CHANGE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

8300.10 CHG 21

2/23/05

SUBJ: AIRWORTHINESS INSPECTOR'S HANDBOOK

1. PURPOSE. This Change transmits new and revised portions of the handbook.

2. DISTRIBUTION. This Change is distributed to all addresses on special distribution list ZFS-830. An electronic message will be disseminated to Flight Standards employees (largely the airworthiness aviation safety inspectors, whom this change affects) to indicate when this Change is electronically published, which chapters are affected, and which bulletins are incorporated and will provide the Universal Resource Locator: <http://www.faa.gov/avr/afs/faa/8300/>. This Change will be electronically published on the appropriate FAA Internet site.

3. EXPLANATION OF CHANGES. This Change to the 8300.10 handbook uses change bars to indicate new and revised material. Significant areas of new direction, guidance, and policy included in this Change are as indicated. The chapters listed below were coordinated as CHG 04A and CHG 04B.

a. Five new chapters:

(1) Volume 2, Chapter 7, Minimum Equipment Lists and Configuration Deviation Lists. This chapter incorporates HBAW 98-09, Air Carrier Manual Instructions Concerning Minimum Equipment List Conditions and Limitations, published 4/28/98; and also cancels Volume 2, Chapter 37, Approve FAR Section 91.30 Minimum Equipment List/Revision; and Chapter 109, Approve FAR Part 125 Minimum Equipment List/Revision.

(2) Volume 2, Chapter 8, Certificate Repariman for Light-Sport Aircraft. This chapter cancels bulletin HBAW 04-08, Introduction to Chapters LSA and LSR: Certificate Repairman for Light-Sport Aircraft and surveillance of Light-Sport Repairman Training Facilities, published 10/1/04.

(3) Volume 3, Chapter 20, Surveillance of Light-Sport Repairman Training Facilities. This chapter cancels bulletin HBAW 04-08.

(4) Volume 3, Chapter 131, Inspect Operator's Maintenance Facility.

(5) Volume 3, Chapter 133, Evaluate/Inspect Part 121/129/135 and 125 Operator's Outsource Maintenance Organization Facility. This chapter cancels Volume 2, Chapter 221, Conduct Evaluation of Operator/ Applicant's Maintenance Facility.

b. Chapters rewritten:

(1) Volume 2, Chapter 3, Maintenance/Inspection Programs for Low Approach Landing Minimums.

(2) Volume 2, Chapter 84, Part 121/125/135 Operations Specifications. This chapter cancels HBAW 04-07A, Part 121/125/135 Operation Specification, published 9/16/04; and HBAW 00-12, New Guidance for Operations Specifications (OpSpecs) Paragraph D071, Additional Maintenance Requirements, published 8/22/00.

(3) Volume 4, Chapter 6, Aviation Safety Action Program. This chapter incorporates FSAW 02-04, Acceptance Procedures for Revisions to Aviation Safety Action Program (ASAP) Memoranda of Understanding (MOU) that Incorporate Updates to FAA Policy, published 4/14/02.

c. Chapters revised or include editorial changes:

(1) Volume 1, Chapter 1, General Information, is revised.

(2) Volume 2, Chapter 1, Perform Field Approval of Major Repairs and Major Alterations, editorial.

(3) Volume 2, Chapter 24, Certificate Repairman/Added Privileges, editorial.

(4) Volume 2, Chapter 105, Evaluate Part 125 Airplane Inspection Program and Maintenance, incorporates additional information from FSAW 97-18, Manufacturers' Service Documents, this bulletin was canceled 3/4/04.

(5) Volume 2, Chapter 126, Evaluate/Approve Maintenance Program and a Minimum Equipment List for U.S.-Registered Aircraft Under Part 129, is revised.

(6) Volume 2, Chapter 162, Procedures For Certificating Part 145 Repair Stations/Satellites Located Within the United States and its Territories, editorial.

(7) Volume 4, Chapter 5, Access to Public and Private Airports, Landing Strips, and Other Areas used for Operation of Aircraft, editorial.

4. DISPOSITION OF TRANSMITTAL. Retain and file this transmittal in the back of this handbook until it is superseded by a revision to this order.

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CHAPTER 1. GENERAL INFORMATION

SECTION 1. GENERAL

1. PURPOSE. This handbook provides guidance for Airworthiness aviation safety inspectors (ASI) responsible for the following:

A. Certification, technical administration, and surveillance of individuals, facilities, and organizations in accordance with (IAW) Title 14 of the Code of Federal Regulations (14 CFR) parts 65, 91, 121, 125, 129, 133, 135, 137, 141, 145, 147, 149, and 183.

B. The investigation and/or response to aircraft accidents and incidents, accident prevention activities, enforcement activities, and miscellaneous tasks not related to specific regulations.

3. DISTRIBUTION. This order is distributed to addresses on special distribution list ZFS-830.

5. DEFINITIONS. The following definitions are from 14 CFR part 1, § 1.1 or other appropriate sources.

A. Aircraft. A device that is used or intended to be used for flight in the air.

B. Aircraft Engine. An engine that is used or intended to be used for propelling aircraft. It includes turbo-superchargers, appurtenances, and accessories necessary for its functioning, but does not include propellers.

C. Airworthy. Two conditions must be met before an aircraft can be considered "airworthy":

- The aircraft must conform to its type certificate (TC); that is, when the aircraft configuration and the components installed are consistent with the drawing, specifications, and other data that are part of the TC, and include any supplemental TC and field-approved alterations incorporated into the aircraft.
- The aircraft must be in condition for safe operation; this refers to the condition of the aircraft relative to wear and deterioration.

D. Appliance. Any instrument, mechanism, equipment, part, apparatus, appurtenance, or accessory, including communications equipment, that is used or intended to be used in operating or controlling an aircraft in flight, is installed in or attached to the aircraft, and is not part of an airframe, engine, or propeller.

E. Applicable. Capable or suitable for being applied.

F. Appropriate. Especially suitable or compatible; fitting.

G. Available. Accessible, obtainable.

H. Current. The term "current," as it relates to the Airplane Flight Manual (AFM) and Rotorcraft Flight Manual (RFM), has two meanings, depending on whether one is referring to aircraft certification or to ongoing operations conducted under part 91, 121, 125, or 135. In an October 8, 1998 legal interpretation from the Assistant Chief Counsel, Regulations Division, AGC-200, the term current is defined as follows:

(1) Certification Rules, Part 21. The definition of current, as it pertains to aircraft certification and as used in the phrase "current approved Airplane or Rotorcraft Flight Manual" in part 21, § 21.5(a), means belonging to the present time. Once the "current" AFM or RFM is made available to the owner at the time of delivery of the aircraft, the obligation under § 21.5 is met, fulfilled, and complete.

(2) Operating Rules, Parts 91, 121, 125, and 135. The definition of current, as it pertains to operations under these parts and as used in the phrase "current approved flight manual" in part 121, § 121.141(a), has been interpreted by the Office of the Chief Counsel (AGC) differently from the interpretation of current for aircraft certification procedures. In contrast to § 21.5(a), AGC has determined that the word current in § 121.141(a) is ongoing and those persons certified to operate under

part 121 have an ongoing obligation to keep a current approved AFM.

I. Data. The drawings and specifications necessary to define the configuration and design features of the repair or alteration. These drawings and specifications include information on weight, balance, operating limitations, flight characteristics, dimensions, materials, and processes that are necessary to define the structural strength of the repair or alteration.

J. Directive Information. Information that is regulatory in nature and uses terms such as "shall" and "must." These terms mean that the actions are MANDATORY. "Shall not" or "must not" means that the actions are PROHIBITED. The use of these terms allows the ASI no flexibility and means their direction must be followed, unless otherwise authorized by headquarters division managers.

K. Field Approval. One of the means used by the FAA to approve technical data used to make a major repair or major alteration. It is an approval by the Administrator, through an authorized Airworthiness ASI, of technical data used to make a major repair or major alteration. Technical data, so approved, becomes "technical data approved by the Administrator." This type of approval may be accomplished in one of the following two ways:

(1) Examination of technical data for use on only one aircraft; or

(2) Examination of technical data by physical inspection, demonstration, testing, etc., for use on only one aircraft.

L. Guidance Information. Information that is advisory in nature and contains terms such as "should" or "may." These terms indicate actions that are desirable, permissible, or not mandatory, and allow flexibility on the part of the ASI.

M. Handbook. The handbook is a directive designed to provide essential overall instructions, guidance, and requirements for operations, airworthiness, and manufacturing field personnel to accomplish their job functions.

N. Major Alteration. An alteration not listed in the aircraft, aircraft engine, or propeller specifications, that:

(1) Might appreciably affect weight, balance, structural strength, performance, powerplant operation, flight characteristics, or other qualities affecting airworthiness; or

(2) Is not done according to accepted practices or cannot be done by elementary operations.

O. Major Repair. A repair that fits one or more of the following:

(1) Might appreciably affect airworthiness by changing weight, balance, structural strength, performance, powerplant operation, or flight characteristics if improperly done; or

(2) Is not done according to accepted practices or cannot be done by elementary operations.

P. Minor Alteration. Any alteration that is not classified as a major alteration.

Q. Minor Repair. Any repair that is not classified as a major repair.

R. Propeller. A device for propelling an aircraft that has blades on an engine-driven shaft which, when rotated, produces by its action on the air, a thrust approximately perpendicular to its plane of rotation. It includes control components normally supplied by its manufacturer, but does not include main and auxilary rotors or rotating airfoils of engines.

S. Substantiating. To support and verify with proof or evidence. To give material form. To make firm or solid. To give substance or reality.

SECTION 2. HANDBOOK BACKGROUND INFORMATION

1. HANDBOOK FORMAT AND USE. This handbook has been designed to serve as a multipurpose document that will meet the needs of newly-hired ASIs as well as experienced principal inspectors (PI). Information currently found in many separate documents has been compiled to make the handbook as comprehensive as possible. The general layout of the handbook is as follows:

- Volume 1 contains generic and general information that an ASI should know before performing the job tasks in Volumes 2 and 3
- Volume 2 (certification) and Volume 3 (surveillance) contain all of the job tasks accomplished by Airworthiness ASIs
- Volume 4 contains reference material and additional guidance in areas that are not a specific job task

A. Task Chapters. Each chapter in Volumes 2 and 3 represents a separate task that can be accomplished by an ASI. Tasks were initially identified from the 1985 Job Task Analysis (JTA) and are revised as ASI/PI responsibilities, regulations, and the safety needs of the aviation community change. Except for introductory chapters, each chapter is divided into two sections, Background and Procedures.

(1) Section 1, Background. This section explains why the task is done, includes any historical considerations, and provides current FAA policy. Section 1 will usually consist of the following format:

(a) Paragraph 1, "Program Tracking and Reporting Subsystem (PTRS) Activity Codes." This paragraph will always give the PTRS codes (when applicable) for that task for each involved Airworthiness specialty.

(b) Paragraph 3, "Objective." This paragraph will state the general objective of that particular task. This can include the specific 14 CFR part(s) that the chapter applies to, the specific regulatory basis for the chapter, and a brief explanation of the ASI's role.

NOTE: If any particular task has definitions of terms not found in other sections of the regulations, the definitions will be included in Paragraph 5, "Definitions."

(2) Section 2, Procedures. Section 2 will usually consist of the following format:

(a) Paragraph 1, "Prerequisites and Coordination Requirements." This paragraph is broken down into two subparagraphs and will consist of the following information:

i. Subparagraph A, "Prerequisites," gives the specific 14 CFR knowledge, course requirements, inspector authorizations, and familiarity requirements necessary for performing the task.

ii. Subparagraph B, "Coordination Requirements," gives a list of the people, organizations, specialties, agencies, etc., that might require coordination with the ASI performing the task.

(b) Paragraph 3, "References, Forms, and Job Aids." This paragraph is broken down into three subparagraphs and will consist of the following information:

i. Subparagraph A, "References," gives a list of materials that will assist the ASI in performing that chapter's task. This can include additional 14 CFR parts to those listed in "Prerequisites," other CFR parts, Advisory Circulars, operators' manuals, manufacturers' manuals, Air Transportation Oversight System (ATOS) elements, and so forth.

ii. Subparagraph B, "Forms," gives a list of the specific FAA/DOT forms that the ASI will need to perform the task.

iii. Subparagraph C, "Job Aids," can include a list of the figures that are provided at the end of the chapter. These figures can include a list of guidelines, examples of official forms, or can be an unofficial form that can be copied and used to fill a need not covered by an official form. An example is the five-day grounding job aid found in vol. 3, ch. 6.

(c) Paragraph 5, "Procedures." This paragraph contains the step-by-step outline of how to perform the task. All steps in the task are included; however, some steps may refer the ASI to another task/chapter. When that occurs, the

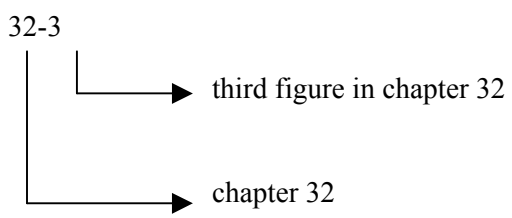
referenced task must be performed before resuming the procedures in the original task. Performance criteria are either included with the step or the location of the objective criteria is identified (practical test standards, 14 CFR section, etc.).

(d) Paragraph 7, "Task Outcomes." This paragraph contains the final steps of the job task and tells what the end result of the task should be.

(e) Paragraph 9, "Future Activities." This paragraph lists any follow-up activities that should be accomplished as a result of the task just performed.

B. Paragraph Numbering. Paragraphs are numbered consecutively starting at number 1 in each section of each chapter of each volume. Only odd numbers are used; 1, 3, 5, and so on, to enable greater ease of revision. For example, new information in future updates can be included as paragraphs 2, 4, or 6.

C. Figure and Table Numbering. The numbering of figures and tables enables the ASI to note the chapter to which the figure or table refers. For example, Figure 32-3 is interpreted as follows:



D. Chapter Pagination. The pagination of each chapter is designed to simplify the addition of revisions, the replacement of lost or misplaced pages, and the location of subject areas.

(1) Each chapter begins with page 1 and is identified with the chapter number; i.e., 131-1 is chapter 131, page 1.

(2) On each page the top margin (header) contains the handbook number and the date the page was issued; position (either right or left) is reversed on odd and even pages. The bottom margin (footer) contains the volume number and the page number of the chapter (again, reversed on odd and even pages). For example:

FIGURE 1-1. ODD PAGE HEADERS/FOOTERS

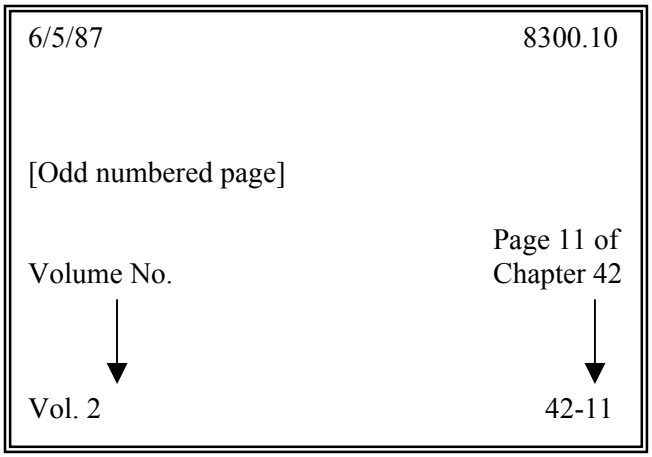
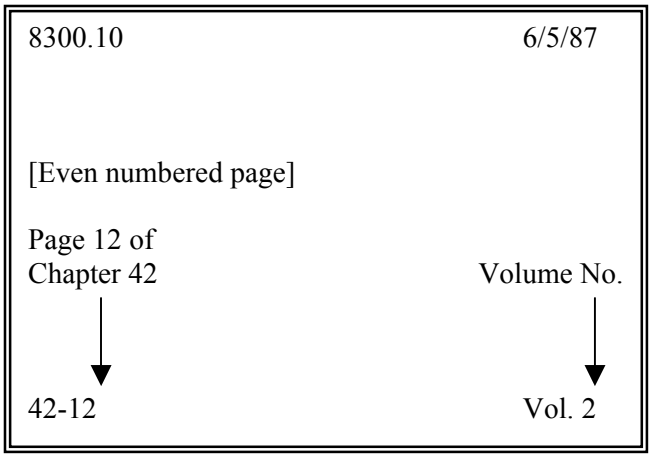


FIGURE 1-2. EVEN PAGE HEADERS/FOOTERS



E. Reserved Pages, Chapters, and Paragraphs. For the purposes of this handbook, reserved pages, chapters, and paragraphs are present to preserve the sequence of codification and allow for revisions without renumbering the succeeding portions.

F. Appendixes. There are four main appendixes to the handbook.

(1) Appendix 1, Acronyms and Abbreviations, contains commonly-used acronyms and abbreviations in Order 8300.10.

(2) Appendix 2, Inspector Feedback, outlines the procedures for recommending a change and/or correction to the information in the handbook. An inspector feedback sheet is provided for this purpose.

(3) Appendix 3, Airworthiness Handbook Bulletins (HBAWs), shows the Web site address where all current handbook bulletins are located.

(4) Appendix 4, Airworthiness Information Bulletins (FSAWs), shows the Web site address where all current information bulletins are located.

3. AUTHORITY TO CHANGE THIS DOCUMENT. The Flight Standards Service is responsible for all changes to this FAA order and its appendixes. This order will be kept current by issuing changes as the need occurs. Regional supplements to this order are prohibited. Recommendations for changes or corrections should be submitted to the Aircraft Maintenance Division, AFS-300, in accordance with the procedures outlined in Appendix 2.

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CHAPTER 1. PERFORM FIELD APPROVAL OF MAJOR REPAIRS AND MAJOR ALTERATIONS

SECTION 1. BACKGROUND

1. PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

A. Maintenance: 3414, 3416, 3446

B. Avionics: 5414, 5416, 5446

3. OBJECTIVE. This chapter provides guidance in determining the category of a repair or alteration and ensuring that the aircraft, engine, or accessory can be returned to service in accordance with (IAW) the field approval process, regardless of the rules under which the aircraft is operated.

