deicing/anti-icing program. Operators should use the following criteria for approving the use of infrared deicing systems:

1) The operator should create an appropriate description of the system: hardware, energy source, markings, etc. In addition, the operator should ensure that:

a) The infrared deicing system performs its intended purpose (i.e., it effectively deices an aircraft).

b) The operation of infrared deicing systems does not create a hazard to:

- Aircraft;
- Ground personnel, as determined by appropriate Occupational Safety and Health Administration (OSHA) standards;
- Crewmembers;
- Passengers;
- Cargo (sensitive materials, plants, animals, etc.); or
- Airport facilities (navigational aids, antennas, communication facilities, buildings, etc.).

c) The infrared system submitted for approval is in agreement with appropriate industry standards as created by groups such as: SAE International (SAE), the International Organization for Standardization (ISO), and FAA documents.

2) The method for approving the operational use of an infrared system should follow established guidelines set by industry groups, such as SAE, ISO, Airlines for America (A4A),

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the International Civil Aviation Organization (ICAO), and the General Aviation Manufacturers Association (GAMA). These guidelines should address:

- The training of flightcrew, infrared equipment ground operator personnel, facility maintenance personnel, and deicing/anti-icing ground personnel;
- The temperature of the aircraft surface, including thermal cyclic loading, thermal stresses, and temperature extremes;
- Melted ice flowing into aerodynamically quiet areas and refreezing;
- Additional deicing and anti-icing requirements; and
- Environmental considerations.

E. Alternative Methods of Deicing. Given the cost of deicing with conventional fluids and the recent demand for alternative deicing methods, interest in infrared deicing systems has increased. The FAA encourages the development and use of alternative methods of deicing such as infrared systems; however, it is necessary to ensure that infrared deicing systems are used with the highest degree of safety. Consequently, the FAA has developed general safety criteria for operators and inspectors to use in evaluating and approving the use of infrared deicing systems in an operator's deice/anti-ice program.

F. Infrared Deicing Facility Criteria. An operator wishing to use an infrared deicing facility should ensure that the infrared deicing system used by that facility meets the criteria, or provides an alternative, acceptable means of ensuring the operational safety of the deicing facility.

3-2239 DEFINITIONS.

A. Pretakeoff Check. A pretakeoff check is a check of the aircraft's wings or representative aircraft surfaces for frost, ice, or snow during the aircraft's holdover time (HOT).

B. Pretakeoff Contamination Check. A pretakeoff contamination check is conducted by the flightcrew and ground personnel after exceeding the HOT. They conduct this check to make sure that the wings, control surfaces, and other critical surfaces, as defined in the operator's program, are free of frost, ice, and snow. The pretakeoff contamination check must be completed within 5 minutes before beginning the takeoff.

C. Outside-the-Aircraft Check (OTAC). Section 121.629(d) requires an OTAC of a certificate holder who operates in ground icing conditions without an approved part 121 ground deicing/anti-icing program. For those operators without an approved program, if frost, ice, or snow may reasonably be expected to adhere to the aircraft, an OTAC must be performed to ensure that the wings, control surfaces, and other critical surfaces are free of contamination. An OTAC must occur within 5 minutes before beginning the takeoff.

D. Holdover Time (HOT). HOT is the estimated time for which deicing/anti-icing fluid will prevent the formation of frost or ice and the accumulation of snow on the treated surfaces of an aircraft. HOT begins when the final application of deicing/anti-icing fluid starts and ends when the applied deicing/anti-icing fluid loses its effectiveness.

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3-2240 PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites:

- Knowledge of the regulatory requirements of part 121, 125, or 135, as applicable; and
- Successful completion of appropriate Airworthiness Indoctrination course(s).

B. Coordination. This task requires coordination with POIs and the operator.

3-2241 REFERENCES, FORMS, DATA COLLECTION TOOLS (DCT), AND JOB AIDS.

A. References (current editions):

- Advisory Circular (AC) 20-73, Aircraft Ice Protection.
- AC 20-117, Hazards Following Ground Deicing and Ground Operations in Conditions Conducive to Aircraft Icing.
- AC 23.1419-2, Certification of Part 23 Airplanes for Flight in Icing Conditions.
- AC 65-15, Airframe and Powerplant Mechanics Airframe Handbook (refer to chapter 7, Ice and Rain Protection).
- AC 91-13, Cold Weather Operation of Aircraft.
- AC 91-79, Mitigating the Risks of a Runway Overrun Upon Landing.
- AC 120-58, Pilot Guide for Large Aircraft Ground Deicing.
- AC 120-60, Ground Deicing and Anti-Icing Program.
- AC 120-89, Ground Deicing Using Infrared Energy.
- AC 135-9, FAR Part 135 Icing Limitations.
- AC 135-16, Ground Deicing and Anti-Icing Training and Checking.
- AC 135-17, Pilot Guide–Small Aircraft Ground Deicing.
- Volume 3, Chapter 27, Ground Deicing/Anti-Icing Programs.
- Volume 4, Chapter 3, Section 5, Safety Assurance System: Selected Practices.
- FAA-P-8740-24, General Aviation Accident Prevention Program, Tips on Winter Flying.
- Publications of the Association of European Airlines (AEA) found on the Web site: http://www.aea.be/news-media-room-media-centre/publications.html.

NOTE: Numerous videos have been produced by manufacturers of deicing/anti-icing products and by aircraft operators. Access to these videos may be available through the regional deicing/anti-icing coordinator.

B. Forms. None.

C. DCTs. SAS DCTs from SAS Element 6.2.2 (AW), Deicing Program.

D. Job Aids. Job Task Analyses (JTA): 2.3.34 and 3.3.57.

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3-2242 PROCEDURES.

A. Brief the Operator.

1) Assist the operator in acquiring all of the pertinent published information.

2) Ensure that the operator is familiar with the technical difficulties that may be involved and the regulatory requirements that must be met.

3) Outline for the operator those elements that must be contained in the operator's proposed program and the required actions at each stage of the approval process.

4) POIs and PMIs should inform the operators for which they have oversight responsibility of the process and criteria for approving infrared deicing systems. The operators should be informed that it is their responsibility to evaluate any infrared deicing system that they wish to use for their aircraft ground deicing/anti-icing program.

B. Review the Operator's Submittal.

1) If the submission is incomplete, immediately inform the operator and determine if the operator intends to complete the package.

2) If the submission is complete, inform the operator and distribute the documents to the appropriate inspectors for initial examination.

3) If the package is unacceptable, discuss with the operator those elements that were unacceptable and/or return the package with a letter outlining the deficiencies.

4) Once an operator has determined that an infrared deicing system meets the criteria, that operator should present its findings of the evaluation to its principal inspector (PI).

C. Evaluate the Operator's Deicing/Anti-Icing Program.

1) Ensure that the manual provides all categories of employees with instructions and information that helps them to perform their duties with a high degree of safety.

2) Ensure that the operator's manual material includes the following:

a) Clear identification of each category of employee with responsibility for deicing/anti-icing program elements;

b) Duty definition of each category of employee involved;

c) Background information and step-by-step procedures; and

d) Checklists, where appropriate, that will allow each category of employee to perform their responsibilities to the required standard.

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3) To ensure that the program complies with § 121.629(c), each operator's ground deicing/anti-icing program must cover a management plan detailing operational responsibilities and procedures as described in AC 120-60.

D. Review Management Plan. The operator should develop, implement, and use a management plan to ensure proper execution of its approved deicing/anti-icing program. The management plan should include operations and maintenance responsibilities and identify the management positions that are responsible for ensuring that all necessary elements of the deicing/anti-icing program are properly executed.

E. Examine Holdover Timetables and the Procedures for Their Use. Ensure that each operator has developed, and has available, holdover timetables for use by its personnel. In addition, each operator must make its holdover timetables available for use in the cockpit. These timetables are required to be supported by data acceptable to the Administrator.

F. Evaluate the Operator's Training. Ensure that the operator has developed a training program that qualifies each category of employee with responsibilities for deicing/anti-icing. Flightcrew training must be incorporated into the operator's approved training program. The training program must include the following:

1) General procedures and any specific requirements for each make, model, and variant of aircraft used by the operator.

2) Means of testing, qualification, and requalification for each category of employee involved in the program.

3) Demonstration of proficiency, by performance, of flightcrew members, equipment operators, and inspectors.

4) Procedures for recurrent training.

G. Determine if Exceptions Apply to the Operator.

1) Certificate Holders That Do Not Operate in Ground Icing Conditions. The part 135 ground deicing rule does not apply to a certificate holder that does not operate in ground icing conditions. This certificate holder is not required to train its pilots or develop pretakeoff contamination check procedures. Certificate holders that do not operate in ground icing conditions will have that limitation in their OpSpec A042.

2) Operators Using Only One Pilot in Operations. Single-pilot operators are not required to comply with the manual and approved training requirements of § 135.21 or § 135.341. Therefore, single-pilot operators are not required to have an approved pilot training program or the additional training required by the part 135 ground deicing rule. However, single-pilot operators must comply with all of the operational requirements of the part 135 ground deicing rule. Those operational requirements include a pretakeoff contamination check or an approved alternative procedure to the pretakeoff contamination check described in its OpSpec. The pilots of these types of operators will need to demonstrate sufficient knowledge to operate in ground icing conditions during the initial and recurrent flight checks. A single-pilot

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operator will have an aircraft-specific description of the pretakeoff contamination check in its OpSpecs A041.

3) Helicopter Operations. Helicopter operations conducted under part 135 are excluded from the additional training and pretakeoff contamination check requirements of the part 135 ground deicing rule. However, the regulation requires the "clean aircraft" concept for helicopters.

H. Determine if Operator's Program Meets Training Requirements of Part 135 Ground Deicing Rule. For operators required to have an approved training program, the training program must include pilot ground training in those subject areas relating to deicing and anti-icing operations required by § 135.345 for initial, transition, and upgrade training and by § 135.351 for recurrent training and testing. These training requirements must include procedures for operating airplanes during ground icing conditions. The operator must provide that training to its pilots and all other participating personnel. The training must include at least the following elements:

1) Use of HOTs. In part 135 operations, HOTs are only advisory and serve as guidance to the pilot in making takeoff decisions. If the operator uses the deicing/anti-icing fluids, it must train its pilots in the use of HOTs.

2) Deicing/Anti-Icing Procedures. Airplane deicing/anti-icing procedures include inspections and check procedures, and responsibilities and requirements for the pretakeoff contamination check or alternative procedures, as applicable.

3) Communications. The operator must provide training for all company personnel in communicating with all agencies involved in the deicing/anti-icing process and the decisionmaking process.

4) Contamination. Aircraft surface contamination training includes how to identify frost, ice, or snow, and how to locate critical areas. Training should include an explanation of how small amounts of surface contamination adversely affect aircraft performance and flight characteristics.

5) Deicing/Anti-Icing Fluids. If the operator uses deicing/anti-icing fluids, it must train its pilots, as well as any other participating personnel, in the types and characteristics of deicing/anti-icing fluids.

NOTE: It is important that flightcrews do not use deicing/anti-icing fluids unless they have been trained in the characteristics and effects of these fluids on their operation.

6) Cold Weather Preflight Inspection Procedures. Training should include procedures for cold weather preflight inspections.

7) Contamination Recognition. This aspect of training should cover techniques for recognizing contamination on the aircraft. These techniques should be used during both the preflight inspection and the pretakeoff contamination check.

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NOTE: Both part 121 and 135 operators must have documentation in their general manuals (GM) or flight manuals (fm) for the procedures they intend to use to comply with their respective deicing/anti-icing rule.

3-2243 TASK OUTCOMES.

A. Complete the PTRS Record. For part 125.

B. Follow SAS Guidance Module 5. For parts 121 and 135.

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

- For program approval, the issuance of OpSpecs.
- For program disapproval, listing of the resulting restriction in OpSpec A004.

D. Document the Task. For part 125, file all of the supporting paperwork in the operator's office file. For parts 121 and 135, follow the SAS process.

3-2244 FUTURE ACTIVITIES. Normal surveillance.

RESERVED. Paragraphs 3-2245 through 3-2248.

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VOLUME 4 AIRCRAFT EQUIPMENT AND OPERATIONAL AUTHORIZATION

CHAPTER 6 AIRPLANE AUTHORIZATIONS AND LIMITATIONS

Section 6 Safety Assurance System: Night Vision Imaging Systems

4-6-6-1 GENERAL. The information outlined in the following paragraphs will be used by principal operations inspectors (POI), principal maintenance inspectors (PMI), and principal avionics inspectors (PAI) when evaluating a Title 14 of the Code of Federal Regulations (14 CFR) part 135 operator's request for use of Night Vision Goggles (NVG). This guidance covers the evaluation of the operator's formal application, revision to the General Operations Manual (GOM), and the addition of an NVG training program and minimum equipment list (MEL).

4-6-6-3 OVERVIEW.

A. Night Vision Enhancement Devices (NVED). In 1990, the Federal Aviation Administration (FAA) determined that NVEDs are appliances. This includes NVGs, which are used, or intended to be used, in the navigation, operation, or control of an aircraft in flight. As appliances, NVEDs/NVGs require FAA certification and specific approval according to specific procedures outlined in 14 CFR part 21. The use of NVGs in part 135 operations may only be authorized with specific FAA approval.

B. Night Vision Imaging Systems (NVIS). "NVG" is the common term used for Night Vision Goggles, part of an NVIS of an aircraft. These systems are used in NVG operations, and the limitations and provisions for conducting Airplane Night Vision Goggle (ANVG) operations are described in operation specification (OpSpec) A051. The complete description and performance standards of the NVG and cockpit lighting modifications appropriate to civil aviation are contained in the RTCA, Inc. document, RTCA/DO-275, Minimum Operational Performance Standards for Integrated Night Vision Imaging System Equipment. Currently, NVIS consists of the following:

- NVGs,
- Interior and exterior aircraft lighting modifications,
- Cockpit windows (e.g., windshield and windows),
- Crew station design and components, and
- Radar altimeter.

NOTE: Refer to the current revision of the Operational Suitability Report (OSR) for NVGs, Airplane Single-Engine Land (ASEL), Airplane Single-Engine Sea (ASES), Airplane Multiengine Land (AMEL), Airplane Multiengine Sea (AMES) and type-rated turbopropeller airplanes for additional information.

C. Airplane Use of NVGs. The civil use of NVGs will be approved only for the purpose of enhancing operational safety. An FAA study, DOT/FAA/RD-94/21, Night Vision Goggles in Emergency Medical Service (EMS) Helicopters (published July 1994), summarized the need for NVGs by stating, "When properly used, NVGs can increase safety, enhance situational

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awareness, and reduce the pilot workload and stress that are typically associated with night operations." The hours of darkness add to a pilot's workload by decreasing those visual cues commonly used during daylight operations. The pilot has a decreased ability to see and avoid obstructions at night. Since the 1970s, NVEDs, such as NVGs, have provided the military with some limited ability to see at night and therefore enhance operations. Continual technological improvements have advanced the capability and reliability of NVGs, and part 135 on-demand operators have requested use of NVGs in commercial operations as a tool for night flight. NVGs are used as an aid to night flight during visual meteorological conditions (VMC), and operators are not to use NVGs during instrument meteorological conditions (IMC). This means that operators must comply with visual flight rules (VFR) weather minimums during NVG usage. For air carrier operations, these weather minimums are prescribed in the air carrier's OpSpecs. The use of NVGs will not change or modify any existing regulation.

D. NVIS Approval. RTCA, Inc. has developed and published the Minimum Operational Performance Specification (MOPS) for NVGs in RTCA/DO-275. The Technical Standard Order (TSO)-C164, Night Vision Goggles, for NVIS was published on September 30, 2004. The approval for NVIS installation can only be accomplished through the type certificate (TC), amended TC, or Supplemental Type Certification (STC) process. The FAA must determine that an appliance can perform its intended function after installation and that its operation does not adversely affect the operation of the aircraft and its installed equipment.

NOTE: Field approvals are not authorized for NVIS/NVG aircraft modifications. Refer to Volume 4, Chapter 9, Section 1, the current edition of FAA Order 8300.16, Major Repair and Alteration Data Approval, and the Aircraft Maintenance Division (AFS-300)-initiated Major Repair and Alteration Data Approval Job Aid, for additional information.

E. Additional Documents. In addition to RTCA/DO-275, RTCA Special Committee 196, Night Vision Goggle (NVG) Appliances and Equipment, RTCA, Inc. completed two other documents: RTCA/DO-268, Concept of Operations, Night Vision Imaging System for Civil Operators, and RTCA/DO-295, Civil Operators' Training Guidelines for Integrated Night Vision Imaging System Equipment. These documents may provide operators with additional insight into the implementation of NVGs.

4-6-6-5 OFFICE COORDINATION AND RESPONSIBILITIES. Direct coordination with the Aircraft Certification Service (AIR) and the Flight Standards Inspector Resource Program (FSIRP) is essential for timely completion of the STC process. The operator must specify on the STC application to the Aircraft Certification Office (ACO) whether approval is sought for a single aircraft or a series of aircraft, and under what operating rule the aircraft will be operated. Operations inspectors assigned to evaluate, test, and check job functions using NVGs must meet the requirements of 14 CFR part 61, § 61.31(k)(3); be NVG-current in accordance with § 61.57(f) or (g); be qualified and current in accordance with the current edition of FAA Order 4040.9, FAA Aircraft Management Program, and the Flight Operations Manual (FOM); or have a letter of authorization (LOA) before conducting these certification flights.

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A. ACO Responsibilities. The ACO is responsible for:

1) Approving the STC for installation of NVG-compatible equipment modifications.