5. GENERAL.

A. Definitions.

(1) Acceptable Data. The drawings and specifications necessary to define the configuration and design features of the repair or alteration. These drawings and specifications include information on weight, balance, operating limitations, flight characteristics, dimensions, materials, and processes that are necessary to define the repair or alteration. The following are examples of acceptable data and may be used as a basis for developing approved data to substantiate repairs or alterations:

(a) Manufacturer's manuals are acceptable data that may be used as a basis for developing approved data for major alterations.

(b) Federal Aviation Administration (FAA) Form 337, Major Repair and Alteration, when the specified data has been previously approved as a one-time alteration or repair, is acceptable data that may be used as a basis for developing approved data for subsequent alterations.

(c) If it is not FAA-approved, data contained in a Structural Repair Manual (SRM); Advisory Circular (AC) 43.13-2, Acceptable Methods, Techniques, and Practices—Aircraft Alterations, as revised; and AC 43.13-1B, Acceptable Methods, Techniques, and Practices—Aircraft Inspection and Repair, as revised, are acceptable. (The Original Equipment Manufacturer (OEM) SRM is a preferred manual even though the SRM is not FAA-approved.)

(2) Alter. To change or modify.

(3) Approval for Return to Service. The approval given by an appropriately rated person that enables an aircraft to be returned to service.

(4) Approved Data. Substantiating and descriptive technical data, used to make a major repair or alteration, that is approved by the Administrator. The following list, although not all-inclusive, contains sources of approved data:

(a) Type Certificate Data Sheets (TCDS).

(b) Supplemental Type Certificate (STC) data, provided it specifically applies to the item being repaired/altered. Such data may be used in whole or part as included within the design data associated with the STC.

(c) Appliance manufacturer's manuals or instructions, unless specifically not approved by the Administrator, are approved for major repairs.

(d) Airworthiness Directives (AD).

(e) FAA Form 337, which has been used to approve multiple identical aircraft (only by the original modifier).

NOTE: Aviation safety inspectors (ASI) no longer approve data for use on multiple aircraft.

(f) U.S. Civil Airworthiness Authority (CAA) Form 337, dated before October 1, 1955.

(g) FAA-approved portions of SRMs.

(h) Designated Engineering Representative (DER)-approved data, only when approval is authorized under his/her specific delegation.

(i) Designated Alteration Station (DAS) FAA-approved data, when the major alteration is performed specific to the authorization granted.

(j) Data in the form of an Appliance Type Approval issued by the Minister of Transport Canada for those parts or appliances for which there is no current Technical Standard Order (TSO) available. The installation manual provided with the appliance includes the Transport Canada certificate (see paragraph 13) as well as the date of issuance and an environmental qualification statement.

(k) Foreign bulletins, for use on U.S.-certificated foreign aircraft, when approved by the foreign authority.

(l) Data describing an article or appliance used in an alteration which is FAA-approved under a TSO. As such, the conditions and tests required for TSO approval of an article are minimum performance standards. The article may be installed only if further evaluation by the operator (applicant) documents an acceptable installation which may be approved by the Administrator.

(m) Data describing a part or appliance used in an alteration which is FAA-approved under a Parts Manufacturer Approval (PMA). (An STC may be required to obtain a PMA as a means of assessing airworthiness and/or performance of the part.)

NOTE: Installation eligibility for subsequent installation or reinstallation of such part or appliance in a Type Certificated (TC) aircraft, other than the aircraft for which airworthiness was originally demonstrated, is acceptable, provided the part or appliance meets its performance requirements and is environmentally and operationally compatible for installation. The operator/applicant must provide evidence of previously approved installation by TC, STC, or field approval on FAA Form 337 that will serve as a basis for "follow-on" field approval.

(n) Any FAA-approved Service Bulletins (SB) and letters or similar documents, including DER approvals.

(o) Foreign bulletins as applied to use on a U.S.-certificated product made by a foreign manufacturer located within a country with whom a Bilateral Agreement (BA) is in place and by letter of specific authorization issued by the foreign civil air authority.

(p) Other data approved by the Administrator.

(q) AC 43.13-1, as revised, for FAA-approved major repairs on non-pressurized areas of aircraft only when the user determines that it is:

- Appropriate to the product being repaired
- Directly applicable to the repair being made
- Not contrary to the airframe, engine, propeller, product, or appliance manufacturer's data

(5) Field Approval. One of the means used by the FAA to approve technical data used to accomplish a major repair or major alteration. It is an approval by the Administrator, through an authorized ASI (airworthiness), of technical data and/or installations used to accomplish a major repair or major alteration. Technical data so approved becomes "technical data approved by the Administrator." This type of approval may be accomplished for one-time approval.

(6) Follow-On Approval. Approval of equipment of the same make and model on an aircraft using data from the initial approval. The make and model of the aircraft may be different if the installation is similar.

(7) Initial Approval. The first approval of equipment of a given make and model.

(8) Major/Minor Repair/Alterations. See Title 14 of the Code of Federal Regulations (14 CFR) part 1 and part 43, appendix A.

(9) Major/Minor Type Design Changes. See 14 CFR part 21, §§ 21.93 and 21.113.

(10) Meet the Minimum Standards Established in a TSO. Means that the equipment need not have TSO approval, but only meet requirements set by the TSO.

(11) Return to Service. The action of making an aircraft operational, after an appropriately rated person grants approval.

(12) Substantiating. To support and verify with proof or evidence.

NOTE: For other definitions, see FAA Order 8300.10, Airworthiness Inspector's Handbook, vol. 1, ch. 1, General Information.

B. ASI Qualifications and Responsibilities. The ASI must be authorized, experienced, and/or trained in

the methods, techniques, and materials involved in the major repair/major alteration.

(1) The ASI must determine if, by granting a field approval, the affected product can be expected to result in safe operation and conform to regulatory requirements.

(2) If the ASI is not thoroughly familiar with all aspects of the alteration or repair, or has any doubt about the expected airworthiness, an airworthiness determination must not be given. He/she will seek assistance to the extent necessary to enable him/her to reach a clear decision before approval or denial is given.

(3) Flight Standards District Offices (FSDO) must ensure that an ASI's lack of experience or qualifications does not necessarily stop the approval process. The ASI's lack of qualifications does not mean the FSDO should deny a field approval and tell the applicant that they need an STC. The ASI can seek assistance from another ASI or FSDO, as appropriate.

(4) ASIs occasionally receive requests to approve alterations or repairs that do not require a field approval. These requests should be denied. Typically, these requests fall into one of two categories: minor alterations or repairs, or alterations or repairs that already have adequate approved data. Minor alterations and repairs do not need approved data and, therefore, should not receive field approvals. Alterations and repairs that are supported by sufficient previously approved DER-approved data may not require further approval. ASIs should review the data packages for each requested approval to ensure that a field approval is needed and is appropriate. ASIs who deny field approval requests to operators for alterations or repairs that do not need or qualify for field approvals should explain to the operator the reason for the denial and, if requested, provide the reason(s) in writing or via e-mail. The operator can then retain this as part of the aircraft records for future reference.

C. DER. If the applicant employs an appropriately authorized DER to provide supporting data for a field approval, then the ASI should coordinate activities with both the applicant and the DER. If the data addresses the entire alteration or repair, and all of the requirements of part 21 and part 43 are met, there is no requirement for any further approval by the ASI. The DER may be limited to technical areas that do not fully cover the entire project. For specific DER authorizations and limitations, reference FAA Order 8110.37, Designated Engineering Representative Guidance Handbook; FAA Order 8110.45, Use of Data Approved by Designated Engineering Representatives to Support Major Alterations; and AC 183.29-1, Designated Engineering Representatives Directory, as revised. The FAA must evaluate any area not covered by this approval.

D. DER Data. FAA Orders 8110.37 and 8110.45 address field approvals by reinforcing that although DERs are not authorized to approve alterations/repairs via a block 3 entry in FAA Form 337, DER data may still be used as the basis for an alteration in support of FAA Form 337. It also recommends inclusion of a note in the body of FAA Form 8110-3, Statement of Compliance with the Federal Aviation Regulations, stating, "This approval is for engineering design data only and is not an installation approval." DER data is not a field approval, but is approved data which, like other approved data, can be used to perform major alterations or repairs without further approval. DER data can also be included in the data package to support a field approval request.

E. Part 121 Air Carriers. Aircraft operated by 14 CFR part 121 air carriers, although not specifically prohibited from receiving field approvals, are not generally eligible for them. Field approvals may be performed on part 121 aircraft in rare instances for extenuating circumstances, and each request must be evaluated on a case-by-case basis. If an ASI from a FSDO/certificate management office (CMO)/ international field office (IFO) believes that a field approval request is appropriate, the FSDO/CMO/IFO will obtain concurrence from the Flight Standards Division regional office prior to performing the approval.

(1) The Flight Standards Division regional office will maintain a database of part 121 field approvals that it concurred or non-concurred with. This database will contain:

- A unique control number for each instance
- The date of concurrence or non-concurrence
- The name of the ASI assigned to field approve the alteration/repair
- The FSDO/CMO/IFO's routing symbol
- An indication of concurrence or non-concurrence
- The air carrier identifier

- The make/model of the aircraft
- A brief description of the requested approval

(2) Annually, the Flight Standards Division regional office will forward a report of the above information to the Aircraft Maintenance Division, AFS-300, by October 15.

7. REPLACEMENT AND MODIFICATION PARTS. Parts or appliances developed, manufactured, and shipped before the dates established by the policy published in the Federal Register on February 27, 1995, 60 FR 10480/10482, and installed or intended for installation in TC'd aircraft by TC, STC, or field approval process, may continue to be considered approved upon removal from the aircraft in which it was originally approved, for the purpose of repair or resale, including installation in a different TC'd aircraft. The intent of this paragraph is to protect the used value of previously installed parts that were installed and approved through the field approval process prior to the Federal Register Notice.

9. ALTERATIONS THAT MAY REQUIRE ENGINEERING EVALUATION, AIRCRAFT CERTIFICATION OFFICE (ACO) ASSISTANCE, OR STCs.

A. The list in Figure 1-3, Major Alterations Job Aid, describes methods of approval for typical major alterations. This list is not all-inclusive, and each project should be examined on a case-by-case basis. If an alteration is not identified on the list, it is eligible for a field approval unless the project is determined to be beyond the scope of the field approval process.

B. An alternative to the field approval process is the use of FAA DER-approved data on FAA Form 8110-3 (with data). If all the data supporting compliance with applicable airworthiness regulations is DER-approved, then the product can be altered IAW those data. The person(s) signing blocks 6 and 7 of FAA Form 337, not the DER, is then responsible for conforming and approving the installation. Refer to FAA Order 8110.45 for further details.

11. INCOMPLETE AND/OR INCREMENTAL INSTALLATIONS.

A. Incomplete or incremental installation field approvals are intended to approve partial-major alterations on aircraft that will be operated for an unspecified period of time. Aircraft having an incomplete equipment installation may be released for service only if the following have been accomplished:

(1) The alteration data has been FAA-approved;

(2) The incomplete/incremental alteration has been determined to not affect the safe operation of the aircraft;

(3) The equipment installed remains deactivated and has placards affixed to prevent use;

(4) The weight and balance reflects the incomplete installation; and

(5) The maintenance records, including the logbooks and Form 337, have been completed and signed for the work that was actually accomplished.

NOTE: In order to maintain an effective Airworthiness Certificate, the approval for return to service must be accomplished by an authorized person as defined in 14 CFR part 43, § 43.7.

B. The applicant must conduct a conformity inspection on the completed alteration. FAA approval of the incremental installation may provide for use of installed equipment if it can be determined that such equipment can be used safely (i.e., may require placards, Flight Manual Supplements, crew training.)

13. MAJOR REPAIR DESIGN APPROVALS BY TRANSPORT CANADA CIVIL AVIATION (TCCA) AND CANADIAN DESIGN APPROVAL REPRESENTATIVE (CANADIAN EQUIVALENT TO A U.S. DER). The FAA and TCCA have agreed in a Memo of Understanding (MOU) that certain TCCA and TCCA-delegated repair design approvals are considered to be FAA-approved data. The following information is provided for reference, but the MOU should be reviewed if additional guidance is required. The MOU is available at http://www.tc.gc.ca/CivilAviation/certification/Int/Memoranda/usa.htm.

A. For U.S.-held TCs, only repair design approvals issued by TCCA are considered to be approved data. Repair design approvals issued solely by a TCCA delegate are not approved data and, to be used as such,

require TCCA approval or direct approval by the FAA or FAA designee.

B. For Canadian-held TCs, repair design approvals issued by either TCCA or a TCCA delegate are considered to be approved data.

C. For TCs held by all other countries, TCCA or TCCA-delegated repair design approvals are not considered to be approved data.

D. A TCCA Repair Design Certificate (equivalent to FAA Form 8110-3) can accompany data and can be signed by either a TCCA-approved Design Approval Representative or TCCA airworthiness authority.

15. USE OF MANAGEMENT DESIGNATED AIRWORTHINESS REPRESENTATIVES (DAR, FUNCTION CODE 50).

A. Management DARs serve as representatives of the Administrator. They review and certify alteration data packages for modifications to determine that:

(1) STC approval is not required.

(2) All regulatory aspects of the alteration(s) are addressed.

(3) Data approvals by DERs are within the scope and limitations of the DER's authority.

(4) Appropriate approvals exist for data that encompasses the entire alteration.

(5) Instructions for Continued Airworthiness (ICA) requirements are met.

B. To accomplish this task, the management DAR must:

(1) Determine the data package is complete with all FAA-approved data.

(2) If the data package is not complete, recommend completion of data approval by DERs, the ACO, or FSDO, as appropriate.

(3) Coordinate with the applicant and the FSDO when the alteration does not meet airworthiness requirements.

(4) If the data package meets all FAA requirements, complete Form 337, block 3, for certification of completeness.

(5) Return the package to the applicant for alteration completion.

(6) Maintain records of the work completed for review by the designee managing office.

C. Make the following entry in Form 337, block 3, for certification of completeness: "The alteration identified herein has been reviewed and found to be complete with appropriate DER approvals. All aspects of the alteration(s) are compatible and eligible for use on the above described aircraft, subject to conformity inspection by a person authorized in § 43.7."

17. FLIGHT TEST/OPERATIONAL CHECK REQUIREMENTS AND LIMITATIONS.

A. An alteration requiring a part 21, § 21.191(b) flight test to show compliance with the regulations must be coordinated with the appropriate engineering office or flight test DER. An Experimental Airworthiness Certificate to show compliance must be authorized by the Manufacturing Inspection District Office (MIDO) IAW FAA Order 8130.2, Airworthiness Certification of Aircraft and Related Products, as revised. If the flight test is unsatisfactory, the applicant must develop additional data.

B. Alterations requiring a flight manual supplement or operations limitations changes must be coordinated with the ACO, unless the Flight Standards inspector has been specifically authorized by Flight Standards to sign the document(s).

C. Any alteration or repair that will appreciably change the aircraft flight characteristics or substantially affect its operation in flight must be operationally checked IAW 14 CFR part 91, § 91.407, and the results recorded in the aircraft records.

19. FAA FORM 337, MAJOR REPAIR AND ALTERATION.

A. Types of Field Approval Data/Alteration Approvals.

(1) Data/alteration approvals issued for one aircraft are applicable only to the aircraft described in block 1 of FAA Form 337. The data/alteration may be used as acceptable data as a basis for obtaining approval on other aircraft.

NOTE: ASIs must not approve data for use on multiple aircraft.

(2) Data based on inspection or testing, such as approval of technical data by physical inspection (see section 2, paragraph 5D(3)).

B. Recording Data Deviations. Alterations that use data that does not differ appreciably from previously approved data do not require new or additional approval. Minor deviations that have no bearing on safety are acceptable without formal approval and without submission of a formal application by the applicant. A field approval is not required; however, the deviation should be recorded on FAA Form 337.

C. Disposition of FAA Form 337. Upon receipt of a completed FAA Form 337, accomplish the following:

(1) Review the form to ensure that all airworthiness requirements are met;

(2) Ensure that all applicable sections, signatures, and dates are affixed to the form;

(3) Ensure that the office identifier and the inspector's initials are entered in the place provided, in the upper right-hand corner of the form; and

(4) Mail the form to Civil Aviation Registry, AFS-700, Oklahoma City, OK 73169.

D. Alterations to Fuel Tanks and/or Systems. Within 24 hours of receipt of an FAA Form 337 that describes a modification to an aircraft fuel system or shows additional fuel tanks installed in the passenger or baggage compartment, review and mail as in paragraph 19C(1) through (4) above.

NOTE: Military aircraft without a civil TC, foreign-registered aircraft, and component parts not installed on an aircraft cannot have FAA Form 337 submitted to AFS-700. This is because they cannot be identified by aircraft make, model, serial number, and U.S. Registration Number.

21. INSTRUCTIONS FOR CONTINUED AIRWORTHINESS (ICA).

A. The Administrator has determined that the field approval data package must include ICAs. The purpose of the ICA is to provide instructions on how to maintain aircraft that are altered and appliances that are installed IAW a field-approved major alteration. The ICA Checklist (Figure 1-1) is a guide for both the applicant who creates the ICA and the FAA Flight Standards inspector who accepts the ICA. The ICA developed IAW this guidance constitutes methods, techniques, and practices acceptable to the Administrator. If the ICA for the submitted field approval major alteration is not acceptable to the FAA inspector, that inspector should not sign block 3 of the applicant's FAA Form 337.

B. The ICA provides the aircraft owner/operator with the following advantages when included in block 8 of Form 337:

(1) The major alteration and reference to ICA is contained in one document;

(2) The ICA becomes a permanent aircraft record as required by part 91, § 91.417(a)(2)(vi); and

(3) The owner/operator can contact FAA registry for a replacement FAA Form 337 if the ICA is lost or destroyed. The additional reference to the presence of ICA as part of the major alteration in the aircraft's maintenance entry will ensure that maintenance personnel appropriately address ICAs during future inspections.

C. The applicant is to develop the ICA and present it in conjunction with the field approval request. The FAA inspector accepts the ICA if it meets the applicable requirements in 14 CFR part 23, § 23.1529; part 25, § 25.1529; part 27, § 27.1529; part 29, § 29.1529; part 31, § 31.82; part 33, § 33.4; and part 35, § 35.4. The checklist in Figure 1-1 is a guide so the applicant can be assured that all applicable requirements are met.

D. For field-approved major alterations to aircraft, engines, and propellers certificated under the Civil Air Regulations (CAR), the ICA must meet the original type design requirements. In cases where the major alteration is a total new design, or a substantial complete redesign which the CAR did not address, the major alteration must meet the applicable 14 CFR requirements. The checklist provides acceptable guidance for these types of installations.

E. The ICA requirements are the same for a field approval or STC. The vast majority of field-approved major alterations are simplistic in design and execution. Therefore, the applicant's ICA may not need as much detail as an ICA required for a complicated STC. If the manufacturers' instructions are not available, the applicant may use FAA publications such as AC 43.13-1 and AC 43.13-2, as

revised; appendix D of part 43, as revised; or other applicable aviation standards to develop the ICA.

F. Major alterations approved before October 7, 1998, were not required to have ICAs. However, if an owner/operator wishes to formally incorporate an ICA for existing field-approved major alterations, they may do so using the revision process in checklist item number 16 in Figure 1-1.

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SECTION 2. PROCEDURES

1. PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites:

- Knowledge of the regulatory requirements of 14 CFR parts 21, 43, and 65
- Successful completion of the Airworthiness Inspector Indoctrination course(s) or equivalent
- Successful completion of the Aircraft Alterations and Repair Course
- Identification and authorization to perform field approvals by the FSDO office manager and the regional Flight Standards manager in the form of a signed statement of authorization placed in the ASI's file or in the office manual (the authorization will state that the ASI is authorized to perform field approvals)

B. Coordination. This task may require coordination or assistance from FAA engineering, other technical personnel, and the operator. Direct communication between field personnel to permit a rapid exchange of technical information is recommended.

3. REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- 14 CFR parts 1, 21, 23, 25, 27, 29, 31, 33, 34, 35, 36, 39, 43, and 91
- Applicable Special Federal Aviation Regulations (SFAR)
- FAA Order 8000.50, Repair Station Production of Replacement or Modification Parts
- FAA Order 8100.8B, Designee Management Handbook
- FAA Order 8100.9, DAS, DOA, and SFAR 36 Authorization Procedures
- FAA Order 8110.37, Designated Engineering Representative (DER) Guidance Handbook
- FAA Order 8110.45, Use of Data Approved by Designated Engineering Representatives to Support Major Alterations
- FAA Order 8130.2, Airworthiness Certification of Aircraft and Related Products
- FAA Order 8310.6, Airworthiness Compliance Check Sheet Handbook
- FAA Order 8340.1, Maintenance Bulletins
- AC 20-114, Manufacturers' Service Documents
- AC 23-17, Systems and Equipment Guide for Certification of Part 23 Airplanes
- AC 33.4-1, Instructions for Continued Airworthiness
- AC 43-9, Maintenance Records
- AC 43.9-1, Instructions for Completion of FAA Form 337 (OMB No. 2120-0020), Major Repair and Alteration (Airframe, Powerplant, Propeller, or Appliance)
- AC 43.13-1, Acceptable Methods, Techniques, and Practices—Aircraft Inspection and Repair
- AC 43.13-2, Acceptable Methods, Techniques, and Practices—Aircraft Alterations
- CAR 3, 4a, 4b, 6, 7, and 8
- Aeronautics Bulletins 7A, 7H, and 8
- TCDS
- ATOS Element: 1.2.2

B. Forms:

- FAA Form 337, Major Repair and Alteration
- FAA Form 8110-3, Statement of Compliance with the Federal Aviation Regulations
- FAA Form 8110-12, Application for Type Certificate, Production Certificate, or Supplemental Type Certificate

C. Job Aids:

- FAA Order 8310.6
- Figure 1-1, ICA Checklist
- Figure 1-2, Decision Flow Chart for Field Approval Process
- Figure 1-3, Major Alterations Job Aid
- JTAs: 3.2.4, 4.8.11

5. PROCEDURES.

A. Review the Applicant's Request for a Field Approval. Ensure that the information supplied is complete enough and is appropriate to proceed with the field approval process for the proposed alteration or repair. The applicant should specify the certification rule used as a basis for the field approval (ref. part 21, § 21.101).

(1) Review and evaluate the following before the operator starts the actual work, as applicable:

(a) A formal request submitted on one of the following:

- FAA Form 337 completed in duplicate (in triplicate for extended range fuel tanks)
- Other administrative forms used by a manufacturer or operator that are acceptable to the Administrator, such as engineering orders

(b) Proposed Flight Manual Supplements.

(c) FAA Form 8110-3.

(d) The description of the proposed alteration or repair to ensure that it correctly and accurately describes the alteration or repair.

(e) Methods, sketches, drawings, stress analyses, photographs, electrical load analyses, etc., to ensure that the operator has considered all applicable design standards and has analyses to substantiate the findings in this regard. The inspector must consider at least the following:

- The certification basis, including special conditions (fail safe, damage tolerance, etc.)
- The structural requirements that may be affected by the alteration or repair
- Any hazards that may affect the aircraft or its occupants
- Weight and balance computations
- Operating limitations
- Any other factors affecting safety or airworthiness

(f) Ensure that all ground and flight tests and operational checks meet applicable certification requirements to substantiate the alteration or repair.

(g) ICAs.

(2) If data is not complete, the operator must supply any additional information needed.

B. Evaluate the Proposal. Determine if the applicant has conducted a conformity evaluation to ensure that the proposed alteration will not impact the airworthiness of the aircraft. The applicant will provide verification that he/she has inspected the aircraft and reviewed the aircraft records to ensure compatibility of this alteration or repair with previously approved modifications.

C. Evaluate Data Package.

(1) If a determination is made that the proposed alteration is beyond the scope of a field approval, advise the applicant that an STC is necessary. Assistance to the applicant will include the following:

- Furnish FAA Form 8110-12 application for an STC
- Advise that supporting data must be attached

(2) If assistance from an ACO is needed for approving a major alteration/repair, the ASI, not the applicant, should make the request for engineering evaluation/assistance and/or approval of non-approved engineering data for the field approval. This request should be made through the Flight Standards regional office. A memorandum from the ASI's office to the ACO through the regional office should accompany the file. The memorandum should provide pertinent and detailed information, such as the ASI's recommendations and specific requests for advice. The regional office should forward the request to the ACO. After the ACO has completed its evaluation, the file should be returned to the ASI through the regional office. Coordination with the applicant will include the following:

(a) Request that the applicant provide all supporting data.

(b) Caution against proceeding with the alteration/repair before receiving engineering approval.

(c) Provide the applicant with a proposed schedule for completion of the project that is consistent with available resources.

(d) Specific authorization:

- Flight Manual Supplement signature authority may be authorized by ACs, bulletins, or other written documentation

- Interior compliance inspections as authorized by an ACO
- Other written authorizations as requested by the ACO and MIDO during the coordination process

D. Data Package Accepted for Field Approval.

(1) ACO Concurrence. If engineering assistance was requested, written ACO concurrence (e.g., memo or e-mail) becomes an attachment to FAA Form 337.

(2) Approval for Data Only. If the repair or alteration data complies with regulations, record data approval by entering the appropriate statement and signing block 3 of FAA Form 337; return both copies to the applicant. When recording FAA approval in block 3, use the following statement for approval of technical data by examination of the data for use on only one aircraft:

> "The technical data identified herein has been found to comply with applicable airworthiness requirements and is hereby approved for use only on the above described aircraft, subject to conformity inspection by a person authorized in § 43.7."

(3) Approval of Technical Data by Physical Inspection. Schedule a physical inspection with the applicant to verify workmanship and compliance of the data submitted. If the repair or alteration complies with regulations, record alteration approval by entering the appropriate statement and signing block 3 of FAA Form 337, and return copies to the applicant. When recording FAA approval in block 3, use the following statement:

> "The alteration or repair identified herein complies with the applicable airworthiness requirements and is approved for use only on the above described aircraft, subject to conformity inspection by a person authorized in § 43.7."

NOTE: ASIs must not approve data for use on multiple aircraft.

(4) Denial of Proposed Alteration/Repair. If the applicant is unwilling or unable to comply with the requirements to obtain the requested field approval, terminate the process by notification in writing to the applicant. This notification should include the reason for denial. The applicant should be given the opportunity to make corrections as necessary.

E. ICAs. ASIs will ensure that each major alteration that requires additional maintenance or inspections not covered by original manufacturer's instructions approved under the field approval process will have ICAs prepared IAW §§ 23.1529, 25.1529, 27.1529, 29.1529, 31.82, 33.4, or 35.4, as applicable. The ICA will be documented on FAA Form 337. The ASI will advise the applicant that the entry for the major alteration in the aircraft's maintenance records required by part 43, § 43.9 will also include a reference to the ICA and identify FAA Form 337 where the instructions are documented. The form will be kept in the aircraft's permanent records IAW § 91.417a(2)(vi). The checklist in Figure 1-1 is a guide so the applicant can be assured that all applicable requirements are met.

7. TASK OUTCOMES.

A. Complete PTRS.

B. Completion of this task can result in the approval of the data, alteration, or repair; reference to the ACO for an STC; or denial of a request for a field approval.

9. FUTURE ACTIVITIES. None.

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FIGURE 1-1. ICA CHECKLIST

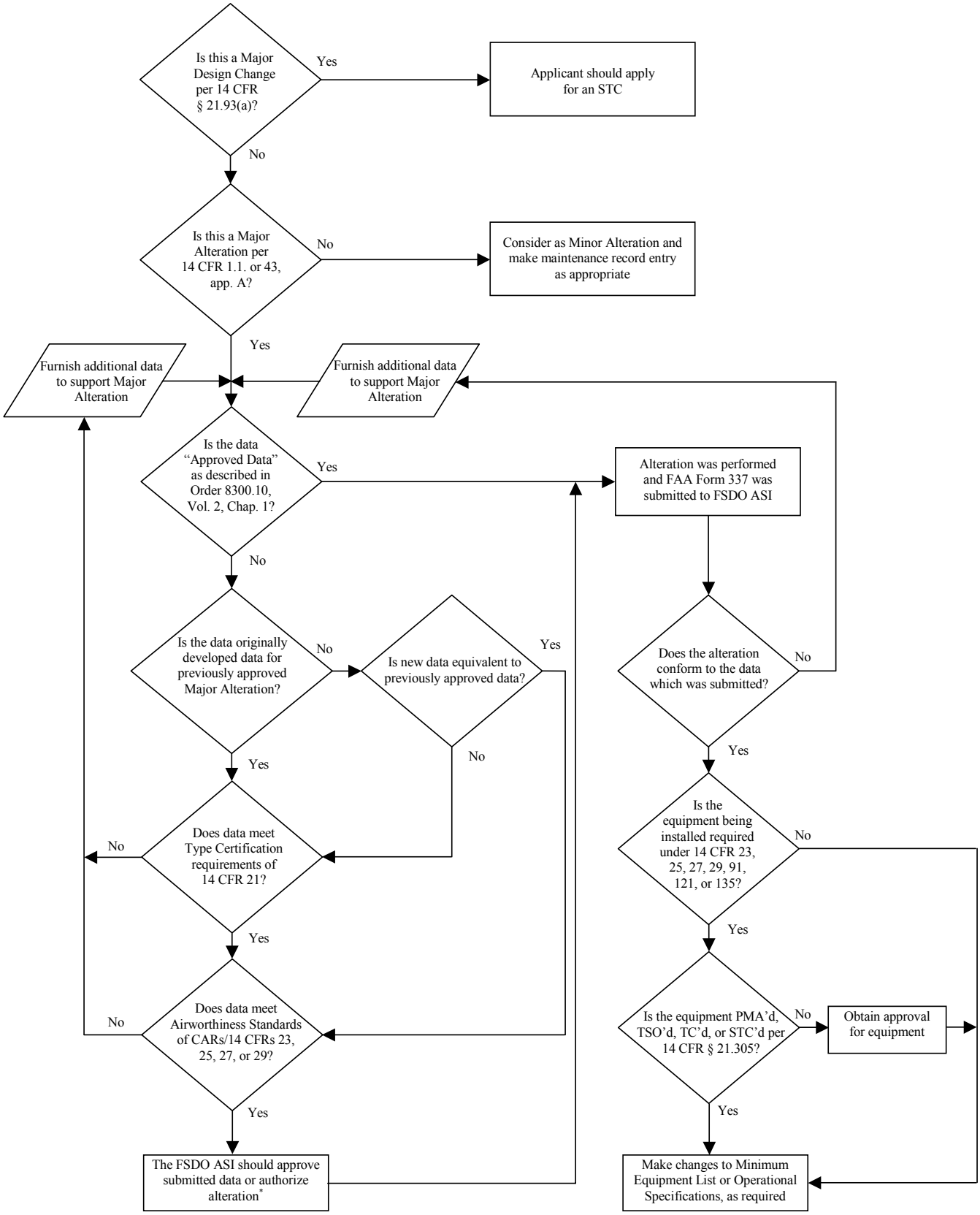
A/C Make: _____ Model: _____ S/N: _____ Reg. # N. _____
Revision: _____Date: _____ System: _____

Item	Subject
1.	**Introduction:** This section briefly describes the aircraft, engine, propeller, or component that has been altered. Include any other information on the content, scope, purpose, arrangement, applicability, definitions, abbreviations, precautions, units of measurement, referenced publications, and distribution of the ICA as applicable.
2.	**Description:** Of the major alteration, its functions, including an explanation of its interface with other systems, if any.
3.	**Control, operation information:** Or special procedures, if any.
4.	**Servicing information:** Such as types of fluids used, servicing points, and location of access panels, as appropriate.
5.	**Maintenance instructions:** Such as recommended inspection/maintenance periods in which each of the major alteration components are inspected, cleaned, lubricated, adjusted, and tested, including applicable wear tolerances and work recommended at each scheduled maintenance period. This section can refer to the manufacturer's instructions for the equipment installed where appropriate (e.g., functional checks, repairs, inspections). It should also include any special notes, cautions, or warnings, as applicable.
6.	**Troubleshooting information:** Information describing probable malfunctions, how to recognize those malfunctions, and the remedial actions to be taken.
7.	**Removal and replacement information:** This section describes the order and method of removing and replacing products, parts, and any necessary precautions. This section should also describe or refer to manufacturer's instructions to make required tests, trim checks, alignment, calibrations, center of gravity changes, lifting or shoring, etc., if any.
8.	**Diagrams:** Of access plates and information, if needed, to gain access for inspection.
9.	**Special inspection requirements:** Such as X-ray, ultrasonic testing, or magnetic particle inspection, if required.
10.	**Application of protective treatments:** To the affected area after inspection and/or maintenance, if any.
11.	**Data:** Relative to structural fasteners such as type, torque, and installation requirements, if any.
12.	**List of special tools:** Special tools that are required, if any.
13.	**For commuter category aircraft:** The following additional information must be furnished, as applicable: A. Electrical loads. B. Methods of balancing flight controls. C. Identification of primary and secondary structures. D. Special repair methods applicable to the aircraft.
14.	**Recommended overhaul periods:** Are required to be noted on the ICA when an overhaul period has been set by the manufacturer of a component or equipment. If there is no overhaul period, the ICA should state for item 14: "No additional overhaul time limitations."

FIGURE 1-1. (Continued)

Item	Subject
15.	**Airworthiness limitation section:** Include any "approved" airworthiness limitations identified by the manufacturer or FAA Type Certificate Holding Office (e.g., an STC incorporated in a larger field-approved major alteration may have an airworthiness limitation). The FAA inspector shall not establish, alter, or cancel airworthiness limitations without coordinating with the appropriate FAA Type Certificate Holding Office. If there are no changes to the airworthiness limitations, the ICA should state for item 15: "No additional airworthiness limitations" or "Not Applicable."
16.	**Revision:** This section should include information on how to revise the ICA. For example, a letter will be submitted to the local FSDO with a copy of the revised FAA Form 337 and revised ICA. The FAA inspector accepts the change by signing block 3 and including the following statement: "The attached revised/new Instructions for Continued Airworthiness (date_____) for the above aircraft or component major alteration have been accepted by the FAA, superseding the Instructions for Continued Airworthiness (date_____)." Once the revision has been accepted, a maintenance record entry will be made, identifying the revision, its location, and date of the Form 337.

FIGURE 1-2. DECISION FLOW CHART FOR FIELD APPROVAL PROCESS



*** NOTE: ASIs should see guidance in Figure 1-3 to determine when additional coordination with a DER or the ACO may be necessary.**

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FIGURE 1-3. MAJOR ALTERATIONS JOB AID

The following lists indicate which method(s) may be used for approving major alterations to TC'd and STC'd products. These lists are not all-inclusive, and each alteration should be evaluated on a case-by-case basis. Consult *each* section that concerns your product. Additionally, ASIs should review current bulletins, ACs, etc., for specific types of installations that have been identified as candidates for field approval. The legend is as follows:

- Items with the letters "STC" require an *STC*.
- Items with the letters "EVL" may be eligible for approval by means other than an STC, depending on the scope and complexity of the alteration. These items will not automatically qualify for a field approval; they require *evaluation* and review of guidance to determine if the field approval process may be used.
- Items with the letters "ENG" may be eligible for approval by means other than an STC, but require either supporting DER *engineering* data or concurrence from the ACO for field approval.