2) Flight testing for NVIS compatibility.

3) Approving the Airplane Flight Manual (AFM), including any supplement.

B. POI Responsibilities. The POI is responsible for:

1) Evaluating operator GOM procedures for the use of NVGs.

2) Authorizing operational approval of NVG operations through the issuance of OpSpec A051.

3) Evaluating part 135 NVG training programs, including instructors and check pilots, if authorized (specialty curricula).

4) Authorizing operator NVG check pilots.

5) Monitoring training.

6) Ensuring competency flights are conducted.

C. NVG National Resource Specialist (NRS) Responsibilities. An NVG NRS may assist the POI in the following areas:

1) Reviewing GOM procedures and training programs.

2) Monitoring training.

3) Conducting competency flights.

4) Advising POIs on recommended changes to the training program and GOM.

NOTE: If the POI is not ANVG-qualified, it is recommended that the POI consult with an ANVG NRS for assistance in reviewing any of the required documents and/or the conduct of any required check flights. Contact the Flight Standards (AFS) Flight Program Division (AFS-60) for the list of current ANVG NRSs.

D. PMI/PAI Responsibilities. The PMI/PAI is responsible for:

1) Reviewing the operator's aircraft maintenance or inspection program for NVIS instructions for continued airworthiness (ICA) and NVG maintenance documents and procedures.

2) Evaluating the operator's training to verify maintenance personnel are adequately trained on the maintenance of NVIS-modified aircraft (e.g., the use of NVGs to inspect for

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incompatible light sources during maintenance/inspections and the use of NVIS drawing packages to perform maintenance/inspections).

3) Evaluating the operator's training to verify maintenance personnel are adequately trained on the maintenance and inspection requirements of NVGs. This is especially important if the operator is authorized to perform their own NVG maintenance and inspection.

4) Evaluating the operator's MEL authorization/procedures for NVIS. Specific reference to the NVIS system is required for MEL relief (e.g., supplemental lighting systems do not apply to NVIS).

5) Verifying any subsequent aircraft modifications to the cockpit, cabin, or aircraft exterior involving a light-emitting or light-reflecting device were properly evaluated in accordance with the "Limitations and Conditions" section of the NVIS STC or aircraft manufacturer data.

NOTE: Ensure the maintenance documents are applicable to the aircraft and equipment being evaluated. NVIS modifications and cockpit configurations are controlled by the aircraft serial number. Any changes to the NVIS configuration will require changes to these documents and may require a compatibility evaluation by an Aircraft Certification Authority (ACA).

4-6-6-7 CERTIFICATION PROCESS. The standard five-phase certification process will be followed for NVG approval. The phases are:

- Preapplication,
- Formal Application,
- Document Compliance,
- Demonstration and Inspection, and
- Certification.

A. Preapplication Phase. During this phase, the operator documents their intent to utilize NVGs in their part 135 operation, including the modification of aircraft to make them compatible with NVGs. In addition, there are several important issues that the POI must make the operator aware of as part of the approval process. These issues include:

1) OpSpec A051 authorizes approval for ANVG operations and outlines additional NVG requirements, restrictions, and limitations.

2) Applicants should review the AFM NVG supplement to ensure that the types of approved operations, crew requirements, and other operational requirements and limitations are compatible with their intended ANVG operations.

3) Applicants should ensure that procedures exist so that the models of NVGs approved for use with a particular NVIS installation in a specific airplane are identified. The AFM for the NVIS installation will list the approved NVGs. If the AFM does not include

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this information, the operator must obtain that information from the STC design approval holder (DAH).

4) Applicants should review their pilot resources to ensure adequate personnel are available to serve as instructors/check airmen or develop a plan for contract training. Operators may select NVG flight instructors from prior NVG-experienced pilots, preferably those with experience as flight instructors. Pilots with prior NVG qualifications with another certificated operator, or who have military NVG training, would typically be good candidates for authorized company NVG flight instructors. See Volume 3, Chapter 20, Section 1, for additional information on air transportation flight instructors.

NOTE: Accordingly, NVG training programs and the associated qualification segments (pilot flight checks) must include maneuvers and procedures as listed in Volume 3, Chapter 19, Section 7, and in its Table 3-70, Part 135 Checking Modules—Airplanes. The performance standards required for basic checks is at least that required for obtaining the certificate which must be held to act as a pilot in command (PIC) and supplemented by guidance in this chapter and Order 8900.1.

B. Formal Application and Document Compliance Phases. During these phases, the operator submits appropriate company manuals and the POI reviews them, including checklists, emergency procedures, and training programs.

1) GOM. The standard guidance for a GOM is outlined in Volume 3, Chapter 32. Additional manual guidance is contained in Volume 4, Chapter 5. A revision to an operator's GOM will be required for NVG authorization. NVG operational control issues and responsibilities must be listed in the GOM. If there are no changes in these procedures and responsibilities between existing unaided operations and proposed NVG operations, the applicant should indicate that the procedures and responsibilities are the same. Where changes are appropriate, the operator should annotate the basic procedures and responsibilities with the ANVG differences.

2) NVG Revisions to the GOM. In addition to the requirements in Volume 4, Chapter 5, specific procedures and responsibilities will include:

a) Pilot training requirements;

b) Check airman and company flight instructor requirements;

c) Crewmember training and currency requirements for use of NVGs;

d) Recordkeeping requirements (including regency of pilot experience);

e) Minimum safe altitudes for NVG operations;

f) NVG weather minimums;

g) Aircraft equipment requirements for NVG operations and MEL deferrals;

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h) Use of aircraft external lighting;

i) NVG-authorized Area of Operations;

j) NVG maintenance and inspections;

k) NVIS/NVG preflight inspection procedures;

l) Reporting of NVIS irregularities and discrepancies;

m) Crew flight time and rest requirements;

n) Crew Resource Management (CRM);

o) Preflight planning (including aircraft performance requirements);

p) Detailed crew briefings;

q) Light discipline (internal and external);

r) Landing procedures to ensure compliance with part 135, § 135.229;

s) Taxi procedures;

t) Abort/Go-Around criteria;

u) Inadvertent IMC procedures; and

v) Any additional information as needed by the operator.

NOTE: The above items are intended as a guide for initial development of the NVG portion of a GOM and may be consolidated where appropriate.

NOTE: Some light-emitting diode (LED) external lighting may not be visible to all night vision devices even when visible to the unaided eye; NVGs are unable to identify some LED obstacles and/or airport lighting. Operators should address this concern in both procedures and training.

NOTE: Any MEL relief given for NVIS-related equipment must be specifically authorized as NVIS-specific relief in the operator's MEL and based on Master Minimum Equipment List (MMEL) Policy Letter (PL) 127, Night Vision Imaging Systems (NVIS), or the MMEL for that airplane. NVIS-related equipment includes all of the elements (including the NVG, windshield, lighting system, lighting system filters, etc.) required to successfully and safely operate an aircraft with the aid of NVGs. Any request for additional MMEL relief must be made to the Aircraft Evaluation Group (AEG) responsible for the particular MMEL. MEL guidance is contained in Volume 4, Chapter 4.

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NOTE: The installation of search lights, landing lights, and the aircraft's internal lighting system will be evaluated during the STC process.

NOTE: Aircraft must meet minimum equipment requirements of 14 CFR part 91, § 91.205(h).

C. Demonstration and Inspection Phase.

1) During this phase, the POI determines that an operator's proposed procedures and programs are effective. This is a total evaluation of the operator's system to include crewmembers and maintenance personnel. Draft OpSpecs will be provided to the operator for use in its ground and flight training curricula.

2) NVG operations are an evolving field of civil airplane operations. Some certificated operators may not have the expertise to effectively conduct an NVG ground curriculum without the use of a contract training provider. A contract training provider with special qualifications in NVG operations may contract with another operator to conduct the ground training in accordance with § 135.323(a)(2) and Volume 3, Chapter 20, Section 1.

3) Company flight instructors and check pilots must meet the requirements of §§ 135.337 through 135.340 and Volume 3, Chapter 20, Section 6, paragraph 3-20-6-23, Approval of a Check Pilot or For Multiple Operators. A contract training provider cannot conduct any flight training unless they meet the requirements of § 135.324(a). This section of the regulations states, "Other than the certificate holder, only another certificate holder certificated under this part or a training center certificated under part 142 of this chapter is eligible under this subpart to conduct training, testing, and checking under contract or other arrangement to those persons subject to the requirements of this subpart." Any contract training provider who does not hold an operating certificate and OpSpecs for the same type of operation for which training is provided, or does not hold a 14 CFR part 142 training center certificate with approved courses applicable to the training provided, must be qualified as a pilot and flight instructor for operations by the certificate holder. Policy pertaining to NVG contract flight instructors and contract NVG check pilots is covered in Volume 3, Chapter 54, Section 5. This section also applies to vendors (other part 135 or 142 certificate holders) who provide outsourced contract training and checking. Additional guidance pertaining to outsource training can be found on the Air Carrier Training Systems and Voluntary Safety Programs Branch's (AFS-280) website.

4) In addition, all flight instructors and check pilots must have been qualified under part 135 in the make and model of aircraft in which instruction is being given with a part 135 operator at some point in time.

5) The FAA should observe all ground and flight training curricula to the extent possible with the operator's initial training of crewmembers. This procedure allows the responsible inspectors to evaluate and make recommendations for improvements in training in a timely manner.

6) The final portion of this phase is completion of the qualification segment. An FAA aviation safety inspector (ASI) or NRS will conduct or observe the conduct of the initial cadre pilot qualification checks, including any check pilot evaluations for the initial cadre of

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check pilots. The ASI or NRS must be current in the general airplane tasks and the ANVG operations tasks, as required by Order 4040.9, in order to accomplish qualification checks.

D. Certification Phase. In this phase, OpSpecs are issued to the operator authorizing ANVG operations once the certificate holder has revised the applicable sections of its GOM, maintenance manual, and training program, and the aircraft has completed the NVG STC requirements. The POI and PMI approve the operator to conduct ANVG operations with the issuance of OpSpec A051 and OpSpec D094. The Safety Assurance System (SAS) surveillance plan should be completed and the surveillance Data Collection Tools (DCT) established. A certification report may be required. This action is necessary to ensure that AFS is able to satisfy its oversight responsibilities in providing clear and effective national policy guidance for both agency and consumer use concerning approval of ANVG operations in part 135 operations.

E. OpSpec Currency Requirements. In order for a pilot to act as a PIC using NVGs in operations under part 135, the pilot must have performed and documented the airplane tasks specified in OpSpec A051 as the sole manipulator of the controls. These ANVG operations must be performed in the same category and class of aircraft in which ANVG operations will be performed. The tracking of NVG currency is the responsibility of the operator and is a continuous review, similar to the pilot crew and duty requirements of § 135.63(a)(4)(vii).

1) The reliability of the NVIS and safety of flight operations is dependent upon the operator adhering to the ICA. The NVIS ICA are accepted by the FAA and will be referenced in OpSpec D094.

2) Guidelines for NVG check pilots and instructor approvals should follow the same principles as aircraft check pilots. However, the NVG check pilot and instructor must still meet the regulatory requirement to remain a qualified crewmember in the same types of operations for which he or she holds check pilot or instructor authority. Evaluations of check pilots conducting NVG checks in multiple aircraft should be alternated between aircraft when possible after an initial check in each make and model.

4-6-6-9 through 4-6-6-23 RESERVED.

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VOLUME 6 SURVEILLANCE

CHAPTER 2 PART 121, 135, AND 91 SUBPART K INSPECTIONS

Section 3 Safety Assurance System: General Inspection Practices and Procedures for Part 91K

6-211 GENERAL. This section contains information on both objectives and characteristics of inspections. It contains direction and guidance on the planning and conduct of specific types of inspections in support of an overall surveillance program. This guidance applies to all aviation safety inspectors (ASI) who conduct inspections of Title 14 of the Code of Federal Regulations (14 CFR) part 91 subpart K (part 91K) program managers.

6-212 OBJECTIVE OF AN INSPECTION. The primary objective of any inspection is to determine that a person, an item, or a certain segment of an operation associated with air transportation meets at least the same standards that were required for initial certification or approval by the Federal Aviation Administration (FAA). For inspectors to make these determinations, inspections must be conducted in an orderly and standardized manner. To accomplish this, each type of inspection must have individual objectives and be conducted each time in generally the same manner, according to the direction and guidance in this order and with appropriate job aids.

6-213 CHARACTERISTICS OF AN INSPECTION. As discussed in Sections 1 and 2 of this chapter, each type of inspection is a specific event (work activity) which has the following characteristics:

- A specific work activity title and Program Tracking and Reporting Subsystem (PTRS) activity code;
- A definite beginning and a definite end;
- Specific objectives to be met;
- General procedures to be followed; and
- A report of findings.

A. Inspection Titles and Codes. Each type of inspection is identified with a specific title. Also, each type of inspection is assigned a specific PTRS activity code for the purpose of computer automation and for reference in the planning and tracking of inspection activity.

B. Duration of an Inspection. Inspections have a definite beginning and end. They may be scheduled by an inspector for the observation and evaluation of a specific activity or they may be scheduled for the evaluation of program manager documents, manuals, or approved programs. A specific inspection activity may be initiated and completed in a short time, or it may be initiated on one day and completed several days later with other types of work activity conducted during that time. In any case, an inspection begins when an inspector initiates the inspection task and ends when the inspector has completed the inspection report.

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C. Inspection Procedures. Inspections have general procedures that inspectors should follow for standardization purposes. These general procedures are outlined in the following sections of this chapter. In most cases, there is a specific job aid for each type of inspection, which contains lists of specific items or areas which should be observed and evaluated, when applicable, during the inspection. Examples of these job aids are included in respective sections of this chapter.

D. Inspection Objectives. The primary objective of any inspection is to determine that a person, item, or segment of an operation complies or continues to comply with regulations, safe operating practices, and other established standards. Each inspection type, however, has specific objectives, which are discussed in respective sections of this chapter.

E. Inspection Results. An inspection is not complete until a report on the results of the inspection has been recorded. This report of inspection results is usually recorded on the PTRS Data Sheet (see Section 2 of this chapter). This inspection report is the key element of any inspection. Inspection must be concise, factual, and objective in reporting inspection results.

6-214 CONDUCTING AN INSPECTION. Due to the complexity of the air transportation industry, there are various types of inspections, each type with specific objectives. When deciding which type of inspection to conduct, inspectors should consider the objectives of each type of inspection and determine the type most appropriate and effective for a particular situation. An inspector's decision to conduct a particular type of inspection may be based on an isolated situation, such as a complaint or an incident, or on some other information that raises a question about compliance with a regulation or safe operating practice. In most situations, however, the types of inspections that need to be conducted are determined by managers, supervisors, and principal operations inspectors (POI) during the development of surveillance programs. These determinations are based on the analyses of previously collected surveillance data and other related information.

A. Preparing for an Inspection. Before conducting an inspection, inspectors should, to the extent possible, familiarize themselves with a program manager's systems, methods, and procedures. To obtain this familiarization, inspectors can review those sections of the program manager's manuals pertinent to the type of inspection to be conducted. Additional familiarization can be obtained by an inspector questioning and discussing the program manager's systems, methods, and procedures with the POIs and with other inspectors already acquainted with the program manager. When possible, inspectors should become aware of any previous deficiencies or negative trends by reviewing previous surveillance data pertinent to the type of inspection to be conducted. Inspectors must be acquainted with the applicable direction and guidance in this order for the type of inspection to be conducted. Inspectors can review the appropriate job aid as a reminder of the areas to be evaluated.

B. Advance Notice of an Inspection. Most inspections will cause some disruptions to routine operations. Responsible program managers engaged in air transportation understand the legal basis for FAA surveillance and are generally cooperative in responding to the needs of inspectors during the conduct of inspections. Program managers are required to afford inspectors the opportunity to conduct inspections in a manner that effectively accomplishes the objectives of the inspections. Inspectors should, however, arrange their inspection activities

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so they will result in a minimum amount of disruption to routine operations. In general, it is appropriate and helpful to both the program manager and inspectors to provide advance notice that an inspection is to be conducted. Advance notice should be given for inspections which take program manager personnel away from their normal duties, such as records inspections. Such advance notice is usually unnecessary for those inspections which result in only a minimal involvement of program manager personnel. Examples of inspections in which advance notice serves little purpose include ramp inspections.

C. Limiting the Scope of an Inspection. Each type of inspection has a set of items or areas that inspectors should observe and evaluate during the inspection. Sufficient time should be allotted for effective evaluation of all the items or areas. The circumstances under which inspections are conducted, however, vary considerably. Often inspectors will not be able to evaluate all the specified items or areas. The more important consideration is to thoroughly and qualitatively evaluate those items or areas in which the inspector has the time and opportunity to observe. In some circumstances, it may be preferable for an inspector to limit the scope of a particular inspection type to ensure the quality of the inspection. When an inspection is limited in scope, the inspector should provide a comment on how it was limited, and indicate it by recording the number and type of records or manuals evaluated, by recording the general areas evaluated, or by recording the general areas not evaluated. In general, it is better to schedule sufficient time to evaluate all the items or areas specified for an inspection type. Inspections that are limited in scope, however, do serve a useful purpose and can still provide valuable information.

D. Inspector Conduct. The actions and conduct of an ASI are subject to close scrutiny by the personnel they encounter during the performance of an inspection. Inspectors must conduct themselves as aviation professionals at all times when conducting inspections. When initiating an inspection, inspectors shall properly identify themselves and ensure that the appropriate program manager personnel are fully aware of the type and purpose of the inspection being conducted. Inspectors shall wear name tags or other appropriate identification in plain view during the conduct of the inspections. When observing or evaluating program manager personnel during the performance of their assigned duties, inspectors shall not intervene in a manner that could adversely hinder or preclude them from effectively performing their duties. If, however, an inspector observes a condition that is obviously unsafe or that could potentially become unsafe, the inspector shall immediately inform the appropriate program manager personnel of the condition.