1. GENERAL AVIATION AIRCRAFT.	
The following list applies to aircraft certificated under 14 CFR parts 23 and 31 (or the earlier equivalents), SFAR 41, or Joint Aviation Regulation (JAR) 22.	
A. Weight and Balance.	
(1) Changes that increase the certificated maximum weight limits (increases in the maximum gross weight, maximum take-off, or landing weights).	**STC**
(2) Changes in the certificated center of gravity range limits (for example, decreasing the forward limit or increasing the aft limit).	**STC**
(3) Changes that increase the operational limits (maximum speed limits, such as V_A, V_{FE}, V_{NE}; minimum speed limitations, such as stall speed; increases in service ceiling; and so forth).	**STC**
B. Structural Strength.	
(1) Changing primary structures (structure that carries flight, ground, or pressure loads as defined in AC 25.571-1, Damage Tolerance and Fatigue Evaluation of Structure, as amended).	**ENG**
(2) Substituting airframe primary structural materials.	**STC**
(3) Substituting an engine or propeller (such as replacing a reciprocating engine with a turbine engine).	**STC**
(4) Substituting or altering a reciprocating engine such that the net result is an increase of more than 10 percent greater horsepower.	**STC**
(5) Substituting blind fasteners in primary load structures.	**ENG**
NOTE: All field approvals for blind fasteners (Cherry Max, or equivalent) in primary load structures must be coordinated with the ACO or supported by DER-approved data.	
(6) Altering passenger-carrying aircraft to an all-cargo or combination configuration.	**STC**

FIGURE 1-3. (Continued)

C. Reliability.	
(1) Changes to manifolding, air induction systems or air intake doors, engine cowling, or baffle that affect the flow of engine cooling air and carburetor/fire ignition heat rises.	**ENG**
(2) Changes to the basic engine or propeller design, controls, and operating limitations.	**ENG**
(3) Changes that include engine/propeller adjustments and settings limitations that affect power output.	**ENG**
(4) Modifications to approved avionics equipment that affect reliability or airworthiness, such as changes:	
• Deviating from the design environment performance.	**STC**
• Deviating from the component manufacturer's operating limitations.	**STC**
• To software other than navigation and terrain databases.	**STC**
• To wire shielding that may affect High Intensity Radiated Fields (HIRF) and Electromagnetic Interference (EMI).	**EVL**
D. Operational Characteristics.	
(1) Changes or relocation of system components (including hydraulic, oil, and fuel systems components) and equipment that affect structural integrity, flight, ground handling characteristics, or noise/acoustics of the aircraft.	**ENG**
(2) Changes that alter the movable control surfaces that affect the dynamic and/or static balance, alter the aerodynamic contour of movable control surfaces, or change the weight distribution.	**STC**
(3) Changes in control surface travel, control system mechanical advantage, location of control system component parts, or direction of motion.	**STC**
(4) Changes in basic dimensions or external aerodynamic contour/configuration of the aircraft such as wing and tail planform or incidence angles, canopy, contour or radii, the location of wing and tail fairings, winglets, wing lift struts, tiptanks, windows, and doors.	**STC**
(5) Changes in canopies, windows, and doors on unpressurized aircraft.	**EVL**
(6) Changes in engine cowlings.	**ENG**
(7) Changes to flight-critical electrical/electronic systems such as electronic flight controls or the engine control system, Full Authority Digital Engine Control (FADEC), fly-by-wire, and so forth.	**STC**
(8) Changes that affect aircraft performance, drag, engine power, revolutions per minute (RPM), or exhaust muffler.	**EVL**
(9) Changes affecting noise.	**ENG**
(10) Changes affecting flight characteristics.	**ENG**
(11) Installation of:	
• Avionics systems performing critical functions or involving complex interfaces to other systems.	**STC**
• Heads up displays, Enhanced Flight Vision Systems, or Synthetic Vision Systems used for primary navigation.	**STC**

FIGURE 1-3. (Continued)

• Traffic Alert and Collision Avoidance Systems I (TCAS I) or Traffic Advisory Systems (TAS) (see relevant bulletins(s)).	**EVL**
• Traffic Alert and Collision Avoidance Systems II (TCAS II).	**STC**
• Autopilots.	**STC**
• Flight data recorders (FDR).	**STC**
• Ground proximity warning systems (GPWS).	**STC**
• Electronic flight instrument systems (EFIS) (see relevant bulletin(s)).	**STC**
• Terrain Awareness and Warning Systems (TAWS-A) (see relevant bulletin(s)).	**EVL**
• Terrain Awareness and Warning Systems (TAWS-B) (see relevant bulletin(s)).	**EVL**
• Emergency Vision Assurance Systems (EVAS).	**STC**
• Global positioning system (GPS) or GNSS (see relevant bulletin(s)).	**EVL**
NOTE: ASIs should also review current guidance for specific types of installations that have been identified as candidates for field approval.	
(12) Changes that increase the differential pressure limits of an atmospheric or climatic control system of aircraft interior compartments.	**ENG**
(13) Changes in engine and propeller combination (vibration approval).	**ENG**
(14) Any alteration that requires flight testing to show compliance with the regulations (not applicable to operational flights conducted under § 91.407(b)).	**ENG**
(15) Anti-terrorism countermeasures, including flares.	**STC**
E. Airworthiness.	
(1) Changes to landing gear and related components, such as internal parts of shock struts, length, geometry of members, brake and brake systems, or additions.	**EVL**
(2) Changes to systems that affect aircraft airworthiness, such as:	
• Relocation of exterior fuel vents, fuel drains, or battery vents. (Applicable to components not attached to the basic engine.)	**EVL**
• Crew or passenger liquid oxygen (LOX) or on-board generating systems.	**ENG**
• External critical access doors, Auxiliary Power Unit (APU) ram air, nacelle blowout doors, fuel drain.	**ENG**
(3) Changes to oil, hydraulic, pneumatic, and fuel lines, or systems that affect their operation or installation and flammability requirements, such as:	
• New types of hoses and/or hose fittings that may not meet installation requirements, such as flow rate and flammability requirements.	**ENG**
• Changes to fuel dump valves.	**EVL**
• New oil/fuel/hydraulic line materials beyond the scope of AC 43.13-1, as revised.	**EVL**

FIGURE 1-3. (Continued)

• Change to, or addition of, permanent fuel tanks or fuel system components, including sealants.	**EVL**
(4) Changes in fixed fire extinguisher or detector systems that affect the system's effectiveness or reliability, such as:	
• Relocating discharge nozzles, detector units, or fixed fire extinguisher bottles.	**ENG**
• Using new or different detector components.	**ENG**
• Decreasing the amount or changing the type of extinguishing agents.	**ENG**
(5) Changes that include substituting airframe materials that affect structural integrity, lightning protection, or flight characteristics.	**ENG**
(6) Alterations or repairs that include:	
• Use of synthetic covering materials.	**EVL**
• New titanium applications.	**ENG**
• Ceramic coatings.	**ENG**
• Use of synthetic coatings.	**ENG**
• Use of new plated coatings.	**ENG**
F. Crashworthiness.	
(1) Changes to the aircraft structure, cabin interiors, or equipment relocation.	**EVL**
(2) Changes that affect emergency exits (i.e., emergency medical services, sport parachute jumping).	**ENG**
2. ROTORCRAFT.	
The following section applies to aircraft with a certification basis of 14 CFR parts 27, 29, or the earlier equivalents.	
A. Weight and Balance.	
(1) Changes that increase the certificated maximum weight limits affecting structural, performance, handling qualities, and so forth (for example, increases in the maximum gross weight, maximum takeoff weight, or landing weight).	**STC**
(2) Changes in the certificated center of gravity range limits (for example, decreasing the forward limit or increasing the aft limit).	**STC**
(3) Changes that increase the operational limits (maximum speed limits, such as V_A, V_{FE}, V_{NE}; minimum speed limitations, such as stall speed; increases in service ceiling; and so forth).	**STC**
B. Structural Strength.	
(1) Changing primary structures (structures that carry flight, ground, or pressure loads as defined in AC 25.571-1) as well as the following additional modifications or structural members:	
• Installation of significant structure and/or appliances to the exterior of the aircraft (i.e., Forward Looking Infrared (FLIR), cameras, firefighting, and spray/dusting equipment).	**ENG**

FIGURE 1-3. (Continued)

• Changes to landing gear and related system and structural components, including wheels, brakes, and tires.	**EVL**
• Internal frame, longeron, or structural members.	**STC**
• Consideration of flutter and vibration for any of the aforementioned changes.	**STC**
(2) Substituting engine, propeller, rotor, or airframe primary structure materials.	**STC**
(3) Substituting blind fasteners in primary load structures.	**ENG**
NOTE: All field approvals for blind fasteners (Cherry Max, or equivalent) in primary load structures must be coordinated with the ACO or supported by DER-approved data.	
(4) Changing the structural panels and load-bearing components that could affect service life.	**STC**
(5) Installing Health Usage Monitoring Systems (HUMS).	**STC**
(6) Installing systems that extract power from drive systems, such as air conditioning power drawn from the tail rotor driveshaft.	**STC**
C. Reliability.	
(1) Changes to manifolding, air induction systems or air intake doors, engine cowling, or baffle that affect the flow of engine cooling air and carburetor/fire ignition heat rises.	**STC**
(2) Change to the basic engine, rotor or propeller design, controls, or operating limitations.	**STC**
(3) Changes that include engine/propeller adjustments and setting limitations that affect power output.	**STC**
(4) Modifications to approved avionics equipment that affect reliability or airworthiness, such as changes:	
• Deviating from the design environment performance.	**STC**
• Deviating from the component manufacturer's operating limitations.	**STC**
• To software other than navigation and terrain databases.	**STC**
• To wire shielding that may affect High Intensity Radiated Fields (HIRF) and Electromagnetic Interference (EMI).	**EVL**
D. Operational Characteristics.	
(1) Changes or relocation of systems (including hydraulic, oil, and fuel systems) and equipment that affect structural integrity, flight, ground handling characteristics, or noise/acoustics of the aircraft.	**STC**
(2) Changes that alter the movable control surfaces that affect the dynamic and/or static balance, alter the aerodynamic contour of movable control surfaces, or change the weight distribution.	**STC**
(3) Changes in control surface travel, control system mechanical advantage, location of control system components parts, or direction of motion.	**STC**
(4) Changes in basic dimensions or external aerodynamic contour/configuration of the aircraft such as wing and tail planform or incidence angles, canopy, cowlings, contour or radii, the location of wing and tail fairings, winglets, wing lift struts, tiptanks, windows, and doors.	**STC**
(5) Changes to flight-critical electrical/electronic systems such as electronic flight controls or the engine control system, FADEC, fly-by-wire, and so forth.	**STC**

FIGURE 1-3. (Continued)

(6) Installation of:	
• Avionics systems that perform critical functions or involve complex interfaces to other systems.	**STC**
• Heads up displays, Ehnanced Flight Vision System, or Synthetic Vision Systems used for primary navigation.	**STC**
• Traffic Alert and Collision Avoidance Systems I (TCAS I) or Traffic Advisory Systems (TAS) (see relevant bulletin(s)).	**EVL**
• Traffic Alert and Collision Avoidance Systems II (TCAS II).	**STC**
• Autopilots.	**STC**
• Flight data recorders (FDR).	**STC**
• Ground proximity warning systems (GPWS).	**STC**
• Electronic flight instrument systems (EFIS) (see relevant bulletin(s)).	**EVL**
• Terrain Awareness and Warning Systems (TAWS-A) (see relevant bulletin(s)).	**EVL**
• Terrain Awareness and Warning Systems (TAWS-B) (see relevant bulletin(s)).	**EVL**
• Emergency Vision Assurance Systems (EVAS).	**STC**
• GPS or GNSS (see relevant bulletin(s)).	**EVL**
NOTE: ASIs should also review current guidance for specific types of installations that have been identified as candidates for field approval.	
(7) Changes that affect aircraft performance, drag, engine power, RPM, or exhaust muffler.	**EVL**
(8) Changes affecting noise.	**ENG**
(9) Changes affecting flight characteristics.	**ENG**
(10) Any alteration that requires flight testing to show compliance with the regulations (not applicable to operational flights conducted under § 91.407(b)).	**ENG**
(11) Anti-terrorism countermeasures, including flares.	**STC**
E. Airworthiness.	
(1) Changes to systems, such as:	
• Relocation of exterior fuel vents or battery vents.	**EVL**
• Crew or passenger liquid oxygen (LOX) or on-board generating systems.	**ENG**
• External critical access doors, APU ram air, nacelle blowout doors, and fuel drain.	**ENG**
(2) Changes to oil, hydraulic, pneumatic, and fuel lines, or systems or their components that affect their operation or installation and flammability requirements, such as:	
• New types of hoses and/or hose fittings that may not meet installation requirements, such as those of flow rate and flammability.	**ENG**
• Changes to fuel dump valves.	**EVL**

FIGURE 1-3. (Continued)

• New oil/fuel/hydraulic line materials.	**EVL**
• New fuel tanks or fuel system components, including sealants.	**EVL**
(3) Changes in fixed fire extinguisher or detector systems that affect the system's effectiveness or reliability, such as:	
• Relocating discharge nozzle, detector units, or fixed fire extinguisher bottles.	**ENG**
• Using new or different detectors.	**ENG**
• Decreasing the amount or changing the type of extinguishing agents.	**ENG**
(4) Changes that include substituting rotor/airframe materials that affect structural integrity, lightning protection, or flight characteristics.	**ENG**
(5) Changes that alter dynamic components of rotorcraft, such as loads, vibration, fatigue, damage tolerance, flaw tolerance, characteristics of main or tail rotor system, transmission system, gearbox, driveshafts, driveshaft support bearings, and main and tail rotor blades.	**STC**
(6) Installation of a new or modification of an existing icing protection system.	**ENG**
(7) Changes to a critical or life-limited part, including engine/APU rotating parts.	**STC**
(8) Alteration of passenger-carrying aircraft to an all-cargo or combination configuration.	**STC**
(9) Additional items include:	
• Changes that may require a human factors compliance finding (for example, in flight deck instrumentation and controls).	**STC**
• Flight deck lighting changes to support night vision goggle use, or any approvals related to night vision goggles.	**STC**
• Changing or substituting engine/aircraft instrumentation required by a unique characteristic of the particular type design.	**STC**
NOTE: RPM changes of main and tail rotor may affect handling performance characteristics and/or noise or acoustics.	
(10) Alterations or repairs that include:	
• Use of synthetic covering materials.	**EVL**
• New titanium applications.	**ENG**
• Ceramic coatings.	**ENG**
• Use of synthetic coatings.	**ENG**
• Use of new plating coatings.	**ENG**
F. Crashworthiness.	
(1) Changes to the aircraft structure, cabin interiors, or equipment relocation that affect crashworthiness and/or emergency evacuation. This includes initial installation or relocation of seats or litter systems.	**STC**

FIGURE 1-3. (Continued)

(2) Changes that affect emergency exits (e.g., emergency medical services, sport parachute jumping).	**ENG**
3. TRANSPORT AIRPLANES.	
The following list applies to airplanes certificated under 14 CFR part 25 (or the earlier equivalents).	
A. Weight and Balance.	
(1) Changes that increase the certificated maximum weight limits (maximum gross weight, maximum takeoff or landing weights, and maximum zero fuel weight).	**STC**
(2) Changes in the certificated center of gravity range limits (for example, decreasing the forward limit or increasing the aft limit).	**STC**
(3) Changes that increase the operational limits (e.g., maximum speed limits, such as V_A, V_{FE}, V_{NE}, $V_{MO,}$ and V_{MO}/M_{MO}; minimum speed limitations, such as stall speed; and increases in service ceiling).	**STC**
B. Structural Strength.	
(1) Changes to principal or primary structural elements (principal elements that carry flight, ground, or pressure loads) defined by AC 25.571-1, as amended.	**STC**
(2) Substitution of engine, propeller, or airframe primary structure materials.	**STC**
(3) Substitution of blind fasteners in primary load structures.	**ENG**
NOTE: All field approvals for blind fasteners (Cherry Max, or equivalent) in primary load structures must be coordinated with the ACO or supported by DER-approved data.	
(4) Alteration of passenger-carrying aircraft to an all-cargo or combination configuration.	**STC**
C. Reliability.	
(1) Significant changes to manifolding, air induction systems or intake doors, engine cowling, or baffle that affect the flow of engine cooling air.	**STC**
(2) Changes to the basic engine or propeller design, controls, and operating limitations.	**STC**
(3) Changes that include engine/propeller changes to the adjustments and setting limitations.	**STC**
(4) Modifications to approved avionics equipment that affect reliability or airworthiness, such as changes:	
• Deviating from the design environmental performance.	**STC**
• Deviating from the component manufacturer's operating limitations.	**STC**
• To software other than navigation and terrain databases.	**STC**
• To wire shielding that may affect High Intensity Radiated Fields (HIRF) and Electromagnetic Interference (EMI).	**EVL**
D. Operational Characteristics.	
(1) Changes or relocation of systems (including hydraulic, oil, and fuel systems) and equipment that affect structural integrity, flight, and ground handling characteristics of the aircraft.	**STC**
(2) Significant changes to the movable control surfaces that affect the dynamic and/or static balance, alter the aerodynamic contour of movable control surfaces, or change the weight distribution.	**STC**

FIGURE 1-3. (Continued)

(3) Changes to control surface travel, method of control system mechanical advantage, or direction of motion.	**STC**
(4) Changes in basic dimensions or external aerodynamic contour/configuration of the aircraft, such as wing and tail planform or incidence angles, canopy, cowlings, contour or radii, the location of wing and tail fairings, winglets, wing lift struts, tiptanks, windows, and doors that would require flight or performance revalidation.	**STC**
(5) Installation of new flight-critical electrical/electronic systems, electronic flight controls, or engine control systems such as FADEC and fly-by-wire.	**STC**
(6) Changes that affect aircraft performance, drag, engine power, RPM, or exhaust muffler.	**STC**
(7) Changes that alter the aerodynamic contour that affect noise or flight characteristics.	**ENG**
(8) Installation of:	
• Avionics systems performing critical functions or involving complex interfaces to other systems.	**STC**
• Heads up displays used for primary navigation.	**STC**
• Traffic Alert and Collision Avoidance Systems I (TCAS I) or Traffic Advisory Systems (TAS) (see relevant bulletin(s)).	**EVL**
• Traffic Alert and Collision Avoidance Systems II (TCAS II).	**STC**
• Autopilots.	**STC**
• Flight data recorders (FDR).	**STC**
• Ground proximity warning systems (GPWS).	**STC**
• Electronic flight instrument systems (EFIS) (see relevant bulletin(s)).	**EVL**
• Terrain Awareness and Warning Systems (TAWS-A) (see relevant bulletin(s)).	**EVL**
• Terrain Awareness and Warning Systems (TAWS-B) (see relevant bulletin(s)).	**EVL**
• Emergency Vision Assurance Systems (EVAS).	**STC**
• GPS or GNSS (see relevant bulletin(s)).	**EVL**
NOTE: ASIs should also review current guidance for specific types of installations that have been identified as candidates for field approval.	
(9) Any alteration that requires flight testing to show compliance with the regulations (not applicable to operational flights conducted under § 91.407(b)).	**ENG**
(10) Anti-terrorism countermeasures, including flares.	**STC**
E. Airworthiness.	
(1) Changes to landing gear and related components, such as internal parts of shock struts, length, geometry of members, brake and brake systems, or additions.	**ENG**
(2) Changes to systems, such as:	
• Relocation of fuel vents or drains.	**EVL**