E. Concluding an Inspection. At the conclusion of an inspection, inspectors should usually debrief appropriate program manager personnel of the inspection results. When appropriate to the type of inspection conducted, the debriefing should include a summary of the area inspected and the inspector's opinion concerning the compliance status of each area. Persons, items, or areas that were found to meet or exceed standards should also be commented on during the debriefing. Post-inspection debriefing must include an explanation of any deficiencies that were found during the inspection. Appropriate program manager personnel must be informed of any areas that will require some form of followup action. If it appears that there is a regulatory deviation, inspectors must inform responsible program manager personnel that an investigation into the apparent deviation will be initiated. When an inspector is unable to debrief the appropriate program manager employees on any deficiencies because those

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employees are not available, the inspector should indicate in the inspection report that the program manager was not briefed on the deficiencies. Isolated types of deficiencies found during an inspection can often be corrected by program manager personnel while the inspection is being conducted. Such deficiencies can be adequately resolved and closed out during the post-inspection debriefing. In these cases, however, inspectors should record information about the deficiency and how it was corrected on the inspection report, because such information is useful for trend evaluations (see Volume 14, Chapter 1, Section 2). The preparation of the inspection report is the final action that must be taken by inspectors to conclude an inspection. All reports on specific types of inspections shall be recorded on the PTRS Data Sheet (see Section 2 of this chapter).

RESERVED. Paragraphs 6-215 through 6-230.

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CHAPTER 2 PART 121, 135, AND 91 SUBPART K INSPECTIONS

Section 6 Safety Assurance System: Conduct Spot Inspection of a Program Manager/Operator's Aircraft

6-293 REPORTING SYSTEM(S). Program Tracking and Reporting Subsystem (PTRS). For Title 14 of the Code of Federal Regulations (14 CFR) parts 91 subpart K (part 91K), 121, and 135 use the following activity codes.

A. Spot Inspection: 3628, 5628.

B. Structural Spot Inspection: 3647, 5647.

6-294 OBJECTIVE. This section provides guidance for observing and analyzing in-progress maintenance operations for compliance with specific methods, techniques, and practices in the program manager/operator's inspection and maintenance programs.

6-295 GENERAL.

A. Definition. A work package is job task control units developed by the program manager/operator for performing maintenance/inspections. A typical work package may include the following:

- Component change sheets;
- Inspection work cards;
- Nonroutine work cards;
- Appropriate sections of the maintenance procedures manual; and
- Engineering Change Orders (EO).

B. Federal Aviation Administration (FAA) Inspection Personnel. It is important that Airworthiness aviation safety inspectors (ASI) are familiar with the type of aircraft to be inspected before performing the inspection. This can be accomplished through on-the-job training (OJT).

C. Coordination Requirements. Airworthiness ASIs possess various degrees and types of expertise and experience. An ASI who needs additional information or guidance should coordinate with personnel experienced in that particular specialty.

6-296 INITIATION AND PLANNING.

A. Initiation. Spot inspections can be scheduled as part of the work program, but may be initiated whenever a problem is noted, including deficiencies noted during other types of inspections.

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B. Planning.

1) Spot Inspections Derived from the Planned Work Program.

a) The number of spot inspections in the work program depends on the type and number of program manager/operator aircraft. After determining the type of aircraft to be inspected, confirm the aircraft availability and scheduled maintenance functions with program manager/operator personnel.

b) If the maintenance to be observed is known, review the program manager/operator's maintenance procedures manual to become more familiar with the maintenance task. Review the following:

- Required Inspection Items (RII), if applicable;
- Forms used to document the maintenance task;
- Latest manual revision and date;
- Special tools and equipment used to perform the maintenance task; and
- Any other manual requirements relating to the maintenance task.

c) For geographic requests, in which the maintenance procedures manuals are not in the office, review the applicable sections of the program manager/operator's maintenance manual at the facility prior to performing this task.

d) Examining previous inspection findings provides the ASI with background information regarding problem areas found during other spot inspections. This information can give an indication of how effective past corrective actions were in resolving previously identified problem areas.

e) The FAA provides information such as Airworthiness Directives (AD), Service Difficulty Report (SDR) summaries, maintenance bulletins, surveillance data, and PTRS entries. This information should be reviewed, when available, to become familiar with current service difficulty information. While performing the spot inspection, ensure that any conditions described in this information do not exist on the aircraft.

2) Spot Inspections Not Derived From the Planned Work Program. There are many situations while performing other surveillance activities that afford the opportunity to perform spot inspections. For example, if a discrepancy is found during the inspection that requires maintenance, a spot inspection of that maintenance function could be performed.

6-297 MAINTENANCE RECORDS. During performance of the spot inspection, special attention should be paid to the following areas, as applicable:

- AD's current status, including the method of compliance;
- Overhaul records, including documentation containing the overhaul details and replacement time;
- Major repair/alteration classifications and the use of approved data; and
- Replacement time of life-limited parts.

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6-298 PERFORMING THE SPOT INSPECTION.

A. Selecting a Maintenance Task.

1) Discuss with the maintenance supervisor what maintenance is currently being performed to determine what portions of that current maintenance/inspection should be observed.

2) Special emphasis should be placed on observing maintenance tasks that involve RIIs. Problem areas to look at include the following:

- Persons performing inspections outside of their authorizations or limitations; and
- RIIs not being properly identified or accomplished.

B. Performance Standards.

1) Each program manager/operator has a maintenance/inspection program for their individual maintenance operations. For maintenance to be performed on the program manager/operator's aircraft, there must be corresponding provisions and procedures in the program manager/operator's maintenance manual.

2) Each program manager/operator should have special procedures in the manual that ensure that persons outside of the organization perform maintenance in accordance with the program manager/operator's maintenance manual.

C. Discrepancies Noted During Surveillance. When deviations from accepted procedures are noted, it must be brought to the attention of maintenance management that corrective action must be taken immediately. Discrepancies noted during the inspection may require followup at a later time.

6-299 STRUCTURAL SPOT INSPECTIONS.

A. Increased Surveillance. The Aging Airplane Safety Rule requires the FAA to validate the effectiveness of air carrier maintenance programs with regard to structural fatigue and corrosion. In response, the FAA uses the structural spot inspection to perform surveillance of transport category aircraft undergoing "C," "D," or similar "heavy inspections." Inspectors should coordinate and time their inspection activities with the certificate holder maintenance process.

B. Inspection Area. During the observance of a "heavy inspection," ASIs must pick an inspection area where maintenance has been started and where there could be possible fatigue or corrosion problems (especially an area that is not usually open to inspection, such as under the galley or lavatories).

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1) If inspecting an area where maintenance is in progress, the following should be evaluated:

a) While performing their job functions, are personnel accomplishing their job task per the work package?

b) Does the Aging Aircraft/Corrosion Control program provide the necessary guidance to evaluate and respond in a timely manner to structural fatigue and corrosion?

2) If inspecting an area where maintenance has already been accomplished, the following should be evaluated:

a) Are there any structural fatigue or corrosion problems evident?

b) If there are, were they identified by the person(s) responsible for that area?

c) If they were identified, was corrective action initiated and completed?

3) Is there an AD applicable to this problem? If there is an AD, what is the status of that AD?

NOTE: While inspecting these areas that are not normally accessible, look for evidence of structural major repairs. If a major repair was accomplished, review the approved data for that repair.

6-300 PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. Previous experience working with an operator/program manager with similar types of aircraft.

B. Coordination.

1) This task may require coordination between Avionics and Maintenance ASIs.

2) Geographic inspector(s) must coordinate with the certificate-holding district office (CHDO) to obtain knowledge of the operator's maintenance procedures and any other items of concern that may surface during routine inspections.

6-301 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- Title 14 CFR Parts 39, 43, and 91K.
- Program Manager/Operator's Maintenance Procedures Manual and Inspection Work Packages.

B. Forms. None.

C. Job Aids. None.

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6-302 PROCEDURES.

A. Initiate Spot Inspection (as applicable).

B. Select Appropriate Aircraft for Inspection. Determine the following from the program manager/operator's maintenance schedules:

- Aircraft availability;
- Aircraft type; and
- Type of maintenance being performed.

C. Prepare for the Inspection. Review the following:

- Maintenance manual procedures for maintenance being performed (if available);
- Operations specifications (OpSpecs)/management specifications (MSpecs) time limitations, when applicable to the maintenance task;
- Previous inspection findings;
- Applicable maintenance alert bulletins;
- SDR summary at http://av-info.faa.gov/sdrx; and
- Any new regulation and/or AD requirements affecting the aircraft to be inspected.

NOTE: If preparing for an aging aircraft inspection, the ASI/Designated Airworthiness Representative (DAR)/Organization Designation Authorization (ODA) should select structural inspections, Corrosion Prevention and Control Programs (CPCP) tasks, or major repairs/modifications that are scheduled to be accomplished during this maintenance visit. If possible, supporting documentation for these tasks should be obtained before conducting the planned inspection.

D. Perform the Spot Inspection.

1) Identify the ASIs to the maintenance supervisor and discuss the nature of the inspection.

2) Discuss with the maintenance supervisor/person in charge the status of the selected maintenance task.

3) Select a particular maintenance task within the work package. If possible, include a maintenance task designated by the program manager/operator as an RII.

a) Ensure that current maintenance procedures are available to the person(s) performing the work by accomplishing the following:

- Asking maintenance personnel for the maintenance procedures used to accomplish the work; and
- Recording the date of the maintenance procedures being used to perform the maintenance task for future comparison with the maintenance manual master copy.

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b) Ensure that the maintenance is performed according to established procedures by comparing actual performance to the program manager/operator's approved maintenance/inspection manual procedures.

c) Ensure the person performing maintenance is using the proper tools by accomplishing the following:

- Observing that the person performing maintenance is using special tools referenced in the maintenance manual; and
- Checking calibration due dates on precision tools, measuring devices, and testing equipment requiring calibration.

d) Ensure that the program manager/operator has the facilities to properly perform the maintenance task.

e) Ensure that systems being maintained are not exposed to environmental conditions that could contaminate or damage components.

f) Ensure that the person performing maintenance accomplishes maintenance recording according to the operator's recordkeeping system.

g) Note any maintenance task deficiencies and include any copies of the documents that revealed the deficiencies.

h) For those maintenance tasks involving RII functions, determine that the persons observed performing these functions are appropriately certificated, authorized, and qualified.

NOTE: If performing an aging aircraft inspection, the ASI/DAR/ODA should focus the inspection on the specific structural areas, tasks, and major repairs/modifications identified during the aircraft records review and are scheduled to be accomplished during the maintenance visit.

E. Analyze the Findings. Evaluate inspection findings to determine if discrepancies exist and discuss the results with the principal inspector (PI)/program manager.

6-303 TASK OUTCOMES.

A. Complete the PTRS Record. When closing out a structural spot inspection, include the following information on FAA Form 8000-36, Program Tracking and Reporting System Data Sheet:

- The age of the aircraft;
- If the operator's inspection includes aging aircraft-related activities; and
- The AD number, AD type, and inspection results, if an AD structural repair or modification was accomplished.

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NOTE: If performing an aging aircraft inspection, enter "AGINGRIR" in the "National Use" block of Section I. Record aircraft times, cycles, inspection status, and other required data in the Comment block of Section IV.

B. Complete the Task. Completion of this task can result in requested manual revisions.

C. Document the Task. File all supporting paperwork in the program manager/operator's office file.

6-304 FUTURE ACTIVITIES. Based on the analysis of inspection findings, plan increased surveillance of problem areas, as applicable.

RESERVED. Paragraphs 6-305 through 6-319.

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CHAPTER 2 PART 121, 135, AND 91 SUBPART K INSPECTIONS

Section 9 Safety Assurance System: Cockpit En Route Inspections

6-372 RECORDING OF ACTIVITIES. Use Safety Assurance System (SAS) automation. This section is related to SAS Elements:

- Element 3.3.1 (OP), Operational Control.
- Element 3.3.2 (OP), Dispatch/Flight Release.
- Element 3.3.3 (OP), Flight/Load Manifest/Weight & Balance Control.
- Element 3.3.4 (OP), MEL/CDL/NEF Procedures.
- Element 3.3.5 (OP), Extended Operations (ETOPS).
- Element 5.2.1 (OP), Crewmember Duties/Cabin Procedures.
- Element 5.2.2 (OP), Carry-on Baggage Program.
- Element 5.2.3 (OP), Exit Seating Program.
- Element 5.2.4 (OP), Passenger Handling.

6-373 OBJECTIVE OF EN ROUTE INSPECTIONS. The primary objective of cockpit en route inspections is for an inspector to observe and evaluate the in-flight operations of a certificate holder within the total operational environment of the air transportation system. En route inspections are one of the Federal Aviation Administration's (FAA) most effective methods of accomplishing its air transportation surveillance objectives and responsibilities. These inspections provide the FAA with an opportunity to assess elements of the aviation system that are both internal and external to an operator.

A. Elements of the Aviation System Internal to the Operator. Elements of the aviation system that are internal to the operator and can be observed during en route inspections are items such as the following:

- Crewmembers;
- Operator manuals and checklists;
- Use of minimum equipment lists (MEL) and Configuration Deviation Lists (CDL);
- Operational control functions (e.g., dispatch, flight following, flight locating);
- Use of checklists, approved procedures, and safe operating practices;
- Crew coordination/cockpit resource management;
- Cabin safety;
- Aircraft condition and servicing; and
- Training program effectiveness.

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B. Elements of the Aviation System External to the Operator. Elements of the aviation system that are external to the operator and can be observed during en route inspections are items such as the following:

- Airport/heliport surface areas,
- Ramp/gate activities,
- Airport construction and condition,
- Aircraft movements,
- Air traffic control (ATC) and airway facilities,
- ATC and airspace procedures,
- Instrument approach procedures (IAP),
- Standard Instrument Departures (SID),
- Standard Terminal Arrival Routes (STAR),
- Navigational aids, and
- Communications.

6-374 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- Title 14 of the Code of Federal Regulations (14 CFR) Parts 1, 61, 91, 121, 125, and 135.
- The Operator's Manual.
- FAA Order 8000.38, Aviation Safety Inspector Credentials Program.
- FAA Order 8000.75, Aviation Safety Inspector En Route Inspection Procedures.
- Volume 3, Chapter 2, Section 1, Paragraph 3-42, Admission to the Flight Deck—Physical, Cognitive, and Language Capabilities.

B. Forms. FAA Form 8430-13, Request for Access to Aircraft.

C. Job Aids. None.

6-375 GENERAL INSPECTOR GUIDANCE. General inspector guidance regarding the following is contained in Order 8000.75:

- Inspector qualifications,
- Authorization to conduct an en route inspection,
- Scheduling of an en route inspection,
- Cockpit en route inspections by aviation safety inspectors (ASI),
- Conduct on an en route inspection,
- Duty time,
- Reporting/recording procedures, and
- Issuance/control of FAA Form 8430-13.

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6-376 COCKPIT EN ROUTE INSPECTION AREAS. Inspectors should consider all inspection areas, both internal and external to the operator, to be of equal importance. Four general inspection areas have been identified for observation and evaluation by inspectors during en route inspections. All inspection areas may not be assessed during each en route inspection. These inspection areas are as follows:

- Crewmember,
- Flight conduct,
- Airport/heliport, and
- ATC/airspace.

A. The Crewmember Inspection Area. The crewmember inspection area applies to both flightcrew members and cabin crewmembers. Inspectors should evaluate such items as crewmember knowledge, ability, and proficiency by directly observing crewmembers performing their respective duties and functions. The applicable job aid contains a list of reminder items that should be observed in the crewmember inspection area. These items are not all inclusive, but represent the types of items inspectors should evaluate during a cockpit en route inspection.

B. The Flight Conduct Inspection Area. The flight conduct inspection area relates to 10 specific phases of flight that can be observed during an en route inspection. The job aid contains a list of the items that should be evaluated by inspectors during these phases of flight. These items are not all-inclusive and, in some cases (such as powerback), may not be applicable to the flight conducted. Inspectors are, however, encouraged to observe, evaluate, and report on as many of these items as possible.

NOTE: Inspectors that are unfamiliar with the operator's specific procedures for operating the aircraft should comment in their inspection reports on any item they believe should be brought to the principal operations inspector's (POI) attention. Inspectors must use good judgment concerning whether to comment on these items when debriefing crewmembers.

C. The Airport/Heliport Inspection Area. The airport/heliport inspection area pertains to the various elements of airports or heliports that are passed through during the flight such as runways, taxiways, ramps, and aircraft ground movements. Inspectors should observe and evaluate as many of these elements as possible during an en route inspection.

D. The ATC/Airspace Inspection Area. The ATC/airspace inspection area pertains to the various elements of ATC and national or international airspace systems. These elements should be observed and evaluated by inspectors during en route inspections. From an operational standpoint, these evaluations are a valuable information source that can be used, not only to enhance safety with respect to ATC and the airspace system, but also to enhance the effectiveness of en route and terminal facilities and procedures.

E. Other Inspection Areas. Although these four general inspection areas cover a wide range of items, they are not the only areas that can be observed and evaluated during cockpit en route inspections. Inspectors may have the opportunity to evaluate many other areas, such

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as line station operations, flight control procedures, and flight attendants (F/A) in the performance of their duties. These types of inspection areas can often be observed before a flight begins, at en route stops, or at the termination of a flight.