FIGURE 1-3. (Continued)

• Crew or passenger liquid oxygen (LOX) or on-board generating systems.	**ENG**
• External critical access doors, APU ram air, nacelle blowout doors, and fuel drain.	**ENG**
(3) Changes to oil, hydraulic, pneumatic, and fuel lines, or systems or their components that affect their operation or installation and flammability requirements, such as:	
• New types of hoses and/or hose fittings that may not meet the installation requirements, such as flow rate and flammability requirements.	**ENG**
• Changes to fuel dump valves.	**ENG**
• New oil/fuel/hydraulic line materials.	**ENG**
• New flammable fluid tanks or system components.	**STC**
• Change to, or addition of, permanent fuel tanks or fuel system components, including sealants.	**ENG**
(4) Changes in fixed fire extinguisher or detector systems that affect the system effectiveness or reliability, such as:	
• Relocation of discharge nozzle, detector units, or fixed fire extinguisher bottles.	**ENG**
• Using new or different detector components (including TSO-approved detectors in new or existing circuit arrangements).	**ENG**
• Decreasing the amount or changing the type of extinguishing agents.	**ENG**
(5) Changes that include the substitution of airframe materials that affect structural integrity, lightning protection, or flight characteristics.	**ENG**
(6) Installation of new systems that affect their operation or installation and flammability requirements, such as:	
• Changing or adding permanent fuel tanks or fuel system components.	**STC**
• Emergency backup electrical power sources.	**STC**
• Crew or passenger oxygen systems.	**STC**
• Auxiliary Power Unit (APU).	**STC**
• Installing new fire extinguisher or detector systems or changing the type of extinguisher agents.	**STC**
(7) Changes to critical or life-limited parts.	**STC**
(8) Installation of a new or modification of an existing icing protection system.	**STC**
(9) Changes that alter critical or life-limited parts, including engine/APU rotating parts.	**STC**
(10) Changes that increase the differential pressure limits of an atmospheric or climatic control system of the aircraft and aircraft interior compartments.	**STC**
(11) Alterations or repairs that include:	
• Use of synthetic covering materials.	**ENG**
• New titanium applications.	**ENG**

FIGURE 1-3. (Continued)

• Ceramic coatings.	**ENG**
• Use of synthetic coatings.	**ENG**
• Use of new plating coatings.	**ENG**
F. Crashworthiness.	
(1) Changes to the aircraft structure, cabin interiors, or equipment relocation that affect crashworthiness and/or emergency evacuation. This includes initial installation or relocation of seats.	**STC**
(2) Changes that affect emergency exits (i.e., emergency medical services, sport parachute jumping).	**ENG**
4. ENGINES, PROPELLERS, AND APUs.	
The following list applies to engines certificated under 14 CFR parts 33, 34, and 36 or JAR E, propellers certificated under 14 CFR part 35 or JAR P, or APUs approved under TSO-C77a or b.	
A. Weight and Balance. Changes that increase or decrease the certificated weight or center of gravity.	**STC**
B. Structural Strength. Changes to an engine, APU, or propeller's primary or critical structure.	**STC**
C. Reliability and Airworthiness.	
(1) Changes to the approved ratings or operational or installation limits.	**STC**
(2) Changes to the engine, propeller, or APU control system.	**STC**
(3) Changes to engine, propeller, or APU adjustments and setting limitations that have an affect on power output or control functions or operability.	**STC**
(4) Changes that alter the aerodynamic contour of any blades, vanes, or internal or external aerodynamic surfaces.	**STC**
(5) Changes affecting engine or propeller performance, power, or RPM.	**ENG**
(6) Changes to inlet induction or exhaust components.	**STC**
(7) Changes to components, assemblies, or systems, such as:	
• Relocation of fuel vents or drains.	**ENG**
• Using new or different alternators, generators, starters, vacuum pumps, or magnetos.	**EVL**
• Using new or different hydraulic components, pumps, or turbo or superchargers.	**STC**
• Pressure fuel lines and oil lines.	**ENG**
• External critical access doors, APU ram air, nacelle blowout doors, bleed ports and doors, and so forth.	**STC**
• Installing new or modifying existing icing protection systems.	**STC**
(8) Changes that include substituting engine/APU/propeller materials that affect structural integrity, lightning protection, operating characteristics, fire protection, or noise/acoustics.	**STC**
(9) Major alterations to propellers.	**STC**
(10) Changes to critical or life-limited parts.	**STC**

FIGURE 1-3. (Continued)

(11) New propeller and engine combinations (vibration approval).	**STC**
(12) Modification to approved electrical equipment, such as:	
• Deviating from the design environmental performance compliance requirements.	**STC**
• Deviating from the component manufacturer's operating limitations.	**STC**
• Changing wire shielding or components that may affect HIRF, EMI, or lightning compliance.	**STC**
• Changing flight-critical electrical/electronic systems, such as electronic controls or engine, propeller, or APU control systems such as FADEC.	**STC**
• Changing or substituting engine, propeller, or APU instrumentation.	**EVL**
• Changes that do not conform to the minimum standards in a TSO under which a particular component or appliance is manufactured (see relevant bulletin(s)).	**EVL**
(13) Changes to or relocation of any systems (including hydraulic, oil, and fuel systems) and equipment that affect structural integrity, operating characteristics, noise/acoustics, fire protection, or emissions and fuel venting.	**STC**
(14) Changes affecting the Airworthiness Limitations section (i.e., Chapter 4 or 5) of the ICAs.	**STC**
D. Other Considerations.	
(1) Changes affecting exhaust emissions (14 CFR part 34).	**STC**
(2) Changes affecting engine noise (14 CFR part 36).	**STC**

CHAPTER 3. MAINTENANCE/INSPECTION PROGRAMS FOR LOW APPROACH LANDING MINIMUMS

SECTION 1. BACKGROUND

1. PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

A. Maintenance: 3435

B. Avionics: 5435

3. OBJECTIVE. This chapter provides guidance for evaluating applications for lower approach and landing minimums in respect to the appropriate support program.

5. GENERAL.

A. Responsibilities.

(1) The Avionics aviation safety inspector's (ASI) primary responsibility is to provide technical support to the Operations ASI and the applicant. The responsibility for monitoring all applicants during the evaluation period should be coordinated between the Avionics and Operations ASIs, to include:

- Approvals
- In-flight evaluation observations
- Surveillance

(2) The applicant is responsible for obtaining and submitting all documents that establish the eligibility of its aircraft, such as:

- The required maintenance/inspection program necessary for continued eligibility
- The applicant's Minimum Equipment List (MEL), with the limitations for Category I operations, if applicable
- An acceptable means for maintaining the reliability of the flight guidance control and associated systems

B. Qualifications for Low Approach Landing Minimums. Low approach and landing minimums are issued to qualified operators operating under Title 14 of the Code of Federal Regulations (14 CFR) part 91, 121, 125, 129, or 135. While the operating rules for each of these authorizations may vary significantly, the approval guidelines do not. Approval for low or minimum approaches in all categories will require regulatory compliance in the following three major areas:

- Airborne equipment and systems
- Flightcrew and maintenance personnel qualifications
- Lowered minimum procedures, including a maintenance/inspection program

C. Deviations. Deviations will not be made without coordination between the Avionics and Operations ASIs. All requests for deviations must be forwarded to the Air Carrier Training Branch, AFS-210 and the Airmen and Avionics Branch, AFS-350 by the Operations ASI. The applicant will be advised not to proceed in operating under its lower minimum proposal until the deviation request is resolved.

7. CATEGORY I OPERATIONS. The Avionics ASI's responsibilities for Category I authorizations are to evaluate the flight director and/or autopilot systems. The principal operations inspector (POI) is responsible for determining the overall suitability of an operator's Category I capabilities.

9. CATEGORY II EQUIPMENT APPROVAL UNDER PARTS 91 AND/OR 135 (9 OR LESS).

A. Lower Approach Minimum Approval. An application for lower approach minimum authority will specify the basis for the aircraft approval to conduct lower minimum approaches. This authority will be based on:

- Type certification and the Airplane/ Rotorcraft Flight Manual
- Supplemental type certification
- Operational evaluation
- Any acceptable combination of the above

B. Requirements for Category II Approval.

(1) Requirements for Category II approval for general aviation operators have been established in part 91, §§ 91.189, 91.191, 91.193, 91.205, and appendix A (see the note below). These sections specify:

- Required instruments and items of equipment
- Methods of approval
- Evaluation program conduct
- Calibration standards
- Maintenance/inspection programs

NOTE: Part 91, appendix A is not referenced in the appropriate sections of §§ 91.189, 91.191, and 91.193. This has created some doubt on whether or not the provisions of appendix A are binding for Category II/III operations. Appendix A is mentioned in § 91.205(f)(2)—however, that provision applies only to the required equipment. Without specific reference in the regulations to maintenance provisions in appendix A, we would conclude that there is no regulatory requirement to use appendix A.

(2) Advisory Circular (AC) 91-16, Category II Operations—General Aviation Airplanes, as amended, is available to assist operators in developing and obtaining approval of Category II equipment installations and maintenance/inspection programs.

C. Operational Evaluation Programs. Engineering coordination should be requested when necessary, particularly for those aircraft in which the functions and limitations of the automated systems are significant factors for safe operation.

D. Flight Director Systems. Avionics ASIs will be aware that single flight director systems with dual displays in which the second display repeats only the Instrument Landing System (ILS) information on the pilot's display will not meet the requirements for two ILS receiving systems.

E. Optional Avionics Equipment. Optional avionics equipment installed by the operator will either be approved in the field or referred to the Aircraft Certification Office (ACO) for an engineering evaluation. The evaluation can assist in determining if flight testing is required, what limitations may apply, and whether or not the installation may require a Supplemental Type Certificate (STC). If an STC is required, Avionics ASIs will assist in the accomplishment of a compliance and conformity inspection, as necessary, when requested by the ACO. Optional equipment that may be installed and require approval includes the following:

- Flight director systems
- Automatic throttle control systems
- Autopilot and approach coupler systems
- Speed control command systems
- System fault detection and warning systems
- Radio altimeters

F. Alterations. ASIs should carefully review proposals to alter installed avionics equipment required for a particular category of operation and handle them in accordance with established procedures. Each proposal should be evaluated for its affect on system performance, compatibility with the original standard, and compliance with Category II criteria.

(1) When manufacturer-proposed alterations to existing avionics equipment appear to be major, the ASI will verify the approval status before sanctioning incorporation of the change by the operator. If Federal Aviation Administration (FAA) approval of the alteration is not clearly indicated in the manufacturer's instructions, the operator will obtain such approval before performing the alteration.

(2) An Avionics ASI will exercise a cautious approach to field approval of alterations. Pressure from any source must not discourage the Avionics ASI from verifying that the alteration is being made in accordance with approved technical data and that the technical evaluation is clearly within the scope of the Avionics ASI's training, experience, and approval authority.

(3) ASIs will also carefully examine alterations originating in an operator's engineering department and, when necessary, refer them to the appropriate ACO.

11. CATEGORY II/III EQUIPMENT APPROVAL UNDER PART 121/135 (10 OR MORE).

A. Large Aircraft Criteria. Operators using large aircraft operating under part 121 will meet the requirements in this chapter.

NOTE: AC 120-28, Criteria for Approval of Category III Weather Minima for Takeoff, Landing, and Rollout, or AC 120-29, Criteria for Approval of Category I and Category II Weather Minima for Approach, as amended, are available to assist operators in developing and obtaining approval of Category II/III equipment installations and maintenance/ inspections programs.

B. Turbojet Criteria. All operators using turbojet aircraft must comply with the aircraft systems evaluation criteria that applies to part 121 operators. Applicants certificated under part 135 using turbojet aircraft will also use the aircraft equipment evaluation standards.

C. Systems Evaluation Approval. Systems evaluation approval should be accomplished in accordance with AC 91-16, 120-28, or 120-29, as applicable.

D. Category II/III .

(1) The aircraft requirements for lower landing minimums (LLM) include requirements for the total aircraft performance and associated systems. The acceptance of an aircraft in either category must be completely based on performance and approved FAA data.

(2) Upon receiving an operator's request for LLM authorization, the assigned Avionics ASI should immediately contact the type certificating office. This action is to determine whether the aircraft has been approved for such operation and what equipment and systems have been approved. If the aircraft has not been LLM certified, the ASI should request assistance from the appropriate ACO so that an application for an STC can be properly consolidated.

13. CONTINUOUS AIRWORTHINESS PROGRAM FOR LOWER LANDING MINIMUMS (LLM).

A. This chapter outlines the requirements for the continuous airworthiness program. This type of operation will need a detailed evaluation supported by well-defined maintenance, training, and reliability programs. All maintenance and reliability supporting documents become part of the accepted program. A monthly utilization/reliability summary will be established for the applicable aircraft and is given to the FAA for the initial data collection/demonstration period of 1 year. Quarterly reporting after the initial period will be accomplished in accordance with the certificate holder's reliability.

B. The initial program should also include appropriate programs identified in the Maintenance Review Board (MRB) document. The frequency of maintenance actions may be revised when sufficient experience has been gained to justify a change and when there is no conflict with the certification requirements. MRB-specified tasks and/or other approved maintenance procedures may be revised to ensure the required airborne equipment will continue to meet total system performance, accuracy, availability, reliability, and integrity for the operation.

C. The reliability of systems and/or components set forth as substantiation for the LLM certification becomes the performance criteria for the program.

(1) Controlled monitoring of the LLM system reliability will require that the operator, after initial evaluation, incorporate the pertinent systems and components into the approved reliability program. If the LLM system reliability does not meet the approved program, the operator will be allowed a reasonable time period in which to improve the reliability.

(2) The ACO responsible for the type certification should be advised when the monthly removal rate is exceeded and informed of the probable cause. The reliability reporting is necessary, when operational approval was based on probability analysis.

D. The maintenance manual will identify all special techniques, maintenance/inspection frequencies, and test equipment requirements to support the program. It will also specify the method of controlling the operational status of the aircraft. Those technicians qualified to release an aircraft for LLM must be identified.

E. The operator's procedures must include a method for manual distribution to assure availability to the appropriate maintenance facility.

F. Operators will show the method of approval of required equipment as listed in the maintenance portion of the manual.

G. The operator must provide an approved training and recurrent training program. The list of personnel must be current. All maintenance personnel authorized to carry out this approved maintenance program must have training on the applicable aircraft systems and the

approved policy and procedures of the certificate holder's approved LLM aircraft maintenance program authorization. Only those persons trained and qualified should be permitted to perform LLM maintenance/ inspections.

H. The operational demand for LLM airborne systems with exposure to numerous hidden functions requires that the aircraft be either periodically exercised or functionally checked. This is to ensure that all systems are operational and that no dormant failure has occurred. The initial program will provide either a periodic LLM approach or periodic system functional check.

I. Until sufficient experience and data is available (excluding the 6-month demonstration), it is recommended the aircraft status period not exceed 35 days. Failure to exercise the system by simulated LLM approach or functionally checking the system within 35 days should automatically place the aircraft in a non-LLM status. The aircraft must maintain this status until the required functional check is made.

15. PROGRAM DEVELOPMENT.

A. Initial Development. At the time of formal application, the Avionics ASI will begin to monitor development activity. Participation in all meetings with an applicant will usually require coordination with the Operations ASI. It is important for the operator to include all key personnel in any meetings.

B. The Operator's Lower Minimums Program. The operator's lower minimums program must be developed and the procedures used during the evaluation period. Part D operations specifications must reflect all special LLM maintenance requirements that were developed to support repetitive evaluation of LLM systems and equipment.

17. MAINTENANCE/ INSPECTION PROGRAMS. The proposed maintenance/ inspection programs must be tailored to the applicant's operations and maintenance organization. All maintenance and reliability supporting documents become part of the accepted program.

A. Requirements for Maintenance/Inspection Programs. Maintenance/inspection programs will provide for the proper maintenance and inspection of equipment and aircraft systems.

B. Control and Accountability. Emphasis will be placed on control and accountability of all areas associated with LLM approvals. These areas primarily encompass the following:

- Initial and recurrent training on flight guidance control systems
- The use of test equipment
- The differences in aircraft systems between aircraft in an operator's fleet
- Special procedures for airworthiness release and control of the aircraft approach status
- Initial and recurrent training in all areas of the lower minimums program
- Training for new personnel and equipment types

C. Operational Status of the Aircraft. The method for controlling the operational status of the aircraft lower minimum required equipment must ensure that flight, dispatch, and maintenance personnel are kept aware of the current status.

D. Purchase of Avionics Equipment "Package" Installations. Some manufacturers and repair stations may develop general aviation maintenance/inspection programs in conjunction with their Category II avionics equipment installation "package." The contents of such programs should be thoroughly evaluated for compliance and maintainability with LLM regulations.

E. Requalification Procedures. The program must include procedures for requalification of an aircraft for lower minimums following maintenance on any required system. This must include tests after replacements, resetting in rack, and interchange of components.

F. Approval. The Avionics ASI will indicate approval of the maintenance program portion of the operator's Category II/III manual by signing and dating each page of the program.

19. MAINTENANCE TRAINING PROGRAMS. Avionics ASIs, during the course of normal surveillance, will evaluate the maintenance facilities performing Category II/III equipment maintenance to ensure that the training provided meets the requirements of lower minimum standards.