6-377 SPECIFIC COCKPIT EN ROUTE INSPECTION PRACTICES AND PROCEDURES.

A. Familiarization with the Operator's Procedures and Facilities. Before conducting en route inspections, it is important that inspectors become familiar with the operating procedures and facilities used by the operator. Inspectors can obtain such familiarization by reviewing pertinent sections of the operator's manuals and by asking questions of, and obtaining briefings from, the POI or other inspectors who are acquainted with the operator's procedures and facilities. The inspector is encouraged to comment on any procedure believed to be deficient or unsafe in the inspection report. The inspector must use good judgment, however, when debriefing crewmembers about procedures that may be specifically approved for that operator.

B. Coordination with Assigned Operators. POIs are responsible for coordinating with their assigned operators to ensure that each operator has established procedures to be used by inspectors for scheduling the observer's seat (jump seat). POIs must ensure that an operator's procedures allow inspectors to have free, uninterrupted access to the jump seat. Inspectors should, however, make jump seat arrangements as far in advance as possible. Since inspectors may have sudden changes in schedule, and may not always be able to provide the appropriate advance notice, POIs must ensure that the operator's procedures are flexible and permit use of an available jump seat on short notice.

C. Avoiding Disruption of Operations. Whenever possible, inspectors should plan cockpit en route inspections in a manner that will avoid disruption of operator-scheduled line checks and initial operating experience (IOE) flights. Should an inspector arrive for a flight and find a line check or IOE in progress, the inspector must determine whether or not it is essential that the cockpit en route inspection be conducted on that flight. If it is essential, the operator must be so advised by the inspector and must make the jump seat available to the inspector. If the cockpit en route inspection can be rescheduled and the objectives of the inspection can still be met, the inspector should make arrangements to conduct the inspection on another flight. When a required checkride is being conducted by a check airman from the forward jump seat and the en route inspection is essential, the inspector should occupy the second jump seat, if one exists. On IOE flights, the check airman should normally occupy one of the pilot seats and the inspector should occupy the forward jump seat. When it is essential that the en route inspection be conducted on an aircraft that does not have two jump seats, the check airman must occupy a pilot seat and the inspector should occupy the jump seat. In such a case, the flightcrew member not being checked must either be seated in the cabin or not accompany the flight.

D. Arriving at the Operations Inspection Facility. An inspector should begin a cockpit en route inspection a reasonable amount of time before the flight (approximately 1 hour) by reporting at the operations area or at the gate, as specified by the POI. There the inspector must first complete the necessary jump seat paperwork for inclusion in the operator's passenger manifest and Weight and Balance (W&B) documents. The inspector should then locate the

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flightcrew. After the inspector gives a personal introduction to the flightcrew, which includes presentation of the current edition of FAA Form 110A, Aviation Safety Inspector's Credential, the inspector must inform the pilot in command (PIC) of the intention to conduct an en route inspection. The inspector should then request that, at a time convenient for the flightcrew, the flightcrew present both their Airman and medical certificates to the inspector for examination. Also, the inspector should request that, at a convenient time, the flightcrew present flight information such as weather documents, Notices to Airmen (NOTAM), planned route of flight, dispatch or flight release documents, and other documents with information about the airworthiness of the aircraft to the inspector for examination.

E. Informing the Flightcrew of the Inspection. Sometimes an inspector cannot meet and inform the PIC of the intention to conduct an en route inspection before boarding the aircraft. In such a case, when boarding the aircraft, the inspector should make appropriate introductions, present FAA Form 110A for the PIC's inspection at the earliest convenient opportunity, and inform the flightcrew of an intention to conduct a cockpit inspection. In this situation, an F/A will usually be at the main cabin entrance door. One of the F/A's primary duties is to ensure that only authorized persons enter the aircraft, such as ticketed passengers, caterers, and authorized company personnel. Therefore, an inspector should be prepared to present FAA Form 110A and any applicable jump seat paperwork to the F/A as identification before entering the cockpit. When boarding the aircraft, an inspector should also avoid unnecessarily impeding passenger flow or interrupting F/As during the performance of their duties. Also, during this time an inspector usually has ample opportunity to observe and evaluate the operator's carry-on baggage procedures and the gate agent's or F/A's actions concerning oversized items. Once inside the cockpit, the inspector should request an inspection of each flightcrew member's Airman and medical certificates, if not previously accomplished. When the flightcrew has completed reviewing the aircraft logbooks (or equivalent documents), the inspector should inspect the logbooks to determine the airworthiness status of the aircraft.

F. The Inspector's In-Flight Responsibilities. The inspector should wear a headset during the flight. During cockpit en route inspections, inspectors must try to avoid diverting the attention of flightcrew members performing their duties during "critical phases of flight." Inspectors must be alert and point out to the flightcrew any apparent hazards, such as conflicting traffic. If during an en route inspection, an inspector becomes aware of an apparent deviation or that the flightcrew is deviating from a regulation or an ATC clearance, the inspector must immediately inform the PIC of the situation.

G. Recording En Route Observations. A principal inspector (PI) may combine questions from two or more different Data Collection Tools (DCT) to make a Custom DCT (C DCT). This will focus the inspector's attention on specific inspection areas to be observed and evaluated. Unplanned items may also be evaluated during an en route inspection that are not a part of the DCT. For such items, a Dynamic Observation Report (DOR) should be used to capture the observations. Inspectors can print the DCT to make notes during the inspection, which can later be transferred to the SAS automation.

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6-378 CONDUCT OF SPECIFIC COCKPIT EN ROUTE INSPECTION.

A. Safety Briefing and Radio Monitoring. Once situated in the cockpit, the inspector should check the jump seat oxygen and emergency equipment (if applicable) and connect the headset to the appropriate interphone system. The PIC or a designated crewmember should offer to give the inspector a safety briefing. If the PIC does not make such an offer, the inspector should request a briefing. It is important that the inspector monitor all radio frequencies being used by the flightcrew to properly evaluate ATC procedures, flightcrew compliance, transmission clarity, and radio phraseology. The monitoring of these frequencies also ensures that the inspector does not inadvertently interfere with any flightcrew communications. Inspectors should continuously monitor these frequencies to remain aware of the progress of the flight.

B. Crewmember Certificates and Identification. There have been several occasions in which pilots have operated certificate holder aircraft without having in their personal possession Airman Certificates and current medical certificates. In some cases, pilots have operated for long periods of time with suspended certificates. The inspector should ensure the following:

1) For part 121 operations:

a) The PIC must have in possession the following:

- Photo identification as required by part 61, § 61.3(a)(2);
- An Airline Transport Pilot (ATP) Certificate;
- A first-class medical certificate, which is valid for 12 months for pilots under 40 years old and for 6 months for pilots who are 40 years of age or older; and
- Appropriate type rating for the aircraft being operated.

b) The second in command (SIC) must have in possession the following:

1. For part 121 domestic operations, flag, or supplemental operations requiring only two pilots:

- Photo identification as required by § 61.3(a)(2);
- An ATP Certificate with appropriate aircraft type rating or an ATP Certificate with restricted privileges and an appropriate aircraft type rating; and
- At least a second-class medical certificate, which is valid for 12 months.

NOTE: For those pilots who are employed as an SIC in part 121 operations on July 31, 2013, compliance with the type rating requirement in part 121, § 121.436(b) is not required until January 1, 2016.

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2. For part 121 flag or supplemental operations requiring three or more pilots:

- Photo identification as required by § 61.3(a)(2);
- An ATP Certificate with appropriate aircraft type rating. In this scenario, a pilot must hold an ATP Certificate issued per the requirements of § 61.159. An ATP Certificate issued per the reduced flight hours in § 61.160 is not sufficient; and
- A first-class medical certificate, which is valid for 12 months for pilots under 40 years old and for 6 months for pilots who are 40 years of age or older.

c) Flight Engineers (FE) must have in their possession the following:

- An appropriate FE's certificate, and
- A second-class medical certificate, which is valid for 12 months.

2) For part 135 operations:

a) The PIC must have in possession the following:

1. For operations in turbojets, aircraft with 10 or more passenger seats, or scheduled multiengine commuter operations:

- Photo identification as required by § 61.3(a)(2);
- An ATP Certificate;
- A first-class medical certificate, which is valid for 12 months for pilots under 40 years old and 6 months for pilots who are 40 years of age or older; and
- An appropriate type rating for the aircraft being operated.

2. For operations not described in subparagraph 6-378B2)a)*1*:

- Photo identification as required by § 61.3(a)(2);
- A Commercial Pilot Certificate with an instrument rating for the aircraft being operated; and
- At least a second-class medical certificate, which is valid for 12 months.

b) The SIC must have in possession the following:

- Photo identification as required by § 61.3(a)(2);
- A Commercial Pilot Certificate with an instrument rating for the aircraft being operated; and
- At least a second-class medical certificate, which is valid for 12 months.

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c) FEs must have in their possession the following:

- An appropriate FE's certificate, and
- A second-class medical certificate, which is valid for 12 months.

C. Exemptions. If any required crewmember does not have a pilot certificate and/or medical certificate in his or her possession, the operator may have an approved process in place for lost/missing Pilot and/or Medical Certificates generated from an exemption.

D. Deviations. If the flightcrew members do not have the proper, current certificates in their possession and the operator does not have an approved method via exemption:

1) Advise the offending crewmembers that there is an apparent deviation from § 61.3 and/or 14 CFR part 63, § 63.3.

2) If the flightcrew members still elect to operate the aircraft without having the appropriate certificates in their possession:

a) Deplane,

b) Terminate this inspection, and

c) Immediately notify the operator's operations center.

E. Load Manifests.

1) Ensure the load manifest contains the following information:

- The number of passengers;
- The total weight of the loaded aircraft;
- The maximum allowable takeoff weight for that flight;
- The center of gravity (CG) limits;
- The actual CG of the loaded aircraft, unless the aircraft is loaded according to an approved loading schedule;
- The registration number of the aircraft or the flight number;
- The origin and destination of the flight; and
- The identification of the flightcrew members and their respective position assignments.

2) Ensure the proper fuel load is on board by comparing fuel gauges to the minimum fuel required for dispatch. This fuel requirement is normally found on the dispatch release.

F. Crewmember Observations. Inspectors should observe and evaluate the crew during each phase of flight. This should include an evaluation of crewmember adherence to approved procedures and a proper use of all checklists. The inspector should also observe the PIC's crew management techniques, delegation of duties, and overall conduct. All crewmembers must follow sterile cockpit procedures. Some of the areas that should be observed and evaluated during each flight phase are as follows:

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1) Preflight. Inspectors should determine that the flightcrew has all the necessary flight information, including the appropriate weather, dispatch, or flight release information, flight plan, NOTAMs, and W&B information. MEL items should be resolved in accordance with the operator's MEL and appropriate maintenance procedures. Inspectors should observe the flightcrew performing appropriate exterior and interior preflight duties in accordance with the operator's procedures.

2) Predeparture. Inspectors should observe the flightcrew accomplishing all predeparture checklists, takeoff performance calculations, and required ATC communications. The flightcrew should use coordinated communications (via hand signals or the aircraft interphone) with ground personnel. Often, pushback or powerback clearance must be obtained from the appropriate ATC or ramp control facility. When W&B information is transmitted to the aircraft by company radio during the outbound taxi, the flightcrew should follow the operator's procedures as to which crewmember receives the information and completes the final takeoff performance calculations and which crewmember monitors the ATC frequency. The inspector should observe the following:

- Accomplishment of checklists during taxi;
- Adherence to taxi clearances;
- Control of taxi speed;
- Compliance with hold lines; and
- Flightcrew conduct of a pretakeoff briefing in accordance with the operator's procedures.

3) Takeoff. The takeoff procedure should be accomplished as outlined in the operator's approved maneuvers and procedures document. Inspectors should observe and evaluate the following items or activities during the takeoff phase:

- Aircraft centerline alignment;
- Use of crosswind control techniques;
- Application of power to all engines;
- Takeoff power settings;
- Flightcrew callouts and coordination;
- Adherence to appropriate takeoff or V-speeds;
- Rate and degree of initial rotation;
- Use of flight director (FD), autopilot, and autothrottles;
- Gear and flap retraction schedules and limiting airspeeds; and
- Compliance with the ATC departure clearance or with the appropriate published departure.

4) Climb. The climb procedure should be conducted according to the outline in the operator's approved maneuvers and procedures document. Inspectors should observe and evaluate the following items and activities during the climb phase of flight:

- Climb profile/area departure;
- Airspeed control;

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- Navigational tracking/heading control;
- Powerplant control;
- Use of radar, if applicable;
- Use of autoflight systems;
- Pressurization procedures, if applicable;
- Sterile cockpit procedures;
- Vigilance;
- Compliance with ATC clearances and instructions; and
- After-takeoff checklist.

5) Cruise. Procedures used during cruise flight should conform to the operator's procedures. Inspectors should observe and evaluate the following areas during the cruise phase of flight:

- Cruise mach/airspeed control;
- Navigational tracking/heading control;
- Use of radar, if applicable;
- Use of turbulence procedures, if applicable;
- Monitoring fuel used compared to fuel planning;
- Awareness of mach buffet and maximum performance ceilings;
- Coordination with cabin crew;
- Compliance with oxygen requirements, if applicable;
- Vigilance; and
- Compliance with ATC clearances and instructions.

6) Descent. Procedures used during descents should conform to the operator's procedures. Inspectors should observe and evaluate the following areas during the descent phase of flight:

- Descent planning;
- Crossing restriction requirements;
- Navigational tracking/heading control;
- Use of radar, if applicable,
- Awareness of maximum operating limit speed (V_{MO}/M_{MO}) and other speed restrictions;
- Compliance with ATC clearance and instructions;
- Use of autoflight systems;
- Pressurization control, if applicable;
- Area/situational awareness;
- Altimeter settings;
- Briefings, as appropriate;
- Coordination with cabin crew;
- Sterile cockpit procedures;
- Completion of appropriate checklist; and
- Vigilance.

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7) Approach. Procedures used during the selected approach (instrument or visual) should be accomplished as outlined in the operator's maneuvers and procedures document. Inspectors should observe and evaluate the following areas during the approach phase of flight:

- Approach checklists;
- Approach briefings, as appropriate;
- Compliance with ATC clearances and instructions;
- Navigational tracking/heading and pitch control;
- Airspeed control, reference speed for final approach (V_{REF});
- Flap and gear configuration schedule;
- Use of FD, autopilot, and autothrottles;
- Compliance with approach procedure;
- Sinkrates;
- Stabilized approach in the full landing configuration;
- Flightcrew callouts and coordination; and
- Transition to visual segment, if applicable.

8) Landing. Procedures used during the landing maneuver should conform to those outlined in the operator's maneuvers and procedures document. Inspectors should observe and evaluate the following areas during the landing phase of flight:

- Before-landing checklist;
- Threshold crossing height;
- Aircraft centerline alignment;
- Use of crosswind control techniques;
- Sinkrates to touchdown;
- Engine spool up considerations;
- Touchdown and rollout;
- Thrust reversing and speedbrake procedures;
- Use of autobrakes, if applicable;
- Braking techniques;
- Diverting attention inside the cockpit while still on the runway; and
- After-landing checklist.

9) Pre-Arrival. Pre-arrival and parking procedures should conform to the operator's procedures as outlined in the appropriate manual. Inspectors should evaluate crew accomplishment of after-landing checklists, ground crew parking, and passenger deplaning procedures.

10) Arrival. Inspectors should observe and evaluate the flightcrew as they complete postflight duties such as postflight checks, aircraft logbook entries, and flight trip paperwork completion and disposition.

G. Other Inspection Areas. During the en route inspection, inspectors should observe and evaluate other inspection areas, such as ATC and airspace procedures and airports or heliports that the flight transits during the cockpit en route inspection.

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1) When evaluating airports or heliports, inspectors should observe the condition of surface areas, such as ramp and gate areas, runways, and taxiways. The following list contains other areas that may be observed and evaluated by inspectors during cockpit en route inspections:

- Taxiway signs, markers, sterile areas, and hold lines;
- Ramp vehicles, equipment, and movement control;
- Aircraft servicing, parking, and taxi operations;
- Obstructions, construction, and surface contaminants (e.g., ice, slush, snow, fuel spills, and rubber deposits);
- Snow control, if applicable; and
- Security and public safety.

2) During cockpit en route inspections, inspectors have the opportunity to observe and evaluate ATC operations and airspace procedures from the vantage point of the aircraft cockpit. Inspectors may observe and evaluate the following areas from the cockpit:

- Radio frequency congestion, overlap, or blackout areas;
- Controller phraseology, clarity, and transmission rate;
- Automated terminal information service;
- Use of full call signs;
- Simultaneous runway use operations;
- Clearance deliveries;
- Acceptable and safe clearances;
- Aircraft separation standards; and
- Acceptability of IAPs, departure procedures, and feeder routings.

H. Debrief Crew. After the flight has been terminated, the inspector must debrief the crew on any discrepancies observed and on any corrective actions that should be taken. If the inspector observed an apparent deviation during the flight and intends to recommend compliance or enforcement action, or intends to make critical comments concerning the crew's performance, the inspector must inform the flightcrew during the debriefing.

6-379 AIRCRAFT AIRWORTHINESS PORTION OF THE COCKPIT EN ROUTE INSPECTION.

A. General Guidance. Open discrepancies or improperly deferred MEL items have been discovered in maintenance records just prior to departure. The resulting corrective actions have resulted in lengthy delays.

1) Regulations require that maintenance be recorded when performed. Procedures for ensuring that these recording requirements are met are described in the operator's maintenance procedures manual.

2) The manual contains specific instructions on when an airworthiness release or record entry is required. All discrepancies entered in the record must either be corrected

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or deferred using the methods identified in the operator's maintenance procedures manual. The ASI must become familiar with the operator's maintenance record handling procedures.

B. Aircraft Maintenance Record Inspection. The inspector should:

NOTE: Notify the appropriate operator personnel immediately of any discrepancies noted during this inspection.

1) Ensure the following:

- Maintenance/airworthiness releases are current,
- No open items exist,
- All discrepancies are corrected or properly deferred, and
- MEL items were deferred per the procedural and placarding requirements of the operator's approved program.

2) Ensure the length of deferrals is not exceeded by reviewing the following:

- Maintenance record pages,
- Deferred maintenance list, and
- Deferred maintenance placards/stickers.

3) Ensure that the maintenance records contain the following for each discrepancy:

- A description of work performed or reference to acceptable data,
- The name of the person performing the work, if outside the organization, and
- The name or other positive identification of the person approving the work.

4) Determine if repetitive problems indicate a trend.

NOTE: If actions taken by the operator deviate from regulatory requirements or the operator's manual, terminate the inspection. Advise the operator of the deviation and the possibility of compliance or enforcement action.

C. Interior Inspection. This inspection should be performed without disturbing the loading and/or unloading of the passengers. Any discrepancies noted should be brought immediately to the attention of the flightcrew. Perform the interior inspection per the guidance in Figure 6-18, Interior Inspection Guidelines, in Volume 6, Chapter 2, Section 4.

D. Exterior Inspection. The inspector should accompany a crewmember on the exterior walk-around to determine the thoroughness of the crewmember's inspection. It is important to be aware of the type of maintenance and servicing activities being accomplished. Perform the exterior inspection per the guidance in Figure 6-19, Exterior Inspection Guidelines, in Volume 6, Chapter 2, Section 4.

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E. In-Flight Monitoring.

1) This phase of the inspection provides the opportunity to monitor aircraft systems and evaluate the effectiveness of maintenance performed to correct maintenance record discrepancies.

2) ASIs have different degrees of pilot skills, and the Airworthiness ASI performing an en route inspection is not there to evaluate the competency of the flightcrew. However, if obvious discrepancies are noted, such as a deviation from assigned altitude or other operational procedure, they must be brought to the attention of the PIC and the assigned POI.

3) While conducting an en route inspection, do not manipulate, operate, select, or deselect any switches, circuit breakers, or controls.

6-380 CARGO/COMBINATION-CONFIGURED AIRCRAFT.

A. Inspection results have disclosed instances of significant aircraft structural damage resulting from the careless loading of cargo, such as:

- Torn or punctured liners indicating hidden damage to circumferential stringers, fuselage skin, and bulkheads.
- Damaged rollers, ball mats, etc., causing significant structural damage to the floors.
- Severe corrosion, fire, and structural damage resulting from the improper handling of some hazardous materials (hazmat).

B. The surveillance of hazmat handling is not the primary function of the cockpit en route inspection. If discrepancies are noted in the handling of hazmat, contact the appropriate FAA security division.

6-381 DEFERRED MAINTENANCE.

A. MEL Deferred Maintenance. The operator's approved MEL allows the operator to continue a flight or series of flights with certain inoperative equipment. The continued operation must meet the requirements of the MEL deferral classification and the requirements for the equipment loss.

B. Other Deferred Maintenance.

1) Operators frequently use a system to monitor items that have previously been inspected and found to be within serviceable limits. These items are still Airworthy, yet warrant repair at a later time or when items no longer meet serviceable limits. This method of deferral may require repetitive inspections to ensure the continuing airworthiness of the items. Examples of items that are commonly deferred in this manner are fuel leak classifications, dent limitations, and temporary (Airworthy) repairs.

2) Passenger convenience item (not safety/airworthiness-related) deferrals should be handled according to the operator's program guidelines.

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C. Approved Maintenance Program. The operator's approved maintenance program must provide for the prompt and orderly repairs of inoperative items.

6-382 ASI BAGGAGE. The ASI must conform to the operator's approved carry-on baggage program. If there is any concern that the baggage will exceed operator limitations, it should be checked. The ASI's identification (FAA Forms 110A and 8430-13) is adequate documentation for the operator to check the baggage.

6-383 TASK OUTCOMES. For parts 121 and 135, follow SAS guidance for Modules 4 and 5.

A. Recording the Use of FAA Form 8430-13. ASIs that have been trained in SAS will record the FAA Form 8430-13 number in the appropriate SAS DCT. ASIs that have not been trained in SAS will record the FAA Form 8430-13 number in the Enhanced Flight Standards Automation System (eFSAS) via the Program Tracking and Reporting Subsystem (PTRS).

NOTE: You may record the same FAA Form 8430-13 number in both SAS and the PTRS if required by the activity.

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

- Satisfactory inspection, or
- Requirement for a followup inspection for a specific discrepancy.

C. Document the Task. File all supporting paperwork in the operator's office file.

6-384 FUTURE ACTIVITIES. Follow SAS guidance.

RESERVED. Paragraphs 6-385 through 6-400.

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VOLUME 6 SURVEILLANCE

CHAPTER 2 PART 121, 135, AND 91 SUBPART K INSPECTIONS

Section 11 Safety Assurance System: Manual Inspections for Parts 121 and 135

6-422 GENERAL. Title 14 of the Code of Federal Regulations (14 CFR) requires certificate holders to prepare and keep current various manuals and checklists for the direction and guidance of flight and ground personnel conducting air transportation operations. Each operator is required to maintain a complete manual (or set of manuals) at its principal base of operations and to furnish a complete manual (or set of manuals) to the Federal Aviation Administration (FAA) certificate-holding district office (CHDO). A certificate holder's manual must be reviewed by principal inspectors (PI) and other qualified inspectors to ensure adequate content and compliance with applicable regulations, safe operating practices, and the certificate holder's operations specifications (OpSpecs). While inspectors are encouraged to provide guidance and advice to certificate holders in the preparation of their manuals, the development and production of an acceptable manual is solely the responsibility of the certificate holder. This section contains information about the definitions and regulations concerning different manuals and direction and guidance to be used by inspectors when conducting manuals inspections of 14 CFR part 121 and 135 certificate holders.

6-423 BACKGROUND DEFINITIONS. Inspectors should have knowledge of the following regulations, definitions, and guidance concerning the various types of manuals and guidance materials.

A. Flight Manual. Part 121, § 121.141 or part 135, § 135.81(c) (as applicable), and 14 CFR part 91, § 91.9(b) require that an FAA-approved flight manual be carried aboard each aircraft for the guidance of crewmembers when conducting flight operations. A flight manual is any manual approved by the FAA that an operator uses to comply with this requirement. A flight manual may either be an approved Airplane Flight Manual (AFM), an approved Rotorcraft Flight Manual (RFM), or an approved Company Flight Manual (CFM). Principal operations inspectors (POI) must review a certificate holder's flight manuals to ensure that the manuals contain adequate direction and guidance for those operations the certificate holder conducts and for the environment in which the operations are conducted (see Volume 3, Chapter 32, Section 5).

B. General Manual. Sections 121.133 and 135.21 require that each certificate holder (except part 135 single-pilot certificate holders and those certificate holders granted a deviation from this requirement) prepare and keep current a manual providing guidance for all categories of flight and ground personnel conducting air transportation operations. The manual required by §§ 121.133 and 135.21 is termed the general manual. The operator's general manual must include the duties and responsibilities of each category of employee. The general manual must also include adequate policy, direction, and guidance for the safe and efficient performance of the duties assigned to each category of employee. In practice, a system of manuals is required to meet both operational and airworthiness regulatory requirements, even for relatively simple operations. When the general manual is subdivided into more than one part, the segment of all portions applicable to operations is termed the General Operations Manual (GOM).

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C. Guidance Material. Inspectors should become familiar with the contents of Volume 3, Chapter 32, Manuals, Procedures, and Checklists for Parts 91K, 121, 125, and 135, before conducting a manuals review. Inspectors should direct particular attention to Volume 3, Chapter 32, Section 2.

6-424 PROCEDURES FOR REVIEWING OPERATIONS MANUALS. A PI or an assigned representative must review a certificate holder's manuals before issuing an operating certificate and periodically thereafter. Inspectors should use the following procedures when reviewing the manuals:

A. Initial Review. A comprehensive review of flight manuals and the GOM must be conducted by the PIs and other assigned inspectors before the initial certification of an applicant. During the initial review of these manuals, PIs must ensure that the certificate holder has addressed the applicable topics required by §§ 121.135 and 135.23. In addition, those items in the certificate holder's final compliance statement which require the operator to develop a policy statement, system, method, or procedure must be addressed in these manuals. If user manuals are furnished, those topics which apply to the specific user must be addressed. Each topic must be presented with enough detail to ensure that the user can properly carry out the portion of the policy or procedure for which the user is responsible.

B. Review of Changes to Manuals. The POI or a designated inspector must review each revision or proposed revision to a manual, checklist, or procedure per Safety Assurance System (SAS) guidance:

1) Approval of Manual Changes. Changes to manuals or sections of manuals or checklists which require approval must be approved by the FAA in writing before the operator can use the change. POIs should endeavor to review approved material in a timely manner.

2) Acceptance of Manual Changes. Only a portion of an operator's manuals are "approved" by the FAA, while the remaining portions are "accepted" by the FAA. The operator may begin using accepted portions of a manual once the change is delivered to the CHDO. POIs should attempt to review changes to accepted portions of manuals promptly, but may need to delay the review of accepted material due to higher priority work. If the POI subsequently concludes that an accepted section of a manual is not acceptable, the POI shall formally notify the operator of the deficiency. Upon notification, the operator must take action to resolve the deficiency.

NOTE: This activity shall be recorded in the Program Tracking and Reporting Subsystem (PTRS) using code 1303. If the manual revision impacts an approved or accepted program, then the PI may want to select an Element Design Data Collection Tool (ED DCT) or a Custom Data Collection Tool (C DCT) to record the revision.

C. Manual Reviews During En Route Surveillance. Inspectors conducting en route inspections and ramp inspections should review the flight manual and those portions of the GOM carried by the flightcrew for completeness and currency. When a flight is long enough to make it practical, inspectors should review these manuals more indepth, particularly those sections that

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are operationally relevant to the flight in progress. An inspector conducting both cockpit and cabin inspections should check the personal manuals of crewmembers to ensure that all required revisions have been made. Inspectors should record any discrepancies found with the manuals in SAS automation.

6-425 PERIODIC REVIEW OF MANUALS. The continual review of a certificate holder's manuals by inspectors is necessary because both the aviation environment and the operations conducted by the certificate holder are constantly changing. Each PI is responsible for developing a surveillance plan for the certificate holder's manual system. The certificate holder's manual system should be reviewed per the SAS process.

RESERVED. Paragraphs 6-426 through 6-440.

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VOLUME 6 SURVEILLANCE

CHAPTER 2 PART 121, 135, AND 91 SUBPART K INSPECTIONS

Section 30 Safety Assurance System: Monitor Continuing Analysis and Surveillance System/Revision for Part 121/135 Certificate Holders and Part 91K Program Managers

6-824 REPORTING SYSTEM(S).

A. Program Tracking and Reporting Subsystem (PTRS). For Title 14 of the Code of Federal Regulations (14 CFR) part 91 subpart K (part 91K), use PTRS activity codes 3635 and 5635.

B. Safety Assurance System (SAS). For 14 CFR part 121/135, use SAS automation and the associated Data Collection Tools (DCT). This section is related to SAS Element 1.1.3, (AW) CASS.

6-825 OBJECTIVE. This section provides guidance for monitoring a Continuing Analysis and Surveillance System (CASS) and for evaluating the overall effectiveness of the Continuous Airworthiness Maintenance Program (CAMP).

6-826 GENERAL.

A. Reliability Program. Some certificate holders with approved reliability programs use the reliability program to fulfill the monitoring mechanical performance functions requirement of its CASS. Since both reliability programs and CASSs require data collection, data analysis, and corrective action requirements, a duplication of operational data would occur. A part 91K program manager may develop and use a reliability program; however, there is no means for approval at this time.

B. Monitoring Mechanical Performance. Not all the elements of the current edition of Advisory Circular (AC) 120-17, Maintenance Control by Reliability Methods, are required to be contained in a CASS for monitoring mechanical performance. AC 120-17 does not provide for the audit function of CASSs.

6-827 INITIATION AND PLANNING.

A. Initiation. For part 91K, this task is scheduled as part of the work program. Additional inspections are initiated by national, regional, or district office special requirements. When given this assignment, the inspector must review current 14 CFR requirements and Federal Aviation Administration (FAA) policy. For part 121/135 follow SAS guidance in Volume 10 for Planning and Data Collection (Module 2 & 4).

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B. Planning.

1) Program Requirements.

a) The program must contain a system that determines the effectiveness of the maintenance and inspection programs, and provides for timely corrective action of any deficiencies in the maintenance/inspection programs. This system must be identified in a chapter of the certificate holder's maintenance manual and must reference part 91, § 91.1431, part 91K, part 121, § 121.373, and/or part 135, § 135.431.

b) Any portions of the program not contained in this chapter of the manual must be referenced to their exact location. For example, an approved reliability program must be referenced in the program if it is used to fulfill the mechanical monitoring function of the program.

2) Certificate Holder Size. The complexity and sophistication of the program should be relative to the certificate holder's operation. A small certificate holder should not be expected to have a program suitable for a large certificate holder; however, all programs must have, as a minimum, monitoring mechanical performance and audit functions. Procedures for administering these two functions must be identified in the certificate holder's manual.

3) Monitor Mechanical Performance Function. This function must provide for collecting and analyzing operational data. The intent here is to identify deficiencies that require corrective action. This monitoring is done through emergency response, day-to-day monitoring, and long term monitoring.

a) Emergency Responding. Emergency responding includes identifying emergency/critical situations, determining causes, and formulating a plan to ensure that similar conditions do not exist in like equipment. Typical examples of emergency/critical situations include:

- In-flight engine separations;
- In-flight propeller separations;
- Uncontained engine failures;
- Critical structural failures; and
- Any life-limited part failure.

b) Day-to-Day Monitoring. Normally, large certificate holders conduct daily meetings to discuss morning launch delays and activities of the previous day. Smaller certificate holders conduct these meetings at less frequent intervals. Items typically discussed include:

- Daily mechanical problems of each aircraft;
- Non-availability of spare parts;
- Inadequate manpower to perform maintenance;
- Deferred maintenance items—excessive numbers and time;
- Safety-related failures;
- Recurring maintenance problems;

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- Excessive unscheduled maintenance;
- Maintenance delays/cancellations; and
- Scheduled inspection results, including sufficient time to complete the check, unusual/critical findings, recurring problems, and parts/equipment/manpower availability.

c) Long-Term Monitoring. This system should include charting or some appropriate means of reporting and accounting operational data at specified intervals to reveal trend-related information. Typical examples of operational data used by the certificate holder to monitor mechanical performance are:

- Pilot reports compiled by the Airlines for America (A4A) code;
- Inspection findings compiled by the A4A code;
- Failure rates compiled by the A4A code;
- Tear-down reports;
- Premature removal rates (includes engines);
- Engine shutdown rates;
- Confirmed failure rates;
- Deferred minimum equipment list (MEL) items; and
- Service Difficulty Reports (SDR).

4) Audit Functions.

a) Auditing is normally an on-the-scene observation and should be a scheduled, ongoing activity encompassing periodic audits of contract agencies. The audit also addresses adequacy of equipment and facilities, storage and protection of parts, competency of mechanics, and housekeeping.

b) To be effective, audits should be separate from the maintenance organization. If audits are assigned to organizational units with other duties, the audit should be accomplished as an independent activity. Under no conditions may an organizational unit perform an audit on itself. Typical audit functions ensure that:

- All publications and work forms are current and readily available to the user;
- Maintenance is performed according to the methods, standards, and techniques specified in the certificate holder’s manuals;
- Maintenance forms are screened for completeness, proper entries, and Required Inspection Items (RII) identification;
- Major repairs/alterations are properly classified and accomplished with approved data;
- Records of all applicable Airworthiness Directives (AD) contain current status and method of compliance;
- Airworthiness releases are executed by designated persons and according to procedures specified in the certificate holder’s manuals;
- Records reveal current status of life-limited parts;

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- The training program syllabus is being followed;
- Carryover items and deferred maintenance are properly handled; and
- Vendors are properly authorized, qualified, staffed, and equipped to do the contractor function according to the certificate holder's manual.

5) Use of Contractors. When the air carrier contracts with another certificate holder and/or repair station for maintenance support, the air carrier is still responsible for CASS requirements. The responsibility for administering or controlling a CASS can never be contracted out. However, contract organizations may be used to collect operational data, make analyses and recommendations, perform audits, and report information to be used by the certificate holder in identifying deficiencies and implementing corrective action.

6) Scheduling Inspection. For part 91K, this inspection will normally be coordinated verbally with responsible persons of the certificate holder. If responsible persons are not available on the agreed upon date, reschedule the inspection with the certificate holder and notify the certificate holder in writing to confirm the date. For part 121/135, follow SAS guidance in Volume 10, Chapters 3 and 5 for Planning and Data Collection (Module 2 & 4).

6-828 PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites:

- Knowledge of the regulatory requirements of parts 91K, 121, and 135;
- Successful completion of the Airworthiness Inspector Indoctrination course for General Aviation (GA) and Air Carrier Inspections, or previous equivalent; and
- Previous experience working with a certificate holder required to have a CASS.