21. EXISTING CONTINUOUS AIRWORTHINESS PROGRAMS.

A. Programs can be developed to be compatible with the existing maintenance/inspection program, as

long as there is a clear distinction between normal and lower minimum requirements.

B. When an operator's proposal is based on an existing maintenance/inspection program, the ASI must ensure that all procedures will provide for the lower minimums program requirements. Caution will be exercised when an applicant has used a program approved for use by another operator for developing its own.

C. The following areas of the proposal and or existing programs will be closely reviewed:

- The existing maintenance or inspection program
- The existing reliability program
- The training program
- The initial evaluation checks for existing aircraft and for new aircraft
- The existing parts pool, borrowed parts procedure, and control of spare parts

D. An operator's existing reliability program may be accepted when shown to be adequate for its lower minimum operations.

23. TEST EQUIPMENT AND STANDARDS.

A. Performance Standards, Tolerances, and Calibration Procedures.

(1) Performance standards, tolerances, and calibration procedures applicable to ILS equipment have been adequately covered by:

- Technical Standard Orders (TSO)
- Radio Technical Commission of Aeronautics (RTCA) documents
- Manufacturers' instruction manuals

(2) These standards or their equivalent are generally considered acceptable for inclusion in maintenance/inspection programs for equipment operated to landing minimums of Category I. Such standards may not be adequate for Category II/III. Those, which will not provide category system performance, will be revised to provide the required level of performance.

B. LLM Tolerances. In many cases, the tolerances for Category II/III airborne equipment are more rigid than those for Category I. Therefore, the equipment used to inspect, test, and bench check Category II/III equipment may require more frequent test and calibration.

C. Established Standards and Tolerances. Standards and tolerance established in the maintenance/inspection program for testing and calibrating airborne equipment and systems that are required for Category II/III operations will not be relaxed following program approval without adequate substantiation that system performance will not be degraded.

D. Built-In Test Equipment (BITE) Test and Return to Service.

(1) The BITE test is a maintenance tool that can be used for return to service if certified by the aircraft manufacturer. The proper procedure for return to service is to perform an operational ground or functional flight check. The procedures in the manufacturer's maintenance manual, including the provisions of BITE, the fault isolation manual, the aircraft maintenance manual, and the operator's FAA-approved minimum equipment list are all essential portions in the process for an aircraft to be returned to service.

(2) For those aircraft for which BITE is minimal or non-existent or that have a mix of digital and analog equipment, then a more comprehensive functional test using test procedures and equipment prescribed in the manufacturer's maintenance manual will need to be accomplished before approval to return to service. On repeat discrepancies, the functional test must consist of the most comprehensive test in the maintenance manual for aircraft that have different levels of test complexities.

(3) The Category II/III maintenance manual will address the procedures for return to service.

25. MAINTENANCE PERIOD EXTENSIONS—GENERAL AVIATION.

A. Applications For Extensions.

(1) The Flight Standards District Office (FSDO) will consider applications for extensions of maintenance periods for general aviation operators at the completion of one maintenance cycle of at least 12 calendar months. Operators should apply to the FSDO having jurisdiction of the area in which the operator is located.

(2) The FSDO will consider the following factors in granting an extension:

- Records of Category II approaches due to malfunctioning equipment
- Number of Category II approaches (actual and simulated)
- Maintenance records of Category II equipment failures
- Service history of known trends toward malfunctioning
- Unit mean time between failures
- Records of functional flight checks

B. Check, Test, and Inspection Extensions. Extensions to the check, test, and inspection periods may be granted if factors indicate that the performance and reliability of the Category II/III instruments and equipment will not be adversely affected. General aviation extension periods, in most cases, would be one calendar month for tests, inspections, and functional flight checks, and four calendar months for bench checks. The operator's program should include procedures for obtaining the extensions.

C. Increased Extension Periods. The extension periods suggested in paragraph 25B may be increased at the discretion of the Avionics ASI.

27. FUNCTIONAL FLIGHT CHECKS. Some operators have submitted programs that provide for functional flight checks. This procedure must not be approved unless all airworthiness requirements have been satisfied before dispatch. In no instance can a functional flight check be substituted for the certification of complete systems or equipment operation.

29. REPORTS AND RECORDS.

A. Responsibilities of Recordkeeping. The owner/operator's organization will provide training to persons responsible for these reports in appropriate parts of the proposed LLM program.

B. Category III or Any Autoland Category. Operators authorized for any Autoland category will provide reports of airborne equipment malfunctions during actual approaches. They will submit the reports on a yearly basis to the FAA or at any time the malfunctions significantly affect the Autoland capability.

SECTION 2. PROCEDURES

1. PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites:

- Knowledge of the regulatory requirements of parts 91, 121, 125, 129, and 135, as applicable
- Successful completion of the Airworthiness Inspector Indoctrination course(s), or previous equivalent

B. Coordination. This task requires coordination with the Avionics and Operations ASIs, the applicant, and ACO, if necessary.

3. REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- 14 CFR parts 23, 25, and 61
- AC 91-16, Category II Operations—General Aviation Airplanes
- AC 120-28, Criteria for Approval of Category III Weather Minima for Takeoff, Landing, and Rollout
- AC 120-29, Criteria for Approval of Category I and Category II Weather Minima for Approach

B. Forms. None.

C. Job Aids:

- JTAs: 3.3.33, 3.3.144

5. PROCEDURES.

A. Review the Maintenance/Inspection Program. Review the applicant's maintenance/inspection program to ensure that it contains control and accountability over the following:

(1) All maintenance accomplished on lower minimum required systems and equipment.

(2) All alterations to systems and equipment.

(3) Approach status of each aircraft at all times.

(4) Return to service procedures to upgrade aircraft to Category II/III status.

(5) Spare equipment.

(6) Maintenance calibration, use of test equipment, records/reporting requirements.

(7) Repetitive and chronic discrepancies to ensure the affected aircraft remains out of lower minimums approach status until positive corrective actions is made.

(8) All aircraft in the fleet that have not been evaluated for lower minimums approaches.

B. Review the Existing Maintenance/Inspection Programs. Ensure that the existing maintenance/ inspection program has procedures for the following:

(1) Identifying chronic discrepancies and corrective action followup.

(2) Keeping aircraft with chronic and/or repetitive discrepancies out of a lower minimum status until positive corrective action is taken.

(3) Training maintenance personnel assigned to reliability analysis.

(4) Conducting initial evaluation checks for existing aircraft and for new aircraft to the fleet before inclusion in the operator's lower minimum operations.

(5) A means for identifying all Category II/III components used in the applicable aircraft systems in the existing parts pool, parts borrowing procedure, and control of spare parts.

(6) Ensuring that calibration standards for all test equipment used for maintaining lower minimum systems and equipment are met.

(7) Ensuring that each flightcrew and persons with operational dispatch authority are aware of any equipment malfunction that may restrict lower minimum operations.

(8) Submitting any changes to the LLM maintenance program to the FAA for acceptance and approval by the principal avionics inspector (PAI) before any changes are adopted.

C. Review the Functional Flight Checks. If a functional flight check has been submitted, ensure that the following information is included:

(1) Maintenance clearance and/or concurrence before an aircraft is returned to a lower minimum

status, even if the functional flight check was found to be satisfactory.

(2) Request for a flight check by maintenance in the aircraft log.

(3) Maintenance entry acknowledging the results and the action taken.

D. Evaluate the Supporting Data. Unless the applicant provides supporting approval data, the Avionics ASI will coordinate with the Operations ASI and the ACO responsible for the type certificate to determine the acceptability of each aircraft for the authorizations requested.

E. Review the Minimum Equipment List (MEL). Appropriate sections of the MEL must be revised to identify Category II/III required systems and special procedures, if applicable.

F. Review the Personnel Training Requirements. Ensure there are procedures for the following:

(1) All maintenance personnel involved and authorized to carry out this approved maintenance program must have initial and recurrent specialized training on the applicable aircraft systems and the approved policy and procedures of the certificate holder's approved LLM aircraft maintenance program authorization.

(2) Ensuring personnel contracted to perform Category II/III related maintenance are qualified and the program requirements are made available to these persons.

(3) Personnel not qualified to perform maintenance on Category II systems and equipment, including flightcrew and dispatch, will be trained in the airworthiness release requirements of the lower minimums program.

7. TASK OUTCOMES.

A. Complete PTRS.

B. Complete the Task. The POI has the primary responsibility to grant the operator approval for lower minimums after concurrence from the Flight Technologies and Procedures Division, AFS-400. It is the Avionics ASI's primary responsibility to evaluate and approve the Category II/III maintenance requirements and associated support programs after concurrence of the Aircraft Maintenance Division, AFS-300. Successful completion of this task will therefore consist of coordination with the Operations ASI for sending all original Category II and III documentation to AFS-400 for review and concurrence.

9. FUTURE ACTIVITIES. None.

[CHAPTER 6 RESERVED]

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CHAPTER 7. MINIMUM EQUIPMENT LISTS AND CONFIGURATION DEVIATION LISTS

SECTION 1. BACKGROUND

1. PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

A. Maintenance: 3312 (initial), 3313 (revision)

B. Avionics: 5312 (initial), 5313 (revision)

3. OBJECTIVE. Minimum Equipment Lists (MEL) were developed to allow the continued operation of an aircraft with specific items of equipment inoperative under certain operational circumstances. The Federal Aviation Administration (FAA) has found that for particular situations, an acceptable level of safety can be maintained with specific items of equipment inoperative for a limited period of time, until repairs can be made. The MEL document describes the limitations that apply when an operator wishes to conduct operations when certain items of equipment are inoperative. In 1964, the FAA established and adopted the MEL program for Title 14 of the Code of Federal Regulations (14 CFR) part 121 operations. In 1978, 14 CFR part 135 multiengine aircraft operations were included in the MEL program; in 1991, part 135 single-engine operations were included.

5. GENERAL. Section 1 of this chapter contains definitions and a general overview of the MEL system. Section 2 contains information on the development and approval process of master minimum equipment lists (MMEL). Section 3 contains information and guidance on developing and approving MELs. Section 4 contains information and guidance for aviation safety inspectors (ASI) on MEL use during operations. Section 5 contains information and guidance for ASIs on how the MMEL Subsystem works as an automated method to retrieve the MMEL. Section 6 contains information about the development, approval, and usage of the CDL. Section 7 contains information on approving MELs for part 125 operators. Section 8 contains procedures for approving MELs of part 125 operators. Section 9 contains maintenance and MELs for foreign operators of U.S.-registered aircraft. Section 10 contains information on approval/revision of part 91, § 91.213 MELs. Section 11 contains procedures for approving MELs of part 129 operators. Certain FAA technical groups, boards, and national resources related to these topics are referred to throughout this chapter.

7. APPLICABILITY. This chapter applies to those operators operating N-registered aircraft in accordance with 14 CFR parts 121, 129, and 135. Separate guidance exists for MMELs for 14 CFR parts 91 and 125 operators in FAA Order 8700.1, General Aviation Operations Inspector's Handbook.

9. PRINCIPAL MAINTENANCE INSPECTOR'S (PMI) RESPONSIBILITIES. The PMI is the primary FAA official responsible for the overall process of evaluating and approving an operator's MEL manual. The PMI or the principal avionics inspector (PAI) is the primary FAA official responsible for the overall MEL management program. It is essential that the PMI work together with the PAI, the principal operations inspector (POI), and other individuals or groups involved in this process. Should any of the principal inspectors (PI) require additional *technical* information related to a specific MEL *item*, he or she should consult the Flight Operations Evaluation Board (FOEB) chairman responsible for the aircraft.

11. DEFINITIONS. The following definitions are used throughout this chapter:

A. Aircraft Evaluation Group (AEG). The AEG is the Flight Standards Point of contact with aircraft certification and is responsible for the development, revision and publication of an MMEL for those aircraft within its area of responsibility.

B. Airplane Flight Manual (AFM)/Rotorcraft Flight Manual (RFM). The approved flight manual is the document approved by the responsible FAA Aircraft Certification Office (ACO) during type certification. The approved flight manual for the specific aircraft is listed on the applicable type certificate data sheet (TCDS). The approved flight manual is the source document for operational limitations and performance parameters for an aircraft. The term "approved flight

manual" can apply to either an AFM or an RFM. The FAA requires an approved flight manual for aircraft type certification.

C. The Aircraft Maintenance Manual (AMM). The AMM is the source document for aircraft maintenance procedures. The term AMM can apply to either an airplane or a rotorcraft manual. The FAA requires an AMM for aircraft certification.

D. Air Transportation Division Web Site, OpSpecs.com. The Air Transportation Division, AFS-200, operates a Web site that provides MMEL policy information and current MMELs to the public. The Web site address is http://www.opspecs.com.

E. Air Transport Association of America (ATA) Specification 2200. ATA Spec 2200, Manufacturers' Technical Data, is an international industry numbering standard developed to identify systems and components on different aircraft in the same format and manner.

F. Configuration Deviation List (CDL). Aircraft certified under the provisions of Civil Air Regulations (CAR) 4b, 14 CFR part 23 or 25, and intended for use under part 121 or 135 may be approved for operations with missing secondary airframe and engine parts. The aircraft source document for such operations is the CDL. The ACO grants approval of the CDL under an amendment to the type certificate (TC). For U.S.-certificated aircraft, the CDL is incorporated into the limitations section of the approved flight manual as an appendix. (See section 6 for more information.)

G. Flight Operations Evaluation Board (FOEB). An FOEB is a board of FAA personnel assigned for each type of aircraft. The FOEB is composed of FAA personnel who are operations, avionics, airworthiness, and aircraft certification specialists. The FOEB develops an MMEL for a particular aircraft type under the direction of the AEG and AFS-200.

H. Flight Operations Policy Board (FOPB). An FOPB provides direction, guidance, and policy for the FOEB. An FOPB consists of AEG managers and representatives from AFS-200 and AFS-800.

I. Flight Standardization Board (FSB). An FSB is an designated group of operations inspectors who determine type rating, certification and training requirements for new or modified aircraft.

J. Inoperative. Inoperative means that a system or component has malfunctioned to the extent that it does not accomplish its intended purpose and/or is not consistently functioning normally within its approved operating limits or tolerances.

K. Master Minimum Equipment List (MMEL). The MMEL is a list of equipment that the FAA has determined may be inoperative under certain operational conditions and still provide an acceptable level of safety. The MMEL contains the conditions, limitations and procedures required for operating the aircraft with these items inoperative. The MMEL is used as a starting point in the development and review of an individual operator's MEL.

L. MMEL Subsystem. The MMEL Subsystem is a computerized component of the Aviation Safety Analysis System (ASAS), which automates the process of creating, revising, approving, and distributing MMELs.

M. Minimum Equipment List (MEL). The MEL is derived from the MMEL and is applicable to an individual operator. The operator's MEL takes into consideration the operator's particular aircraft configuration, operational procedures and conditions. When approved and authorized for use, the MEL permits operation of the aircraft under specified conditions with certain inoperative equipment.

N. Proposed MMEL. The proposed MMEL is a list developed by the manufacturer or operator that is submitted to the FOEB as a basis for the development of an MMEL.

13. MEL PURPOSE. The CFRs require that all equipment installed on an aircraft in compliance with the airworthiness standards and the operating rules must be operative. However, the rules also permit the publication of an MEL where compliance with certain equipment requirements is not necessary in the interests of safety under all operating conditions. Experience has shown that with the various levels of redundancy designed into aircraft, operation of every system or installed components many not be necessary when the remaining operative equipment can provide an acceptable level of safety. Parts 121, 129, and 135 allow the continued operation of an airplane as long as an MEL exists for that airplane. Based upon particular aircraft equipment configurations, operational conditions and the applicable conditions and limitations contained in an approved MEL and the OpSpecs authorizing its use, an airplane may be

operated with certain instruments and equipment in an inoperable condition.

15. ITEMS LISTED ON THE MEL. Categories of items that may be contained in the operator's MEL:

- MMEL items
- Passenger convenience items
- Administrative control items
- Any other particular aircraft equipment configurations for operational conditions

A. MMEL Items. The MEL will list all of the MMEL items for which the operator seeks relief and that are appropriate for its operation. The operator, by not listing at its discretion certain items in its MEL, may be more restrictive than permitted by the MMEL.

B. Passenger Convenience Items. The passenger convenience items, as contained in the operator's approved MEL, are those related to passenger convenience, comfort, or entertainment, such as, but not limited to, galley equipment, movie equipment, in-flight phones, ashtrays, stereo equipment, and overhead reading lamps. It is incumbent on the operator and the PI to develop procedures to ensure that those inoperative passenger convenience items are not used. Passenger convenience items do not have fixed repair intervals. Items addressed elsewhere in the MMEL shall not be authorized relief as a passenger convenience item. "M" and "O" procedures may be required and should be developed by the operator, approved by all three assigned PIs, and included in the air carrier's appropriate document.

C. Administrative Control Items. An operator may use an MEL as a comprehensive document to control items for administrative purposes. In such cases, the operator's MEL may include items not listed in the MMEL; however, relief may not be granted for these items unless conditions and limitations are contained in approved documents other than the MMEL or meet the regulatory requirements of 14 CFR. Examples of items considered to be administrative control items would be cockpit procedure cards, medical kits, delaminated windshields, and lifevests.

17. INOPERATIVE EQUIPMENT. The MEL is intended to permit the continued operation of an aircraft with certain inoperative items for a limited period of time to allow the operator the time to bring together parts, maintenance personnel, and aircraft at a specific time and place for the needed repairs.

A. Repair Interval. Operators must make repairs within the time period specified by the MEL. Although the MEL might permit multiple days of operation with certain inoperative equipment, operators must repair the affected item as soon as possible.

B. Day of Discovery. The day of discovery is the calendar day an equipment malfunction was recorded in the aircraft maintenance log or record. This day is excluded from the calendar days or flight days specified in the MMEL for the repair of an inoperative item of equipment. This provision is applicable to all MMEL items, such as categories A, B, C, and D. The operator and the PIs must establish a reference time in which the calendar day or flight day begins and ends 24 hours later. This reference time is established to ensure compliance with timely repair of equipment and items.