B. Coordination. This task requires coordination between the principal inspectors (PI) assigned to the certificate holder. Safety issues, deviations from standards, and noncompliance may require interdependent coordination with local, regional, and headquarters (HQ) personnel, depending on the severity and complexity of the issues.

6-829 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- AC 120-16, Air Carrier Maintenance Programs.
- AC 120-17, Maintenance Control by Reliability Methods.
- Program Manager/Certificate Holder's Maintenance Procedures Manual.
- Regulations Division—Legal Interpretations & Chief Counsel's Opinions
- Volume 10, Safety Assurance System Policy and Procedures

B. Forms. None.

C. Job Aids. None.

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6-830 PROCEDURES.

A. Review Office Files. Review the historical data of the program to include the following:

- The PTRS history of past inspections (may be applicable to 121/135);
- The PTRS history of Compliance Actions;
- The Enforcement Information System (EIS);
- The previous 6 months' Mechanical Interruption Summaries (MIS);
- SDRs at http://av-info.faa.gov/sdrx;
- Any other operational data that might indicate negative trends in the maintenance/inspection program; and
- Surveillance history part 121/135 using SAS automation or the Safety Performance Analysis System (SPAS).

B. Collect Items to be Used During Inspection. Note and collect the following:

1) Samples of any negative trends in the previous 6 months' MISs.

2) Negative trends on the certificate holder's aircraft fleets (query the SDR database at http://av-info.faa.gov/sdrx for this information).

3) Samples of negative trends in operational data that the certificate holder identified in previous reports.

4) Reports of all emergency/critical situations during the previous 12 months.

5) Samples of records from the day-to-day monitoring meetings in which corrective actions were deemed necessary.

6) Negative trends in the maintenance/inspection program noted during routine surveillance that the CASS had not detected. Examples of situations indicating negative trends include increases in the following:

- Aircraft delays;
- Premature removal rates;
- The number of engine shutdown rates;
- Number of short term escalations;
- Deferred maintenance MEL items and length of time items remain deferred; and
- Repeat pilot reports.

C. Review the Program Manager's/Certificate Holder's Manual. Before making the onsite inspection, obtain the certificate holder's maintenance procedures manual and review the CASS. It is vital that the inspector obtain precise knowledge of the program manager's/ certificate holder's programs, concepts, and how the program is administered. While reviewing

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the manual to ensure that it complies with 14 CFR and before making the inspection, note any unclear areas, obvious omissions, or apparent discrepancies.

1) Review the program manager's/certificate holder's program as described in the manual. Ensure that it contains policies and procedures for determining the effectiveness of the maintenance/inspection program and for corrective action of any deficiencies in those programs as required by § 91.1431, § 121.373, or § 135.431.

2) Ensure that the manual contains procedures for administering the CASS that are clear and easy to understand.

3) Ensure that the certificate holder's manual describes a systematic method of reviewing operational data. It should determine the effectiveness of the maintenance/inspection program through:

- Emergency responding;
- Day-to-day monitoring; and
- Long-term monitoring.

a) Emergency responding. The manual must include procedures for responding to critical and/or emergency safety-related situations. Review the manual procedures to ensure:

- Critical/emergency situations are defined;
- Procedures exist for the notification/coordination process;
- Procedures exist for determining if similar situations exist on other aircraft;
- Procedures exist to ensure that the certificate holder implements corrective action; and
- Procedures define how the certificate holder notifies the FAA.

b) Day-to-day monitoring. Ensure that the manual contains procedures for conducting periodic meetings with required personnel to discuss mechanical performance and identify the need for corrective action. Procedures must include:

- What items to discuss;
- When to conduct meetings;
- Who attends meetings; and
- How records of these meetings are forwarded to the FAA.

c) Long-term monitoring: data collection. Determine how the certificate holder is monitoring the mechanical performance function of the program. This monitoring should include, at a minimum:

- What operational data the certificate holder is using;
- What forms are used to collect the data;
- Who is responsible for compiling the data; and
- When and how often the data is collected.

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d) Long-term monitoring: data analysis. Ensure that the manual has procedures for analyzing operational data. The procedures must include:

- When the analysis is to be performed;
- Who is responsible for performing the initial analysis;
- What conditions, based on performance standards, warrant corrective action; and
- Who is responsible for performing further analysis and making a corrective action recommendation.

4) Ensure that the manual has procedures for taking corrective action based on the data analysis. The procedures must describe:

- Who has responsibility for implementing corrective action;
- When the corrective action will be implemented; and
- How the corrective action will be phased into the maintenance program.

NOTE: Some program managers/certificate holders fulfill this long term monitoring function through their approved reliability programs.

5) Ensure that the program manager's/certificate holder's manual contains audit functions. Review the manual.

a) The procedures must provide a continuous audit of the total maintenance program, including contract agencies. The procedures must state:

- Who is responsible for performing audits (normally, an independent agency that is assigned to the quality assurance (QA)/quality inspection department);
- What is being audited (e.g., manuals, maintenance, record entries, RIIs, training, airworthiness releases, deferred maintenance, vendors, etc.);
- When the audits are performed;
- How the audits are documented; and
- How records are retained.

b) Procedures for analyzing audit functions must include the following:

- Analyzing each audit to identify deficiencies;
- Initiating corrective action for each deficiency;
- Providing for on-the-spot corrective action, if appropriate;
- Providing for further analysis to determine system breakdown;
- Establishing qualifications of persons performing analysis; and
- Recording audit findings and subsequent actions.

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c) Procedures must contain corrective action, to include:

- Timely implementation of corrective action from the data analysis; and
- Followup to determine effectiveness of the corrective action.

D. Document Findings of Review Prior to Onsite Inspection. For part 91K, document preliminary findings found during the office and manual review. Discuss them with the PI/supervisor. Along with the PI/supervisor, indicate those inspection findings that must be brought to the attention of the program manager/certificate holder during the initial meeting. These findings will be used in determining the overall effectiveness of the program. For part 121/135, follow SAS guidance in Volume 10, Chapter 5, Sections 1 and 2 for Data Collection and Reporting (Module 4).

E. Schedule the Inspection. For part 91K, schedule the inspection with the program manager. Coordinate the inspection with the certificate holder to determine when the certificate holder's personnel will be available and agree upon a time for the inspection. Arrange to attend a periodic meeting. For part 121/135, follow SAS guidance in Volume 10, Chapters 3 and 5 for Planning and Data Collection (Module 2 & 4).

F. Meet With the Program Manager/Certificate Holder. Contact the person who has overall responsibility for the program and discuss:

- The nature and scope of the inspection;
- Negative trends discovered during manual and office review; and
- Organizational elements responsible for administering the program, including identifying personnel.

G. Verify Currency of Program Manager's/Certificate Holder's Manual. Ensure that the organizational person responsible for the CASS has the current manuals. This can be done by comparing the effective dates or revision dates of the manual master copy held by the certificate holder with the manual held by the responsible person.

H. Determine if Staffing Equals that Described in the Program Manager's/ Certificate Holder's Manual. Compare the current organization to the organization described in the manual. Document any differences in staffing. These differences will be used in the final analysis in determining the effectiveness of the CASS.

I. Ensure the Manual is Readily Available to Personnel. Determine whether each organizational element responsible for administering the program has a current copy of the manual available.

J. Inspect Program Manager/Certificate Holder System to Monitor Mechanical Performance. During the inspection, document and photocopy any instances in which the certificate holder did not follow the procedures identified in the manual by inspecting the following areas:

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1) Emergency Responding. Using the previous year's reports of emergency actions gathered during the office review, determine whether:

- Manual procedures were followed to ensure that similar situations did or did not exist on other aircraft;
- Fault analysis was accomplished for each situation; and
- Any corrective action established was implemented and effective.

2) Day-to-Day Monitoring.

a) Establish that periodic meetings are occurring as defined in the manual.

b) Attend a periodic meeting to determine if daily mechanical problems are being discussed and if the appropriate personnel are attending.

c) Using day-to-day monitoring records collected during office review, determine, when the need for corrective action was recognized, whether:

- The problem was assigned to appropriate personnel; and
- The plan for corrective action was established, implemented, and effective.

3) Long-Term Monitoring.

a) Data Collection. Compare the manual procedures with the actual data collection. Ensure that the following is being accomplished according to the manual:

- All operational data was collected and was entered on the appropriate forms;
- The appropriate persons compiled the data; and
- The data was collected at the specified times.

b) Data Analysis. Determine if data analysis is being performed in accordance with manual procedures by comparing the manual procedures to actual performance. Ensure that:

- Operational data was analyzed to identify items exceeding performance standards, indicating negative trends;
- These items were further analyzed to identify cause by using the sample of negative trends reported by the certificate holder and collected during the planning of the inspection;
- Trained, competent, and qualified personnel performed initial and further analysis;
- Audit functions are accomplished when analysis has identified the need; and
- The need for corrective action was determined.

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c) Corrective Action. Use the same sample of the negative trends used in the data analysis to ensure that the certificate holder established and implemented a corrective action plan (CAP) for those items requiring corrective action. Continue to follow those items through the corrective action process.

- Determine if the plan required changes to the maintenance/inspection program;
- Ensure that these changes were implemented; and
- Review operational data to ensure that the corrective action was effective in reversing the negative trend.

d) Documentation. For part 91K, document all findings indicating that the certificate holder did not follow its manual procedures. These findings will be used in determining the overall effectiveness of the CASS. For part 121/135, follow SAS guidance in Volume 10, Chapter 5, Sections 1 and 2 for Data Collection and Data Reporting (Module 4).

K. Inspect the Program Manager's/Certificate Holder's System to Audit the Maintenance Program. Document and photocopy any instances in which the certificate holder did not follow the procedures identified in the manual. Contact the responsible person identified in the manual to determine what audits the certificate holder accomplished in the past 12 months.

1) Inspection. Inspect audit functions by accomplishing the following:

- Sample a cross-section of audit requirements identified in the manual and have the certificate holder provide records of audit completion;
- Review the audit completion records to determine scope and detail of inspection;
- Verify results of audit by performing spot check of the audited facility;
- Verify that audits were performed within specified time periods;
- Determine whether persons who performed the audits have experience and expertise in the areas audited;
- Determine whether audit functions triggered by analysis are accomplished; and
- Discuss any other areas of concern found during surveillance that was not noted through the audit system.

2) Analyze Audit Findings. Determine if the certificate holder has performed analysis of audits. Using samples collected from audit records provided by the program manager/certificate holder, determine the following:

- Analysis of each audit was accomplished to identify deficiencies;
- On the spot and system corrective actions were implemented to correct deficiencies; and
- Personnel performing audit had necessary experience and expertise.

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3) Corrective Action. Using the same samples:

- Determine if the certificate holder has implemented corrective action;
- Perform an onsite inspection to ensure the timely implementation of the corrective action; and
- Determine the effectiveness of corrective action by ensuring that similar deficiencies no longer exist.

4) Documentation. For part 91K, document all findings indicating that the certificate holder did not follow the manual procedures. The inspector will use these findings in determining the overall effectiveness of the program. For part 121/135, follow SAS guidance in Volume 10, Chapter 5, Sections 1 and 2 for Data Collection and Reporting (Module 4).

L. Follow Up on Negative Trends Identified During Office and Manual Review.

1) Follow SAS Guidelines. For part 121/135, see Volume 10, Chapter 6 for Analysis, Assessment, and Action (Module 5).

- Contact the person responsible for the negative trend.
- Determine whether the trend was significant.
- Determine why the program did not identify the trend.
- Ensure that corrective action is initiated.
- Document all findings.

2) Determine Effectiveness of the Program. For part 91K, combine all inspection findings from the following to determine program effectiveness, including:

- The office and manual review;
- Onsite inspection; and
- Inspector identified trends.

M. Coordination. After assessing the program and before debriefing the certificate holder, consult with the appropriate FAA supervisory personnel to determine which, if any, findings require official notification.

N. Debrief Program Manager/Certificate Holder. For part 121/135, follow SAS guidance for Module 5. For part 91K, notify the program manager. In the program manager's debriefing:

- Discuss results of the inspection;
- Discuss all discrepancies discovered during the inspection;
- Discuss possible corrective action;
- Inform the certificate holder that official written notification of findings will follow; and
- Inform the certificate holder that they must submit a plan for the timely completion of corrective action.

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NOTE: Agree with the program manager upon time limits for the CAP during the debriefing. The inspector can negotiate with the certificate holder over time limits later if mitigating circumstances arise.

6-831 TASK OUTCOMES.

A. Complete the PTRS Record. For part 91K and for all when Compliance Action is taken, per Volume 14, Chapter 1, Section 2.

B. Follow SAS Guidance for Modules 4 and 5. For part 121/135 (See Volume 10).

C. Complete the Task. Successful completion of this task will result in a formal letter to the certificate holder confirming the inspection findings.

D. Document the Task. File all supporting paperwork in the certificate holder's office file.

6-832 FUTURE ACTIVITIES.

A. Schedule a 6 Month Followup Inspection. For part 91K at the end of the time limit for corrective action in the areas of deficiency to determine the effectiveness of the certificate holder's corrective action.

B. Follow SAS Guidance. For part 121/135, see Volume 10 to plan future surveillance activities to determine the effectiveness of the certificate holder's corrective action.

RESERVED. Paragraphs 6-833 through 6-847.

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VOLUME 6 SURVEILLANCE

CHAPTER 2 PART 121, 135, AND 91 SUBPART K INSPECTIONS

Section 32 Safety Assurance System: Inspect a Part 91K Program Manager or Part 135 (Nine or Less) Certificate Holder

6-872 RECORDING SYSTEM(S).

A. Program Tracking and Reporting Subsystem (PTRS). For Title 14 of the Code of Federal Regulations (14 CFR) part 91 subpart K (part 91K), use activity codes 3637 and 5637.

B. Safety Assurance System (SAS). For 14 CFR part 135 (nine or less), use SAS automation and associated Data Collection Tools (DCT).

6-873 OBJECTIVE. This section provides guidance in inspecting the aircraft, maintenance records, maintenance programs, and facilities of a part 91K program manager or part 135, § 135.411(a)(1) certificate holder.

6-874 GENERAL.

A. Inspection. This inspection can be conducted as a result of any the following:

- An annual requirement;
- As part of a continuous surveillance activity;
- Reported problems with the certificate holder (complaint, a review of Service Difficulty Reports (SDR) or Mechanical Interruption Summaries (MIS), incident, accident, etc.);
- Request by the office manager, district office, or region; and/or
- SAS requirements.

B. Compliance. Section 135.411(a)(1) requires certificate holders operating aircraft type-certificated (TC) for nine or less passenger seats to comply with either the inspection and recordkeeping requirements of part 91 or an Approved Aircraft Inspection Program (AAIP). Although this is in accordance with § 135.419, the additional maintenance requirements in § 135.421 must still be met. Part 91, § 91.1109 requires program managers to establish and ensure that each aircraft is inspected in accordance with that inspection program.

C. Recordkeeping System. Principal inspectors (PI) should review the certificate holder's recordkeeping systems for its adequacy in effecting timely corrections of recordkeeping errors. PIs should also give special attention to recordkeeping errors that may indicate deficiencies in the certificate holder's maintenance program.

D. Cargo Operations, Part 135 (Nine or Less). The requirements of § 91.409(b) only apply to aircraft that carry revenue passengers. This allows cargo operations to function without using the 100-hour inspection.

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6-875 AAIP.

A. What an AAIP Provides. An AAIP provides a means for a certificate holder to incorporate specific inspection requirements into an inspection program. The program can be used to control repetitive Airworthiness Directives (AD) and special inspections resulting from MIS or other service experience.

B. AAIP Scope. The program must encompass the total aircraft, including all installed equipment such as communications and navigational equipment, cargo provisions, and emergency equipment. It must include a schedule of the individual tasks or groups of tasks that comprise the program and the frequency with which these tasks are accomplished. The certificate holder must substantiate the program and any revisions to the aviation safety inspector (ASI).

C. Aircraft Pool Under an AAIP. When a group of aircraft involved in an aircraft pool is under an AAIP, each certificate holder must maintain the required operations specifications (OpSpecs) for any pooled aircraft used. In addition, each certificate holder involved in the pool is responsible for having procedures that determine the current maintenance status of each aircraft used from the pool.

6-876 ADDITIONAL MAINTENANCE REQUIREMENTS.

A. Aircraft Maintained Under § 135.411(a)(1). Any certificate holder maintaining aircraft under § 135.411(a)(1) must comply with the maintenance requirements of § 135.421 for engines, propellers, rotors, and emergency equipment.

B. Manufacturer Maintenance Requirements/Federal Aviation Administration (FAA) Program. A certificate holder may use either the manufacturer's recommended maintenance requirements or a program developed by the certificate holder and approved by the Administrator. Any change to a program developed by a certificate holder requires FAA approval.

6-877 MAINTENANCE PROGRAM APPROVAL FOR CARRY-ON OXYGEN EQUIPMENT USED FOR MEDICAL PURPOSES.

A. Medical Carry-On Oxygen. Carry-on oxygen to be used for medical purposes must be of an approved type. If the oxygen is owned by the certificate holder, it must be under an approved maintenance program.

B. Medical Equipment for Carry-On Oxygen. The maintenance program for carry-on oxygen equipment used for medical purposes is approved for use on OpSpec/Management Specification (MSpec) D104, Additional Maintenance Requirements—Emergency Equipment, as an item of emergency equipment.

6-878 REVISING TIME LIMITATIONS.

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A. Inspection/Overhaul Time Limitation Revisions. Revisions to inspection and overhaul time limitations for powerplants, propellers, rotors, and emergency equipment are based on service experience. The certificate holder may request authorization for a time increase if the request is accompanied by supporting data. The supporting data must substantiate that the increase will not adversely affect the airworthiness of the aircraft.