C. MMEL Definitions. More than one set of MMEL definitions exist due to years of evolving changes during which not all MMELs have been updated to the latest revision of the definitions. However, only one set of definitions may be used with a specific MMEL. The most up-to-date definitions reside in MMEL Policy Letter 25 (PL-25), Policy Concerning MMEL: Definitions. Only certain portions of the latest definitions may be appropriate for a specific air carrier's MEL. Definitions found in global changes, such as administrative control and repair intervals, may be adopted by the operator.

D. Continuing Authorizations. Approval of an MEL authorizes an operator to use a continuing authorization to approve extensions to the maximum repair interval for category B and C items, provided the responsible Flight Standards District Office (FSDO) is notified within 24 hours of the operator's exercise of extension authority. The certificate holder is not authorized to extend the maximum repair time for category A and D items, as specified in the approved MEL. Misuse of the continuing authorization may result in an amendment of the operator's OpSpecs by removing the operator's authority to use an MEL.

19. RECORDKEEPING.

A. Parts 121 and 135 require that:

(1) All mechanical irregularities occurring during flight time are entered in the maintenance log of the airplane.

(2) Records identifying the inoperable instruments and equipment and the information that

provides for the operation of the airplane with certain instruments and equipment in an inoperable condition must be available to the pilot.

B. Part 129 requires that the aircraft records available to the pilot must include an entry describing the inoperable instruments and equipment.

21. MULTIPLE INOPERATIVE ITEMS. While many individual MEL requirements are designed to provide coverage for single failures, its interface with other instruments, equipment, or systems may be dependent upon the now inoperative item. This now may render another system inoperative required for a specific operation. When operating with multiple inoperative items, the operator should consider the interrelationships between those items and the effect on aircraft operation, crew workload, particular aircraft equipment configurations, operational conditions, including consideration of a single additional failure occurring en route.

23. FLEET APPROVAL. An operator who has a single MEL for multiple aircraft may reflect equipment in its MEL that is not installed on all aircraft in its fleet. In this case, the item's title in the operator's MEL need not reference any specific airplane identification (usually registration number) unless the operator determines that there is need to do so. See AFS-200 Policy Letter 70 (PL-70), Definitions Required in MELs, for additional information.

25. AIR CARRIER MANUAL INSTRUCTIONS—CONDITIONS AND LIMITATIONS.

A. Inclusion in Operational Documents. MEL conditions and limitations must be included in the air carrier's operational documents. This requirement must be included in but not limited to the Flightcrew Manual, Flight Operations Manual, and the Flight Attendant Handbook.

B. Manual Instructions and Actions. Some items/systems listed in the MMEL/MEL contain standard phrases such as "provided alternate, normal and emergency procedures, and/or operating restrictions are established and used." The intent of this such proviso is to insure that incumbent air carriers develop the necessary manual instructions and appropriate actions to be followed by all concerned personnel.

C. Policy.

(1) When operating in accordance with the MEL, the communications equipment (whether inoperative or functional) used between the flight deck and the flight attendants requires specific instructions for inclusion in the appropriate air carrier's manuals (the Flightcrew Manual, Flight Operations Manual, and Flight Attendant Handbook). In some cases it may be appropriate to include such instructions in the operators MEL "O" procedure. Instructions in these manuals concerning specific inoperative equipment situations must be consistent with instructions in the other manuals.

(2) To ensure a clear understanding of the action to be taken in emergency or abnormal situations, the pilot-in-command (PIC) will brief the flightcrew, lead flight attendant and/or concerned flight attendants on the procedures to be followed. Examples of methods of cockpit notification to cabin could include various cockpit combinations such as cabin chimes to indicate different events, use of a separate evacuation signaling system, PA announcements, etc. The briefing is to ensure that when cabin/flight deck communication equipment becomes inoperative, procedures to be followed for each event listed can be carried out:

(a) Fire and/or smoke in the flight deck or passenger cabin.

(b) Hijacking.

(c) Ditching.

(d) Emergency landing.

(e) Evacuation of the passenger cabin/rejected takeoff evacuation.

(f) Passenger problem (medical/disturbance).

NOTE: It is not the FAA's intention to impose a requirement to prevent a flight attendant from opening the flight deck door to report an emergency situation.

D. MEL Access. The regulations require that the MEL be carried aboard the aircraft or that the flightcrew have direct access to the MEL information prior to flight. Other means of direct access require FAA approval.

27. CONFLICT WITH OTHER FAA-APPROVED DOCUMENTS. The MEL may not conflict with other FAA-approved documents such as the approved flight manual limitations, emergency procedures, and Airworthiness Directives (AD). The operator's MEL may be more restrictive than the MMEL, but *under no circumstances* may the operator's MEL be less restrictive.

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SECTION 2. MMEL DEVELOPMENT AND APPROVAL PROCESS

1. GENERAL. This section contains information for ASIs concerning the development, approval, and revision process of MMELs.

3. PROPOSED MMEL. The first requirement for producing an initial MMEL is the development of a proposed MMEL that reflects the manufacturer or operator's concepts of which items can be inoperative. The FAA encourages the aircraft manufacturer to develop a proposed MMEL during the aircraft certification process. The aircraft manufacturer coordinates with the AEG and the aircraft operators throughout the proposed MMEL development process. Manufacturers and operators seeking consideration for relief for operating with certain items of equipment inoperative must provide supporting documentation that sufficiently substantiates their request. In addition to including an evaluation of the potential outcome of operating with items that are inoperative, this documentation should consider the subsequent failure of the next critical component, the interrelationships between items that are inoperative, the impact on approved flight manual procedures, and the increase in crew workload. The proposed MMEL must not conflict with the approved flight manual limitations, emergency procedures, configuration maintenance procedures (CMP), or ADs. The proposed MMEL should specify suitable limitations in the form of placards, maintenance procedures, crew operating procedures, and other restrictions as necessary to ensure an acceptable level of safety. To substantiate these considerations, the manufacturer must provide demonstrations that include evaluation flights as necessary. AEG participation or observation in demonstration flights may be required and should be scheduled in conjunction with the certification test program or the FSB's operational evaluation, whenever possible. In a format acceptable to the Administrator, the manufacturer develops the proposed MMEL, which is submitted to the AEG for review.

5. INITIAL MMEL APPROVAL PROCESS. To initiate the MMEL approval process, the AEG schedules FOEB meetings to review and evaluate the proposed MMEL for technical accuracy and acceptability. Interested parties, such as the manufacturer, operators, and interested aviation community representatives, are invited to participate in these meetings. The FOEB discusses each proposed MMEL item with the interested participants and recommends approval, modification, or disapproval for each item. If consensus cannot be reached, an item may be held open for further consideration or until more information is gathered. The manufacturer or operator must resubmit, with additional justification, items not acceptable or held open by the FOEB. The proposed MMEL is the initial manufacturer and AEG working document used to develop the draft MMEL and establishes the working relationship between the initial operators and the FOEB chairman. The FOEB chairman arranges to have the draft MMEL put on http://www.opspecs.com for operator and industry review and then will receive comments within the time period indicated. The FOEB will review and discuss the recommendations and comments and revise the draft MMEL as necessary. After ensuring that the coordination of the draft MMEL with the field and industry has been properly completed, AFS-200 will post the MMEL to http://www.opspecs.com.

7. MMEL REVISION PROCEDURES. While an MEL is approved at the district office level, an MMEL revision is reviewed and approved by the appropriate AEG. An individual operator, the FAA, or industry may request changes to an MMEL. The AEG will consider those items requested by users based on operational considerations that indicate needed relief. Proposed changes that are generated by an operator should be submitted through the POI when the need becomes apparent. Proposed changes are forwarded by the POI, with recommendations, to the appropriate AEG for consideration at the next scheduled FOEB meeting or electronic FOEB via http://www.opspecs.com. MMEL revisions are either interim, global, or standard. A description of the types of MMEL revisions is contained in section 4 of this chapter. Revisions to the MMELs are approved in the same manner as initial MMELs; that is, after AFS-200 has ensured that proper coordination has been completed, they post the revision on http://www.opspecs.com for industry to revise individual MELs.

9. LEAD AIRLINE CONCEPT. For certain air carrier airplanes, an air carrier representative will be designated by industry as the lead airline representative to coordinate with the aircraft manufacturer, other operators, and the FOEB chairman. The purpose of the lead airline representative is to expedite the FOEB process and

MMEL revision for the affected airplane. The lead airline representative will conduct coordination meetings, as required, and will develop the FOEB agenda in a manner acceptable to the FOEB chairman. The lead airline representative will also coordinate industry participation at the FOEB meeting and will assist the manufacturer and the FOEB chairman in finalizing the MMEL revision after the meeting.

FIGURE 7-1. SAMPLE OPSPEC D095

SAMPLE

D095. Minimum Equipment List (MEL) Authorization

The certificate holder is authorized to use an approved Minimum Equipment List (MEL) provided the conditions and limitations of this paragraph are met. The certificate holder shall not use an MEL for any aircraft that is not specifically authorized by this paragraph.

a. Authorized Aircraft. The certificate holder is authorized to use an approved MEL for the aircraft listed below provided the conditions and limitations of this paragraph are met:

Aircraft M/M/S
TABL01

b. Maximum Times Between Deferral and Repair. Except as provided in subparagraph d, the certificate holder shall have items repaired within the time intervals specified for the categories of items listed below:

(1) Category A. Items in this category shall be repaired within the time interval specified in the remarks column of the certificate holder's approved MEL.

(2) Category B. Items in this category shall be repaired within 3 consecutive calendar days (72 hours) excluding the calendar day the malfunction was recorded in the aircraft maintenance log and/or record.

(3) Category C. Items in this category shall be repaired within 10 consecutive calendar days (240 hours) excluding the calendar day the malfunction was recorded in the aircraft maintenance log and/or record.

(4) Category D. Items in this category shall be repaired within one hundred and twenty (120) consecutive calendar days (2,880 hours), excluding the day the malfunction was recorded in the aircraft maintenance log and/or record.

c. MEL Management Program. The certificate holder shall develop and maintain a comprehensive program for managing the repair of items listed in the approved MEL. The certificate holder shall include in a document or its manual a description of the MEL management program. The MEL management program must include at least the following provisions:

(1) A method which provides for tracking the date and when appropriate, the time an item was deferred and subsequently repaired. The method must include a supervisory review of the number of deferred items per aircraft and a supervisory review of each deferred item to determine the reason for any delay in repair, length of delay, and the estimated date the item will be repaired.

(2) A plan for bringing together parts, maintenance personnel, and aircraft at a specific time and place for repair.

(3) A review of items deferred because of the unavailability of parts to ensure that a valid back order exists with a firm delivery date.

(4) A description of specific duties and responsibilities by the job title of personnel who manage the MEL management program.

(5) Procedures for controlling extensions to specified maximum repair intervals as permitted by **subparagraph d,** to include the limit of the extension, and the procedures to be used for authorizing extensions.

FIGURE 7-1. SAMPLE OPSPEC D095--CONTINUED

d. The certificate holder is authorized to use a continuing authorization to approve extensions to the maximum repair interval for category B and C items as specified in the approved MEL provided the responsible Flight Standards District Office is notified within 24 hours of any extension approval.

The certificate holder is not authorized to approve any extensions to the maximum repair interval for category A items or category D items as specified in the approved MEL. The Flight Standards District Office may deny the use of the continuing authorization if abuse is evident.

TEXT99

SECTION 3. MEL APPROVAL PROCESS FOR PART 121 AND 135 OPERATORS

1. GENERAL. This section contains specific direction, guidance, and procedures to be used by ASIs when evaluating and approving MELs. An MEL is developed by the operator from the appropriate MMEL, particular aircraft equipment lists configurations, and operational conditions approved by the FAA. Each MEL is approved by the FAA and authorized for use by issuing D095 OpSpecs.

3. MEL ACCEPTABILITY. The general criteria for MEL acceptability are as follows:

A. Equally or More Restrictive. The operator's MEL must not be less restrictive than the MMEL, the CFRs, the OpSpecs, the approved flight manual limitations, certification maintenance procedures, or ADs.

B. Appropriate. The MEL must be appropriate to the individual aircraft make, model, series and equipment installed.

C. Specific. The certificate holder's operations "O" and maintenance "M" procedures must be specific to the aircraft make, model, series, and particular aircraft equipment configurations, and operational.

D. Applicability. An MEL should be applicable for the CFRs under which the operator is certificated.

5. INITIAL PHASE OF MEL APPROVAL. In this phase of the MEL approval process, the operator should consult with the three assigned PIs regarding requirements for either developing an MEL or for revising an existing MEL. During the review of the "O" and "M" procedures, the POI, PMI, and PAI may consult with the FOEB chairman as necessary concerning specific procedures. When the FOEB chairman determines that additional engineering support is necessary, the FOEB chairman will contact the appropriate ACO and provide that information to the PI.

A. Operator Familiarization. In phase one of the MEL approval process, the PIs should determine the scope of the task, based on the operator's experience with MELs. PIs should adapt the discussion to fit the operator's needs and experience, and should provide advice and guidance to the operator as necessary. PIs must ensure that the operator clearly understands that MEL document preparation is solely the operator's responsibility. The operator must review its proposed or approved OpSpecs for its specific type, kind, route and area of operations authorized and required equipment to be included in the MEL.

B. Required Document Submittal. PIs should advise the operator that for an MEL to be approved, the following documents must be submitted:

(1) Current equipment list for each make, model, series aircraft that is to be included in the MEL or revisions.

(2) The proposed MEL or MEL changes.

(3) Necessary "O" and "M" procedures, which may be based on the aircraft manufacturer's recommended procedures, Supplemental Type Certificate (STC) modifier's procedures, or equivalent operator procedures.

(4) A document or the portions of its section 121.133 required manuals for each group of personnel (section 121.135(b)) that includes its comprehensive program for managing the repair of items listed in the proposed or revised MEL, as appropriate.

(5) Any other parts of its manual that includes duties, responsibilities, authority, policies, procedures, instructions, or information for crewmembers, ground, maintenance, and management personnel with regard to handling of MEL items covering sections 121.133, 121.563, 121.701, and 121.709.

(6) A description in its section 121.367 required inspection program and its program covering MEL items that ensures that:

(a) The maintenance performed by it, or by other persons, is performed in accordance with the requirements of their manual.

(b) Competent personnel are provided for the proper performance of that maintenance.

(c) Each aircraft released to service is airworthy and has been properly maintained for their operation.

NOTE: Several manufacturers have produced manuals of recommended procedures for operating with inoperative equipment. The Lockheed and McDonnell Douglas MEL Procedures Manual and the Boeing Dispatch Deviation Guide (DDG) are examples of these manuals. Title 14 CFR parts 23 and 27

manufacturers normally do not publish procedures manuals. When a manufacturer's recommended procedures exists, operators may use them or may develop alternate procedures. When contract services are used to develop the operator's MEL along with acceptable "O" and "M" procedures, the PIs should review the "O" and "M" procedures in light of the type of operations being conducted and should ensure the acceptability of the procedures. The PIs should ensure that the operator could adequately implement the developed MEL procedures.

C. Materials Provided to the Operator. A computer copy of the MMEL is accessible to FSDOs through the MMEL Subsystem as discussed in section 5 of this chapter. However, it is preferred that the operators obtain a copy of the MMEL by computer and modem directly from http://www.opspecs.com. If the MMEL is furnished to the operator on computer disk, the MMEL should be in standard text format. This allows the operator to use different word processing packages and different types of computers when editing the document. The PIs should provide the operator with one of the following:

(1) The Internet address (http://www.opspecs.com) for direct computer;

(2) Modem access to the MMEL and related information;

(3) A computer disk containing the appropriate MMEL (computer disk to be provided by the operator); or

(4) A hardcopy of the MMEL document and appropriate guidance material (as a last resort).

D. Document Form. The operator may submit MEL draft documents to the FAA either on hardcopy (printed on paper) or on computer disk, as mutually agreed upon between the operator and the PIs. The operator and the PIs should discuss the techniques that will be used for revising and editing the proposed document. It is important that the operator understand that when the process is complete, the final proposed MEL must be submitted on paper unless otherwise approved by the Administrator.

E. MEL Format. The MMEL format has been standardized to facilitate the development, revision, and approval of both master and operator documents.

F. Generic Single-Engine MMELs. A generic MMEL for single-engine aircraft was developed and published by the FAA. This MMEL is applicable to all single-engine airplanes and helicopters for which a specific MMEL has not been issued. When an operator is approved to use this generic MMEL, and a specific MMEL for the individual aircraft type is subsequently issued, the operator's MEL must be revised within the specified timeframe to conform to the specific MMEL.

7. DEMONSTRATION PHASE. A demonstration phase is normally not required for an MEL approval. When an operator is developing an MEL in conjunction with original certification for initial issuance of an operating certificate, or when instituting service with a new aircraft type, a demonstration of the operator's ability to use an MEL may be conducted during any required aircraft proving tests.

9. FINAL PHASE OF THE MEL APPROVAL PROCESS. The final phase begins when the operator formally submits the proposed MEL or MEL changes to the PI. The PI should initially review the operator's submittal to verify that it is complete and contains the required elements.

A. Unacceptable Submittal. If the PI finds the proposed MEL package to be incomplete or unacceptable at this time or at any other juncture in the approval process, the PI should contact the operator. A sample letter is provided in Figure 7-2. If a mutually acceptable correction cannot be immediately agreed upon, the entire package must be immediately returned to the operator, or its representative, along with an explanation of the problems found within the documents.

B. Acceptable Submittal. If the PI finds the proposed MEL package to be complete and to contain the required information in an acceptable format, the detailed analysis begins. If the operator does not currently have an MEL program, its MEL management program must also be reviewed for acceptability. Inspectors should examine the technical content and quality of the proposed MEL document and other supporting documents and procedures as follows.

(1) Timely Review. PIs should promptly address all deficiencies and notify the operator of any discrepancies or outstanding issues. The PI and the operator may informally coordinate by telephone to clarify minor discrepancies or misunderstandings.

(2) Reference Material. Inspectors should use the MMEL, current aircraft equipment list, and OpSpecs as the primary reference document when reviewing and approving the MEL. In addition, inspectors should use the following references:

- Related CFRs
- Appropriate advisory circulars (AC)
- Approved flight manual
- Operator's OpSpecs
- Operator's manuals
- MMEL policy letters

(3) Coordination with Technical Groups. During this phase, the PI may wish to coordinate with the appropriate AEG.