B. Items with Deterioration Not Affected by Operational Hours. Items whose deterioration is not affected by operational hours (such as electronic units and emergency flotation equipment) should have their time limitations established in terms of calendar time.

C. Time Limitation Extensions. Time limitation extensions are approved and authorized for use by amending the OpSpecs/MSpecs.

6-879 PART 135 ON-DEMAND CERTIFICATE HOLDER ALLOWING PILOTS TO REMOVE AND REINSTALL APPROVED AIRCRAFT CABIN SEATS, APPROVED CABIN-MOUNTED STRETCHERS, AND APPROVED CABIN-MOUNTED MEDICAL OXYGEN BOTTLES.

A. Title 14 CFR Part 43 Requirements. An exemption or deviation is not required if the certificate holder and pilot meet the requirements of part 43, § 43.3(i) for removal and reinstallation of approved aircraft cabin seats, approved cabin-mounted stretchers, and, when no tools are required, approved cabin-mounted medical oxygen bottles, for an aircraft TC'd for nine or fewer passenger seats, excluding any pilot seat.

B. Principal Maintenance Inspector (PMI) Review. PMIs are to review the certificate holder's programs to ensure that the following are accomplished:

- The certificate holder has an approval issued to allow pilots to perform the tasks;
- The Weight and Balance (W&B) program includes all approved configurations;
- The configurations are in the approved Airplane Flight Manual (AFM);
- OpSpec E096, Weight and Balance (W&B) Control Procedures, reflects any changes;
- The procedures are available to the pilot to evaluate the accomplishment of the task; and
- The pilots have satisfactorily completed an approved training program and are authorized in writing by the certificate holder to perform each task.

6-880 COORDINATION REQUIREMENTS. This task requires coordination between principal avionics inspectors (PAI), PMIs, and ASIs.

6-881 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- Title 14 CFR Parts 13, 43, 65, 91, 91K, and 135.
- Advisory Circular (AC) 120-49, Certification of Air Carriers.
- AC 135-10, Approved Aircraft Inspection Program.
- OpSpecs/MSpecs.

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- Certificate Holder's Maintenance Manual/Part 91K Inspection Program.
- Regulations Division—Legal Interpretations & Chief Counsel's Opinions.
- Volume 10, Safety Assurance System Policy and Procedures.

B. Forms. None.

C. Job Aids. General Aviation (GA) Job Task Analysis (JTA): 2.3.113.

6-882 PROCEDURES.

A. Review the Certificate-Holding District Office's (CHDO) Certificate Holder Files. Review the following:

1) MSpec/OpSpec D073, Approved Inspection Program. Ensure the following when use of OpSpec D073 or MSpec D073 is applicable:

- All aircraft under this program are listed by make, model, serial, and registration numbers; and
- The program being used is identified.

2) Certificate Holder's Maintenance Manual. Review the following when use of the manual is applicable:

- Procedures for approving an aircraft for return to service after inspections and nonroutine maintenance;
- Procedures for conducting inspections; and
- Procedures to ensure that the recordkeeping requirements of § 91.417 are met.

B. Perform an Onsite Inspection.

1) Inspect the Aircraft Maintenance Records. Ensure that records meet the requirements of § 91.417 or 91.1113, including:

- A description of work performed or reference to acceptable data; and
- The signature and certificate number of the person approving return to service.

2) Inspect the Aircraft. Inspect the certificate holder's aircraft to ensure that the aircraft:

- Meet the type design;
- Are properly registered and certificated;
- Are in condition for safe operation; and
- Have nine or less passenger seats.

3) Review Recordkeeping. Ensure that the certificate holder's recordkeeping system is adequate. Recordkeeping discrepancies could indicate the following:

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- Maintenance performed may not comply with part 43;
- Maintenance may not be recorded in maintenance records;
- Certificate holder maintenance program may be inadequate; and
- Certificate holder may be experiencing systemic deficiencies.

4) Inspect the Facilities. Inspect the maintenance facility used by the certificate holder to ensure that the certificate holder can safely maintain its aircraft.

5) Review the Maintenance Program. If the certificate holder is on a program other than a 100-hour/annual, ensure that:

- The latest revision is in the program; and
- The program is available to the certificate holder's maintenance personnel.

6) Review the Records for a Part 135 On-Demand Certificate Holder Exemption. If applicable, ensure the following are accomplished:

- The W&B program for all approved configurations are reviewed;
- The configurations are in the approved form; and
- OpSpec/MSpec A005, Exemptions and Deviations, and OpSpec E096 reflect any changes relating to the exemption.

6-883 TASK OUTCOMES.

A. Complete the PTRS Record. For part 91K.

B. Complete the Task. Advise the certificate holder that additional surveillance may be necessary to verify correction of discrepancies noted during surveillance.

C. Document the Task. File all supporting paperwork in the certificate holder's office file.

D. Follow SAS Guidance Volume 10, Chapter 5. For part 135 (nine or less).

6-884 FUTURE ACTIVITIES.

A. Schedule a Followup Inspection. For part 91K in the areas of deficiency to determine the effectiveness of the certificate holder's corrective action.

B. Follow SAS Guidance. For part 135 (nine or less) for planning and accomplishing future surveillance.

RESERVED. Paragraphs 6-885 through 6-900.

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CHAPTER 11 OTHER SURVEILLANCE

Section 14 Safety Assurance System: Conducting Records Reviews and Aircraft Inspections Mandated by the Aging Airplane Rules for Parts 121, 129, and 135

6-2486 REPORTING SYSTEM(S). For Title 14 of the Code of Federal Regulations (14 CFR) parts 121, 129, and 135, use Program Tracking and Reporting Subsystem (PTRS) Activity Codes 3634 and 3647.

NOTE: This section is related to Safety Assurance System (SAS) Elements 4.2.1 (AW), Maintenance/Inspection Requirements, and 4.6.2 (AW), Maintenance Special Emphasis Programs, but not reported in SAS.

6-2487 OBJECTIVE. This section provides guidance on conducting aging airplane inspections and records reviews to accomplish the requirements of the Aging Airplane Safety Final Rule and the Aging Aircraft Safety Act of 1991 (the Act). The Act requires the administrator to make inspections and to review the maintenance and other records of certain aircraft to decide whether they are maintained in an Airworthy condition. To accomplish this, the maintenance aviation safety inspector (ASI) will conduct structural spot inspections and aircraft records surveillance, as deemed appropriate. The air carrier, to accomplish the required aircraft records reviews and inspections, may use Designated Airworthiness Representatives (DAR) and/or Organization Designation Authority (ODA).

NOTE: For the purpose of this function, “the Administrator” is defined as ASIs, DARs, ODAs, or other persons so designated to accomplish these inspections.

6-2488 GENERAL.

A. Basic Requirement. The basic requirement is to inspect each aircraft and review its records; however, a sampling of these tasks and records for each airplane along with routine surveillance of a certificate holder’s maintenance program will ensure that each airplane and its age-sensitive components are properly maintained. This guidance is applicable to each airplane operated under part 121 (except those airplanes operated solely within the state of Alaska); part 135 multiengine, in scheduled service (except those airplanes operated solely within the state of Alaska); and U.S.-registered, part 129 multiengine aircraft. Special coordinating instructions for aircraft operated under part 135 on-demand rules can be found in subparagraph 6-2493A. Aircraft and records inspections are reported in PTRS for all 14 CFR parts.

B. General.

1) Records Review. The ASI/DAR/ODA will review/sample the following records for each airplane described in subparagraph A above to ensure confidence that the carrier is maintaining adequate/reliable records:

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a) Total years in service.

b) Total flight hours of the airframe.

c) Total flight cycles of the airframe.

d) Date of last records review and inspection required by part 121, § 121.1105, part 129, § 129.105, and part 135, § 135.422.

e) Current status of life-limited parts of the airframe.

f) Time since last overhaul of all structural components required to be overhauled on a specific time basis.

g) Current inspection status of the airplane, including the time since the last inspection required by the inspection program under which the airplane is maintained.

h) Current status of the following, including method of compliance:

- Airworthiness Directives (AD), and
- Inspections and procedures required by § 121.1109 and § 129.109.

NOTE: The effective date of these rules is December 20, 2010.

i) A list of major structural alterations.

j) A report of major structural repairs and the current inspection status of those repairs.

2) Aircraft Inspections. The intent of the Act will be met by accomplishing structural spot inspections as outlined in Volume 6, Chapter 2, Section 6, Safety Assurance System: Conduct Spot Inspection of a Program Manager/Operator's Aircraft.

3) Federal Aviation Administration (FAA) Inspection Personnel. It is important that ASIs are familiar with the type of aircraft and records system of the air carrier before performing these inspections. ASIs possess various degrees and types of experience. An ASI who needs additional information or guidance should coordinate with personnel experienced in that particular specialty. This can be accomplished through on-the-job (OJT) training provided by the office with responsibility for oversight of the air carrier the ASI will be inspecting.

4) Coordination Requirements.

a) It is essential for certificate-holding district offices (CHDO)/certificate management offices (CMO) to coordinate with the operators and geographic inspectors to ensure that no unnecessary delays are incurred as a result of records reviews and aircraft inspections if inspections are to be accomplished using geographic ASIs.

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b) Geographic inspectors may be needed to assist the CHDO/CMO in performing these inspections/reviews. Coordination is required to transmit all inspection results and/or recommendations to the CHDO/CMO including a list of discrepancies found.

c) The CHDO/CMO will be responsible for notifying the certificate holder that the inspection/review has been completed.

6-2489 INITIAL NOTIFICATION AND PLANNING.

A. Initial Notification.

1) Sixty-Day Notification to the FAA. The rules require that the operators notify the FAA at least 60 days before the airplane and its records will be available for inspection and review. Operators should be encouraged to provide advanced planning schedules of aircraft undergoing heavy maintenance. Principal maintenance inspectors (PMI) should work closely with their operator during this period to address any issues that could delay the records review and inspection or prevent the airplane from returning to service as scheduled.

2) Unforeseen Scheduling Conflict. The rules provide for a 90-day extension to the seven-year interval for repetitive records reviews and aircraft inspections. Should an unforeseen operator scheduling conflict occur, the CHDO/CMO may approve an extension of up to 90 days, provided the operator presents written justification for the scheduling conflict. Electronic, facsimile, or other forms of notification may be accepted. Operators should be encouraged to provide ample time for the CHDO/CMO to respond to the extension request.

NOTE: Extensions may only be approved for the seven-year repetitive inspection intervals. In all cases, the initial compliance threshold to the applicable rule must be met.

NOTE: An extension can only be granted by the CHDO/CMO.

B. Heavy Maintenance Check. The Act states that the records reviews and inspections will be carried out as part of the operator's heavy maintenance check. For the purpose of complying with this statute, a heavy maintenance check is defined as a "C" check or segment thereof, a "D" check or segment thereof, or other scheduled maintenance visits where structural inspections are accomplished.

C. Planning. The records review(s) can be, and usually will be, accomplished separately from the aircraft inspection. This is because many operators perform maintenance in one location while the records may be maintained in a different location. If the records review and aircraft inspection are conducted separately, the operator should provide a summary of any additional records entries at the time of the aircraft inspection, such as ADs accomplished and major repairs accomplished.

D. Records Reviews and Inspections. Records reviews and airplane inspections for parts 121, 129, and 135 scheduled operators will be similar.

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1) Records Review.

a) The operator may provide actual "hardcopies" of the records or summaries of compliance as per its approved recordkeeping program.

b) The ASI/DAR/ODA should plan to sample the records to verify accuracy.

2) Aircraft Inspection.

a) Confirm the aircraft is available. Schedule the inspection when the aircraft has been sufficiently prepared for inspection (i.e., opened/cleaned).

b) The ASI should be familiar with the aircraft type and inspection program the aircraft is maintained under.

c) Based on the records review and the planned maintenance, the ASI/DAR/ODA should select several structural inspection items to sample, if practical. Included in the items selected for sampling should be job task cards that indicate the:

- Task,
- Method of compliance,
- Tooling required, and
- Required signoffs.

3) Air Carrier Notification. The CHDO/CMO must notify the operator that the records reviews and inspections are complete. Because the aircraft records reviews and/or inspections may be accomplished by different inspectors in different geographic locations, coordination of these efforts is essential. Final notification to the operator will be made by the CHDO/CMO.

6-2490 PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. Familiarity with the aircraft type and inspection program the aircraft is maintained under.

B. Coordination. This task requires coordination between ASIs, DARs, and ODAs. It also requires coordination between CHDOs/CMOs and operators/geographic units.

6-2491 REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions). FAA Order 8900.1, Volume 6, Surveillance:

- Chapter 2, Parts 121, 135, and 91 Subpart K Inspections,
  - Section 6, Safety Assurance System: Conduct Spot Inspection of a Program Manager/Operator's Aircraft,
  - Section 35, Safety Assurance System: Inspect Section 135.411(A)(1) Operator's Maintenance Records, and

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- Section 36, Safety Assurance System: Inspect Parts 91K and 121/135 (10 or More) and Part 129 Operator's Maintenance Records; and
- Chapter 4, Part 129 Inspections: Monitor Maintenance Program for U.S.-Registered Aircraft Operated by a Foreign Operator Under Part 129.

B. Forms. None.

C. Job Aids. None.

6-2492 MAINTENANCE RECORDS REVIEW.

A. Receive the Records. The certificate holder will coordinate with the FAA to provide the location and the status of the records required by §§ 121.1105, 129.105, and 135.422. Volume 6, Chapter 2, Sections 6, 35, and 36, and Volume 6, Chapter 4 provide necessary guidance for evaluating the required air carrier maintenance records.

B. Conduct the Review. The ASI/DAR/ODA will review/sample the records identified in subparagraph 6-2488B1).

NOTE: The records review and airplane inspection may be carried out by different ASIs/DARs/ODAs in different locations. This will require coordination between the inspectors to ensure discrepancies, noted in either the records review or the airplane inspection, are investigated to ensure compliance with regulations.

6-2493 AIRCRAFT INSPECTIONS.

A. Plan the Inspection. The ASI will coordinate with the certificate holder as to the scope and extent of the planned inspection. Volume 6, Chapter 2, Section 6 provides necessary guidance for accomplishing structural spot inspections.

1) The ASI/DAR/ODA should select structural inspections, Corrosion Prevention and Control Programs (CPCP) tasks, or major repairs/modifications that are scheduled to be accomplished during this maintenance visit. If possible, supporting documentation for these tasks should be obtained before conducting the planned inspection.

2) While performing these inspections, every effort should be made to avoid interfering with, or inconveniencing, the planned/scheduled maintenance.

B. Observe Maintenance Tasks. Observe maintenance tasks to ensure that:

- Work instructions provide sufficient detail to accomplish the scope of the required maintenance task;
- Required tooling and materials are available and used; and
- Work is accomplished by properly trained and qualified personnel.

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6-2494 TASK OUTCOMES.

A. Complete the PTRS Record. Complete the PTRS record to track the accomplishment of these inspections. Use activity code 3647 for the aircraft inspection and 3634 for the records review. Enter "AGINGRIR" in the "National Use" block of Section I. In Section IV, the "Comment" block, record airplane times, cycles, inspection status, and other required data.

B. Complete the Task. Successful completion of this task will result in the following:

1) The cognizant PMI will be notified of any significant findings.

2) ASIs, designees, or the operator will notify the cognizant PMI electronically or verbally upon completion of the records review or aircraft inspection so that no delay will be incurred in notifying the operator.

3) The PMI will notify the certificate holder of any findings through standard office procedures.

4) The PMI will notify the certificate holder that the records review and inspection have been accomplished for a specific airplane. This will be accomplished via electronic, facsimile, or other accepted forms of notification.

NOTE: Because records reviews and the structural spot inspections may be completed on different dates, therefore the date of notification to the operator of completion of the records and aircraft inspection will be used to determine the due date of the next required inspection.

5) If DAR/ODAs accomplished the records reviews and aircraft inspections, they shall submit a report to the CHDO/CMO indicating the aircraft inspected. This report may be provided directly from the DAR/ODA or from the operator. The information provided must include the following:

- Identification number of the aircraft,
- Total years in service,
- Total flight hours of the airframe, and
- Date of last records review and inspection required by the aging airplane rules.

6-2495 FUTURE ACTIVITIES. ASIs assigned to parts 121, 129, and 135 certificate holders will accomplish structural spot inspections and aircraft records surveillance, as required by the Act.

RESERVED. Paragraphs 6-2496 through 6-2515.

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VOLUME 6 SURVEILLANCE

CHAPTER 11 OTHER SURVEILLANCE

Section 25 Safety Assurance System: Certificate Holder Food and Beverage Service Cart Safety and Serviceability

6-2755 OBJECTIVE. This section provides specific guidance for aviation safety inspectors (ASI), principal maintenance inspectors (PMI), and principal operations inspectors (POI) with reference to a certificate holder's food and beverage service cart programs.

6-2756 GENERAL. Certificate holder's operation, ground servicing, and maintenance programs may not adequately address food and beverage service cart safety and serviceability. Studies have identified food and beverage service carts as the most common source of injury to airline flight attendants (F/A) and a major cause of lost work time. In addition, a sampling by Flight Standards Service (AFS) of carts utilized by Title 14 of the Code of Federal Regulations (14 CFR) part 121 certificate holders revealed a number of deficiencies, such as lack of required load limit placards, inadequate inspection criteria, and the inability of the certificate holder to track the use and inspection and repair activity of the carts. Certificate holder's aircraft use two types of food service carts/units. They are:

- Those that remain onboard the aircraft and are usually only removed during scheduled maintenance checks, sometimes referred to as chiller units; and
- Those that catering personnel roll on and off the aircraft at designated aircraft catering stations multiple times a day.

6-2757 COORDINATION REQUIREMENTS. This task requires coordination between ASIs, the certificate-holding district office (CHDO)/certificate management office (CMO), the International Field Office (IFO)/International Field Unit (IFU), and certificate holders/geographic units.

6-2758 REPORTING SYSTEM. Use the Safety Assurance System (SAS) Automation and the associated Data Collection Tools (DCTs).

6-2759 CERTIFICATE HOLDER GALLEY CART PROGRAMS. A certificate holder's manual must have operations, cabin, ground servicing, and maintenance procedures that ensure the use of serviceable carts on their aircraft. Galley service carts must contain their contents within established limits under all flight and ground loads. As with other aircraft parts and components, certificate holders must maintain approved Technical Standard Order (TSO) food and service beverage carts in a serviceable condition for use on aircraft.

6-2760 PMI/POI ACTION. The PMI/POI must review the certificate holder's manual and ensure that the manual includes procedures that address:

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A. Cart Discrepancies.

1) Verify that procedures require discrepancies to be entered in the appropriate logbook (cabin or aircraft) by the appropriate personnel, and that procedures are consistently followed. They include, but are not limited to, inoperative or ineffective brakes, doors that will not latch, defective door safety latches, casters that do not rotate freely, sharp edges, broken or loose handles, etc.

2) Verify that "Defective Service Cart" tags are available to cabin crew, that procedures are in place to identify and tag service carts with discrepancies, and that unserviceable carts are not to be used.

3) Verify that log entries (cabin or aircraft) are cleared when the cart is removed from the aircraft for service or repairs.

4) Verify that the certificate holder has a process and has procedures that ensure that discrepant carts are received into the certificate holder's receiving inspection/material control system for tracking/traceability purposes.

B. Manual Procedures for Catering Personnel Actions. The certificate holder's manual must have procedures that:

1) Explain how to make catering personnel aware of discrepant carts removed from the aircraft.

2) Explain how to disposition carts at each certificate holder station that provides catering service for the certificate holder.

3) Ensure that a defective cart is not loaded on to the aircraft.

C. Cart Maintenance Program. The certificate holder's maintenance program must provide for the inspection, repair, and return to service of galley service carts and ensure that:

1) Discrepant carts are received into the certificate holder's receiving and inspection/material control system and tracked during inspection, repair, and return to service.

2) The certificate holder's quality control (QC) and quality assurance (QA) functions adequately monitor all phases of cart inspection, repair, and return to service, including quality audits.

3) The certificate holder's designee inspects and repairs all carts in accordance with the manufacturer's service instructions, which may be in the form of an equipment manual or other methods, techniques, or practices acceptable to the Federal Aviation Administration (FAA).

4) The certificate holder's designee installs the appropriate serviceable tag.

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NOTE: As a TSO item, an appropriately qualified person must return galley carts to service.

D. Principal Inspector (PI) Surveillance Activities. PMIs and POIs must include cart inspections in their work programs. This must encompass aircraft equipment during ramp inspections, cabin en route inspections, repair facility inspections, and other required inspections using the associated DCTs in SAS.

6-2761 TASK OUTCOMES.

A. Utilization. Part 121 and 14 CFR part 135 ASIs will use associated DCTs in SAS automation to document surveillance activities, per SAS guidance in Volume 10.

B. Compliance. Part 121/135 PIs will:

1) Ensure that the certificate holder's procedures are consistent with the guidance and that the certificate holder continues to comply with food and beverage cart procedures in their manual.

2) Plan and accomplish surveillance activities, per SAS guidance in Volume 10.

6-2762 FUTURE ACTIVITIES. Follow SAS guidance in Volume 10 to plan future surveillance.

RESERVED. Paragraphs 6-2763 through 6-2776.

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VOLUME 13 FLIGHT STANDARDS DESIGNEES

CHAPTER 2 AIRCREW DESIGNATED EXAMINER PROGRAM

Section 3 Safety Assurance System: Aircrew Program Designees and Designated Flight Engineers in an Aircrew Designated Examiner Program

13-106 GENERAL. This section contains information and guidance to be used by certificate managers, principal operations inspectors (POI) and inspectors concerning aircrew program designees (APD) and designated flight engineer examiner (DFEE) responsibilities, and the selection, training, supervision, and administrative control of APDs/DFEEs in an Aircrew Designated Examiner (ADE) program. This section is related to Safety Assurance System (SAS) Element 2.1.5 (OP), Appropriate Airmen/Crewmember Checks and Qualifications.

13-107 PRIVILEGES OF ADEs/DFEEs. All certification conducted by an APD/DFEE must be limited to the privileges of the APD/DFEE's airman certificate, the APD/DFEE's Certificate of Authority (COA), the APD/DFEE's letter of authority (LOA), one certificate type (pilot or Flight Engineer (FE)), and one aircraft type.

A. Privileges. An APD is authorized to perform airman certification in one type of aircraft for an operator's pilots who have been trained under the operator's Federal Aviation Administration (FAA)-approved training program. A DFEE in an ADE program is authorized to perform airman certification for an operator's FE candidates who have been trained under the operator's FAA-approved training program.

B. Limitations.

1) Evaluation of any applicant by an APD/DFEE when the examiner has instructed that student or when the examiner has recommended the applicant, is not recommended and must be approved by the POI or aircrew program manager (APM) on a case-by-case basis.

2) APDs/DFEEs may not conduct FAA knowledge tests, special medical evaluations, tests for waivers, or any test for competency under Title 49 of the United States Code (49 U.S.C.) § 44709 (formerly Section 609a of the Federal Aviation Act of 1958 (FA Act)). Applicants for such tests must be referred to the APM or the local district office, Flight Standards District Office (FSDO)/certificate management office (CMO).

C. Designation as an Examiner Outside of an ADE Program. An individual's designation as an APD/DFEE does not prevent the individual from obtaining a designation as an examiner in another program or capacity. When an APD/DFEE holds a designation, the privileges and limitations that may be exercised outside of the ADE program must be specified on the COA and LOA. The privileges and limitations listed on the COA issued outside an ADE program do not apply to the ADE program.

13-108 SELECTION OF AN APD/DFEE.

A. Eligibility Requirements. The following apply to the selection of APD and DFEE candidates:

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1) Must be employed by the operator either full-time, part-time, or under contract to the operator.

2) Must possess the appropriate airman certificate, class rating, and type rating, if applicable.

3) Must be an FAA-approved proficiency check pilot or check FE, as applicable, for the operator for the aircraft in which the APD/DFEE candidate is to perform examiner duties. To perform examiner duties in an aircraft in flight, APD candidates must also be an FAA-approved line check pilot—all seats and proficiency check pilot—aircraft for the operator for that aircraft.

4) Should have served as a check pilot or check FE for a minimum of 1 year (APD candidates—preferably 6 months as a proficiency check pilot) before designation as an APD/DFEE. (Check pilot/check FE experience in other types of aircraft and in service with other operators may be credited. Crediting of past experience, including length of time and type of check pilot/check FE, is at the discretion of the POI and APM.)

5) Must possess an above-average level of knowledge, ability, and experience.

6) Must have a good record of compliance with Title 14 of the Code of Federal Regulations (14 CFR) (isolated and unrelated violations or incidents are not disqualifying).

B. Evaluation of Qualifications. The APD/DFEE candidate must submit a complete statement of professional qualifications on FAA Form 8710-6, Examiner Designation and Qualification Record. The APM must review the qualifications to determine whether the candidate meets the requirements and standards for an APD/DFEE designation. If the candidate is eligible, the APM may recommend to the POI that the candidate be designated as an APD/DFEE. An APD/DFEE selection must be agreed upon by the APM, the POI, and the operator.

13-109 APD TRAINING AND EVALUATION. The APM must train and evaluate the prospective APD/DFEE on APD/DFEE duties and responsibilities as follows:

A. Training. Inspectors should ensure that the APD/DFEE is trained and evaluated in at least the following areas:

- The knowledge, ability, and skill requirements for the original issuance of the airline transport pilot (ATP) certificate and added ratings, as applicable (FE certificate and added rating for DFEE candidates);
- The procedures, methods, and techniques associated with administering the required certification tests;
- The responsibilities, authority, and limitations of an examiner under 14 CFR;
- The use of FAA forms and job aids associated with the particular APD/DFEE function; and
- The administrative procedures and supervisory relationships that exist in an ADE program.

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NOTE: The POI and the APMs must stress to examiner candidates that in performing their duties as an APD/DFEE, they are representatives of the Administrator and responsible to the Administrator. Prospective APDs/DFEEs must understand that company politics, economics, union loyalties, and seniority issues are not relevant when certificating airmen.

B. Evaluation. After formal training, an APD/DFEE candidate must observe the APM in conducting a complete oral test, flight test, the necessary briefings, and the completion of the certification paperwork. The APM must then observe and evaluate the APD/DFEE candidate in conducting at least one complete oral test and complete flight test, including the necessary briefings and certification paperwork for the certificate or added rating involved.

13-110 SUPERVISION AND ADMINISTRATIVE CONTROL OF APDs/DFEEs. The APM assigned to a particular aircraft type is responsible for the supervision of APDs and DFEEs who conduct airman certification activities for that aircraft type. Inspectors should evaluate the supervisory and administrative process, taking into account the following:

A. Working Relationships. An APM observes and counsels APDs and DFEEs. An APM should emphasize to APDs and DFEEs appropriate methods for handling applicants, maintaining desired test standards, and completing and processing certification and Program Tracking and Reporting Subsystem (PTRS) paperwork. An APM should endeavor to maintain a working relationship with each APD and DFEE which promotes the examiner's confidence in the performance of their duties and in their interactions with their assigned APM. An APM must conduct regular meetings with the program's APDs and DFEEs for the purpose of maintaining these effective working relationships. During the APD/DFEE meetings, a close and continuing dialogue for the clarification of problem areas should be developed. Special meetings should be held when there is any change to FAA airman certification requirements, policies, or procedures affecting the particular APD/DFEE or the program in general. An APM should attend crewmember safety and standardization meetings held by the operator.

B. APD/DFEE Supplies and Materials. An APM must ensure that APDs and DFEEs have continuing access to the following materials, including current amendments and additional supplies, as needed:

- Order 8900.1, Volumes 5 and 13.
- All appropriate job aids.
- FAA Form 8710-1, Airman Certificate and/or Rating Application (Pilot).
- FAA Form 8400-3, Application for an Airman Certificate and/or Rating (FE).
- FAA Form 8060-4, Temporary Airman Certificate.
- FAA Form 8060-5, Notice of Disapproval of Application.
- FAA Form 8000-36, Program Tracking and Reporting Subsystem (PTRS) Data Sheet, which may be overprinted to facilitate standardization of data entered into the system.

13-111 CERTIFICATE-HOLDING DISTRICT OFFICE (CHDO) APD/DFEE ADMINISTRATIVE FILES. The CHDO will maintain a file on each APD/DFEE. Inspectors must ensure that the CHDO file contains the following documents for each APD/DFEE:

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- FAA Form 8710-6, Examiner Designation and Qualification Record, for original issuance and each renewal.
- FAA Form 8430-9, Certificate of Authority, for original issuance and each renewal.
- LOA for original issuance and each renewal, change of authority, and change of limitations.
- FAA Form 8000-5, Certificate of Designation.
- Any pertinent correspondence.

13-112 PROCESSING INITIAL APD/DFEE DESIGNATIONS.

A. APM Responsibilities. When processing an initial APD/DFEE designation, the APM must ensure that all requirements for designation have been met. The APM must prepare all of the necessary additional paperwork. The APM must complete the back of FAA Form 8710-6 and sign the space labeled "Inspector's Signature." The APM must enter the words "Aircrew Program Designee" or "Designated Flight Engineer Examiner" and the aircraft type in the space labeled "Type of Designation" under the "Regional Office Action" block. The APM must record the APD/DFEE designation number under the space labeled "Certificate of Authority Issued" in the space titled "No." The expiration date is the last day of the month that is 1 year from the date of designation. The "DO to Serve Under" space should be left blank by the APM.

B. POI Approval. The POI, or an inspector authorized to act for the POI, must indicate approval by completing the first line of the block labeled "District Regional Office Action" on FAA Form 8710-6 and then sign in the appropriate space. POIs, or authorized inspectors, must also sign FAA Form 8000-5, FAA Form 8430-9, and the LOA. The originals of these forms must be issued to the APD/DFEE, and copies must be retained in the APD/DFEE's file in the CHDO.

C. APD Designation Numbers (Examiner Designation Numbers). For APDs and DFEEs, the airman's certificate number coupled with the applicable four-character designator for the operator may be used in all instances when an Examiner Designation Number may be called for (e.g., 123456789DALA for an APD/DFEE at Delta Airlines). The four-character suffix will allow for differentiation between programs when there is more than one ADE program within a CHDO.

13-113 RENEWAL OF APD DESIGNATIONS. APD/DFEE designations must be renewed every 12 calendar-months as follows:

A. Renewal Date. The renewal date is 1 month prior to the expiration date. An APD/DFEE may not conduct certification tests after the expiration date.

B. Renewal Application. See Volume 13, Chapter 1, Section 2, paragraph 13-37 for renewal procedures. In order to renew a designation, an APD/DFEE must submit the following documentation to the APM:

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- The expiring FAA Form 8430-9;
- A newly completed FAA Form 8710-6; and
- Evidence of having attended, during the past 12 calendar-months, at least one APD/DFEE safety meeting or a briefing conducted by the APM (such as a notation on the back of the FAA Form 8430-9, signed by the APM).

C. Annual Observation. At least once within the year preceding an APD/DFEE's renewal, the examiner must be observed conducting a complete certification. The observation is made by the APM or by another appropriately rated inspector designated by the APM or POI. Preferably, this observation should take place within the 120-day period before the current designation expires (PTRS code 1672). To complete the observation, the APD/DFEE must conduct at least one oral examination and one complete flight evaluation. When an examiner designation is renewed, the day and month will normally remain the same, and only the year will be changed.

NOTE: If it is acceptable in an operator's approved training program for the entire proficiency or flight check to be accomplished in a full flight simulator (FFS), then the APM is not required to observe the APD/DFEE in the aircraft for a renewal.

D. APM and POI Responsibility. Before renewing an APD/DFEE designation, the APM and POI must determine whether the APD/DFEE's services have been satisfactory, whether the APD/DFEE's level of activity warrants a redesignation, and whether the APD/DFEE's services continue to be needed. The examiner's level of activity may be determined from the PTRS.

E. Processing a Renewal. The administrative steps for renewal are the same as those outlined for original designation (see paragraph 13-112).

13-114 AMENDMENT OF APD/DFEE DESIGNATIONS. An APD/DFEE may be issued only one FAA Form 8430-9. An APD/DFEE's examining authority should normally be cancelled when the APD/DFEE enters transition training on a new aircraft type. The POI may designate a former APD/DFEE, provided the following actions have been completed:

A. Pilot in Command (PIC)/FE Training. The APD/DFEE must have completed the operator's approved PIC or FE ground and flight training for the new aircraft. The APM must determine whether the designee has accumulated sufficient experience on the new aircraft to accumulate an above-average level of knowledge of its systems and operations.

B. Check Pilot/Check FE Training. An APD must have completed the operator's check pilot training and be approved as a proficiency check pilot for the new aircraft. A DFEE must have completed the operator's check FE training and be approved as a check FE for the new aircraft.

C. Interview and Review. The APM for the new aircraft must hold an interview with the APD/DFEE to establish an appropriate working relationship and review the administrative processing (paperwork/documentation) procedures for certification activities.

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D. Oral Examination/Flight Evaluation. The APM for the new aircraft must observe the APD/DFEE conducting at least one complete oral examination and complete flight evaluation, as appropriate to the certificate or type rating involved, on the new aircraft type.

E. Issuance of New Designation. The administrative steps for the issuance of the new designation are the same as those outlined for initial designation (see paragraph 13-112).

13-115 PROCESSING APD/DFEE CERTIFICATION PAPERWORK. An APD/DFEE must forward the airman certification paperwork to the CHDO for review, processing, and transmittal to the Airmen Certification Branch (AFS-760). The paperwork must be accepted and processed only by the CHDO and not by any other district office. Use of the Integrated Airmen Certification and/or Rating Application (IACRA) program for processing applications is highly encouraged.

A. APD/DFEE Responsibilities. An APD/DFEE must complete the airman certification paperwork in accordance with the requirements of Volume 5, Chapters 1, 3, and 4, as applicable. An APD/DFEE will complete the PTRS data sheet for each evaluation function conducted. An APD/DFEE is responsible for the accurate, complete, and timely submission of certification paperwork. Satisfactory fulfillment of this responsibility is a condition for continued designation as an APD/DFEE.

B. APM Responsibilities. An APM is responsible for training each APD/DFEE in correct documentation procedures.

13-116 REVIEW OF APD/DFEE's DECISION. If an airman is dissatisfied with an APD/DFEE's decision, the airman may appeal to an APM for a reevaluation. The airman must submit the appeal in writing and indicate the reasons for protesting the APD/DFEE's decision. The APM must review the matter and decide if reevaluation is warranted. If a reevaluation is granted, a new application must be completed, and the entire evaluation must be reaccomplished by an FAA inspector.

13-117 TERMINATION OF APD/DFEE DESIGNATIONS. An APD/DFEE designation may be terminated or canceled for cause by the POI at any time. See Volume 13, Chapter 1, Section 2 for applicable procedures.

RESERVED. Paragraphs 13-118 through 13-135.

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