(4) Change in Schedule. If certain MMEL items must be addressed within a specific timeframe, the PI should notify the operator of this requirement as soon as possible. If the operator is unable to meet these schedule requirements, the PI should negotiate a new schedule with the operator.

(5) MEL Evaluation. Inspectors should compare the operator's MEL changes against the corresponding items in the current MMEL for the specific aircraft type. In addition, inspectors should verify that the operator's MEL contains the following required items:

(a) Cover Page (Optional). The MEL cover page contains the operator's name and the make and Model of the aircraft the MEL applies to.

(b) Table of Contents (Required). The table of contents contains a list of all of the pages in the MEL by title and the corresponding page identification (usually a page number).

(c) Log of Revisions (Required). The log contains the revision identification (usually a number) and date of the revision. It may also contain a list of the revised pages, a block for the initials of the person posting the change, and additional enhancements for use by the operator.

(d) Preamble and Definitions (Required). The standard MMEL preamble and definitions section must be reproduced word-for-word in each MEL, without modification, except as specified in MMEL Policy Letters 25 and 70.

(e) Control Page (Required). The control page is used as a method for keeping track of the status of the MEL and includes a record of the revision status or the date of each page of the operator's MEL. It may also be used as a means of conveying FAA approval of the MEL.

i. Minimum Contents. At a minimum, the control page must contain the following:

- The operator's name
- A listing of all of the pages in the MEL (including the date of each page and its number or revision number)
- The MMEL revision number on which the MEL is based
- A signature block containing space for signature of the PI (only if this page is used as a means of conveying FAA approval of the MEL)

ii. Optional Contents. The operator may include additional information on the control page to provide flexibility and additional approval functions.

iii. Highlights of the Change Page (Optional). This page contains a synopsis of the changes made by the operator in each revision.

(f) Additional Items. The operator may include additional information sections in excess of the six FAA sections.

(6) Individual Air Transport Association of America (ATA) System Page Evaluation. These pages contain a list of individual items of equipment in the aircraft together with provisions for the operation of the aircraft when the items are inoperative. The reviewing inspector should examine the individual ATA system pages, ensuring that the MEL is at least as restrictive as the MMEL and that operator's procedures are adequate and appropriate. The inspector should also examine the material contained on these pages to ensure no conflicts exist with the CFRs, aircraft flight manual limitations, emergency procedures, ADs, and the operator's approved OpSpecs. The following elements are included:

(a) The ATA Numbering System. Operators should use the standard ATA numbering system, similar to the manner used in the MMEL, for numbering individual pages in this section. An example of this numbering system would be the communications page; the first page would be 23-1; the second page would be 23-2.

(b) Individual Items of Equipment. The MMEL contains listed items of installed equipment that may be inoperative.

i. MMEL Items Not Listed on the Operator's MEL. If items listed on the MMEL are not listed on the MEL, there is no relief.

ii. MMEL Items Listed on the Operator's MEL. Each piece of equipment that is installed on the aircraft and that is contained in the MMEL, for which the operator seeks relief and that is appropriate for its operation, should be listed on the appropriate page of the operator's MEL within the associated ATA system. The operator may be more restrictive than permitted by the MMEL by not listing certain items in its MEL. Each item title on the operator's MEL will generally be entered exactly as it is shown on the MMEL. Exceptions include the following:

1. When the MMEL uses a generic term to address equipment that serves a similar function but various operators use different names for that equipment; or

2. When the MMEL lists functions rather than individual pieces of equipment within that category. (Examples include "Navigation Equipment" or "Communications Equipment." In such cases, the MEL must contain a list of the individual equipment or systems within that category that are actually installed on the aircraft, such as "VHF Communications Transceivers." When items of this type consist of several components of a system, the item may be listed as a complete system, such as "VOR Navigation System," consisting of a VOR navigation receiver and its associated indicator. The inspector should ensure that the operator has not listed inappropriate items or items that are listed individually elsewhere in the MMEL. However, the PI is authorized to approve generic MMEL relief for navigation or communication equipment that is appropriate, such as ILS, VOR, VHF, HF and GPS.)

iii. Items Listed on the MMEL but not Installed on the Operator's Aircraft. The PI may follow several acceptable methods of dealing with an item of equipment being listed on the MMEL but not installed on the operator's aircraft. One method is to simply omit the item from the MEL altogether, renumbering individual items within an ATA category as necessary to provide proper continuity. (Note that individual item numbers on a page are not necessarily ATA code numbers, but are simply sequential item numbers within an ATA category.) Another method is to list the item as shown on the MMEL, and to show the Number Installed as zero. In this case, the "Number Required for Dispatch" would also be zero, and the remark "Not Installed" may be noted under "Remarks and Exceptions;" repair category designators should be omitted.

iv. Triple Asterisk Symbol (***). The triple asterisk symbol is used in an MMEL to indicate that an item is not installed on some models of the aircraft. Operators should not produce or use this symbol in the MEL.

v. Repair Category. Each item of equipment listed in the operator's MEL, except for Administrative Control Items and Passenger Convenience Items, must include the repair category designator for that item as shown on the MMEL. These designators, categorized as A, B, C, or D, indicate the maximum times between deferral and repair. The time intervals specified for the categories of items corresponding to these letters are provided in the "Notes and Definitions" section of the MMEL and D095 OpSpecs. The operator may choose to adopt a more restrictive repair category than the one shown on the MMEL, but may not relax the requirement. Components or subsystems of items categorized in the MMEL, such as items of communications or navigation equipment that are not listed individually in the MMEL, must retain the repair category shown on the MMEL when listed as separate items on the MEL.

vi. Passenger Convenience Items. Passenger convenience items relate to the convenience, comfort, and entertainment of passengers and must never affect the airworthiness of the aircraft. These items do not carry a specific repair category; however, the operator should make repairs to convenience items within a reasonable timeframe. Normally, the operator lists these items individually in ATA chapters 25 and 38. Passenger convenience items may be included elsewhere in the MEL if clearly identified as passenger convenience items. PIs should review the proposed MEL to decide which passenger convenience items are components of an item appearing in the MMEL. When listing passenger convenience items on the MEL, the operator must list each item for which the operator wishes relief. The operator may make a list of passenger convenience items that, once it is acceptable to the PI, is held at the certificate-holding district office (CHDO). Passenger convenience items also apply to cargo airplanes, as appropriate.

vii. Administrative Control Items. "Administrative control item" means an item listed by the operator in the MEL for tracking and informational purposes. It may be added to an operator's MEL by approval of the PI, provided no relief is granted, or provided conditions and limitations are contained in an approved document (such as a Structural Repair Manual or AD). If relief other than that granted by an approved document is sought for an administrative control item, the operator must submit a request to the Administrator. If the request results in review and approval by the FOEB, the item becomes an MMEL item rather than an administrative control item. Examples of items that could be considered administrative control items are cockpit procedure cards, medical kits, and lifevests. These items should appear in the appropriate ATA chapter and would not have a repair category. When the operator chooses this course of action, the PI must examine each proposed administrative control item on the operator's proposed MEL to ensure that the following conditions are met:

- No item is included as an administrative control item if it is included elsewhere in the MMEL
- Administrative items are not included as a subsystem of items listed in the MMEL
- Administrative items are not granted relief in the MEL unless the release conditions or limitations are contained in another approved document

viii. Number of Items Installed. The MEL will normally contain the actual number of items of particular equipment installed on the aircraft. This number may be either greater or less than the number shown on the MMEL. The MMEL shows the number of items installed as the number of those items normally installed on a particular aircraft type. Individual aircraft operated by an operator may have a different number of items. Frequently the MMEL shows a dash in the "Number Installed" column. This dash indicates that a variable quantity of these items is generally installed on the aircraft. If the operator has an MEL for a single aircraft or identical aircraft, the actual number of these items on the particular aircraft must be listed in the MEL. If the operator has an MEL for multiple aircraft, and the equipment is not installed on all aircraft or there is a variable quantity between aircraft, the operator's MEL will not reference specific aircraft identifications; the "Number Installed" column may contain a dash.

ix. Number of Items Required for Dispatch. Normally, the number of items required for dispatch is determined by the FOEB and may be modified in the MEL in only two cases:

- When the item is not installed on the aircraft, in which case a zero may be shown as the number required for dispatch
- When the item is shown in the MMEL as being a variable number required for dispatch

NOTE: In this case, the reviewing inspector should ascertain that the operator has made a determination as to the number required for dispatch. There can be several factors that establish this number. In some cases, it is determined by a reference to specific requirements listed in the Remarks or Exceptions column of the MMEL. An example would be cabin lights. In this case, the MMEL may show a variable number installed while the Remarks or Exceptions column might state that 50 percent of those items be operable. The number required for dispatch would therefore be 50 percent of the number of lights determined to be actually installed on the individual aircraft. Another case where the MMEL may show a variable number required for dispatch is when the Remarks or Exceptions column of the MMEL contains the statement, "As Required by CFR." In this case, the number is the minimum quantity of these items that must be installed for operations under the least restrictive regulation under which the operator conducts operations. For example, part 135 requires two communications transmitters for operating a small airplane as a commuter operator under instrument flight rules (IFR). Only one transmitter is required by part 135 for on demand charter operations, and none are required for visual flight rules (VFR) operations when operating outside of controlled airspace. If none are required, the minimum number of transmitters required for dispatch could be zero.

x. Remarks or Exceptions. Certain items demand specific relief developed by the operator

as authorized through OpSpecs, area of operation, and CFRs. "As required by CFR" is an example of this type of relief.

xi. Other Items. Other items in which relief has been specifically written to reflect actions or restrictions to the operation may be changed only when the FOEB chairman makes a change to the MMEL. Generally they contain "O" and "M" procedures in which the operator develops its company procedures to comply with the MEL.

(7) Evaluation of Associated Documentation. The inspector should evaluate the supporting documentation submitted by the operator to ensure that it is complete and appropriate. Inspectors should evaluate the operator's manual to ensure that it contains adequate guidance for the operator's personnel in conducting operations using the MEL. Generally, if the operator does not presently have an MEL program, the applicable portions of its manual and other guidance material should be submitted at the time the MEL is submitted for initial review. When evaluating the operator's manual, inspectors should use the following guidance.

(8) Documentation Procedures. The certificate holder's manual that contains the MEL item policies, procedures, instructions, or information for each group of personnel should be clear and, at a minimum, provide for recording the following items:

- An identification of the item of equipment involved
- A description of the nature of the malfunction
- An identification of the person making the entry
- The MEL item number for the equipment involved

(9) Crew Notification. The operator should establish procedures for advising the PIC of inoperative items and required procedures such as affixing placards alternate operating procedures, and instructions for the isolation of malfunctions. The PIC and the operator are both responsible for ensuring that flights are not dispatched or released until all of the requirements of the "O" procedures and "M" procedures have been met.

(10) Flight Restrictions. The operator should establish procedures to ensure that dispatch or other operational control personnel, as well as the flightcrew, are notified of any flight restrictions required when operating with an item of equipment that is inoperative. These restrictions may involve maximum altitudes, limitations for the use of ground facilities, weight limitations, or a number of other factors.

(11) Training Program Material. Inspectors should ensure that the operator's flight and ground personnel training programs contain adequate instruction for MEL use.

(12) MEL Management Program. Operators are to establish a controlled and sound repair program including the parts, personnel, facilities, procedures, and schedules to ensure timely repair. The MEL management plan must include the following:

(a) A method that provides for tracking the date and, when appropriate, the time an item was deferred and subsequently repaired. The method must include a supervisory review of the number of deferred items per aircraft and a supervisory review of each deferred item to determine the reason for any delay in repair, length of delay, and the estimated date the item will be repaired.

(b) A plan for bringing together parts, maintenance personnel, and aircraft at a specific time and place for repair.

(c) A review of items deferred because of the unavailability of parts to ensure that a valid back order exists with a firm delivery date.

(d) A description of specific duties and responsibilities by the job title of personnel who manage the MEL management program.

(e) Procedures for controlling extensions to specified maximum repair intervals as permitted by D095, subparagraph d, to include the limit of the extension, and the procedures to be used for authorizing extensions.

11. TERMS AND CONDITIONS OF RELIEF. This section contains the terms and conditions of relief granted to an operator for operating the aircraft with items of installed equipment that are inoperative. The operator must state the terms and conditions under which operations may be conducted with inoperative items for the operator's particular organization and aircraft. The reviewing inspector must address the following elements of this section:

A. Standard Phraseology. When reviewing the MEL, inspectors should ensure that the operator generally uses the phraseology used in the MMEL to ensure clarity and standardization. In some cases, modified phraseology is appropriate for the operator's specific installation. The PI should refer questions about non-MMEL phraseology to the FOEB chairman for resolution.

B. As Required by CFR. The general term, "As Required by CFR," applies to ATA chapters 23 (Communications), 31 (Indicating Recording Systems), 33 (Lights), and 34 (Navigation). When this term appears in the Remarks or Exceptions section of an MMEL, the operator's MEL must contain the specific conditions that apply. The operator usually must research the applicable regulations in detail to develop the appropriate provisions that apply to that operator's particular operations. An example of a typical distance measuring equipment (DME) remark could read, "Not required for flights below FL 240."

NOTE: The operator's MEL must clearly establish the actual requirement for its operation when the MMEL stipulates, "As required by CFR." It is not acceptable for the MEL to simply refer to the CFR part.

C. "O" and "M" Procedures.

(1) Descriptions of the Procedures. "O" and "M" procedures must contain descriptions of the individual steps necessary to accomplish each process. For example, if the MMEL contains an "M" symbol with a provision that a valve must be closed, the operator must include the appropriate procedures to close the valve as part of the operator's manual or MEL. The reviewing inspector must ensure that the procedure addresses the following:

- How the procedure is accomplished
- The order of accomplishing the elements of the procedure
- The actions necessary to complete the procedure

(2) Location of Procedures. If, for example, the MMEL contains an "M" symbol with a provision that a valve must be closed, the operator must include detailed steps and actions for closing and testing the valve and installing the placard. The actual written procedures may be contained within the Remarks or Exceptions section of the MEL, in separate documents, or attached as an appendix. Inspectors should consult the guidelines for "O" and "M" procedures section of the MMEL when evaluating these procedures. This section does not have to be contained within the operator's MEL. If the "O" and "M" procedures are not contained within the MEL, the MEL should include a reference to the location of the procedures.

NOTE: While inspectors should ensure that the procedures are detailed and explicit, it is not necessary that the operator repeat obvious requirements of the MEL item, of the CFRs, or of other established standards.

(3) "O" Procedures. The "(O)" symbol indicates a requirement for a specific operations procedure that must be accomplished in planning for and/or operating with the item listed as inoperative. Normally, the flightcrew accomplishes these procedures; however, other personnel may be qualified and authorized to perform certain functions. The satisfactory accomplishment of all procedures, regardless of who performs them, is the responsibility of the operator. Appropriate procedures are required to be published as a part of the operator's manual or MEL.

(4) "M" Procedures. The "(M)" symbol indicates a requirement for a specific maintenance procedure, which must be accomplished prior to operation with the listed item inoperative. Normally maintenance personnel accomplish these procedures; however, other personnel may be qualified and authorized to perform certain functions. Procedures requiring specialized knowledge or skill, or requiring the use of tools or test equipment should be accomplished by maintenance personnel. The satisfactory accomplishment of all maintenance procedures, regardless of who performs them, is the responsibility of the operator. Appropriate procedures are required to be published as part of the operator's manual or MEL.

(5) Provisos. The Remarks and Exceptions section of the MMEL generally contains provisos that includes specific conditions under which an item of equipment may be inoperative. These provisos must be carried over either verbatim into the operator's MEL or by using equivalent terminology. Provisos are distinct from "O" and "M" procedures. A procedure is an action that must be performed. A proviso is a condition that must exist. For a proviso that operations must be conducted under VFR, an operation under an IFR flight plan is not permitted, regardless of the weather conditions. When reference is made to visual

meteorological conditions (VMC), operations may be conducted under an IFR flight plan, but only in VMC.

13. PI APPROVAL OF THE OPERATOR'S MEL. After the PI is satisfied that the MEL is in full compliance with all applicable requirements, the PI shall sign the MEL control page or the individual MEL pages to signify approval. If the operator has not previously been authorized to operate under an MEL, the PMI should issue OpSpec D095 concurrently. The PI may send a letter of approval if desired (see Figure 7-3).

15. PTRS INPUT. The PI should record the initial approval of an MEL on FAA Form 8000-36, PTRS Data Sheet, using activity code 1321 under "Organizational and Technical Administration." The PTRS should be used to track the MEL approval process from phase one through phase five. After receiving the proposed MEL from the operator, the PI can open a record for the approval and document each phase of the approval process in Section IV of the datasheet by making additional comments when required. Once the MEL is approved, the PTRS is closed with a "C."

17. MMEL SUBSYSTEM ENTRY. As the final step in the MEL approval process, the PI enters the operator and MEL information into the MMEL Subsystem.

FIGURE 7-2. SAMPLE LETTER TO THE OPERATOR FOR DENYING THE MEL

FAA Letterhead

[*date*]

Mr. Robert Smith
Director of Operations
ABC Airlines
1 Park Avenue
New York, NY 11021

Dear Mr. Smith:

This letter is to inform you that the Minimum Equipment List (MEL) submitted for approval on June 6 is being returned to your office. A comparison of ABC's MEL against the current Master Minimum Equipment List (MMEL) shows that in the following places ABC's MEL is less restrictive than the MMEL.

Specifically, these System and Sequence Numbers do not comply with acceptable procedures:

1. Page 24-1, item 3. DC Loadmeter

2. Page 28-1, item 1. Boost Pumps

3. Page 30-3, item 13. Pitot Heater

Additionally, ABC's MEL does not include the required Control Page.

If you have further questions on the MEL approval process, please feel free to contact me.

Sincerely,

John Doe
Principal Maintenance or Avionics Inspector

FIGURE 7-3. SAMPLE LETTER TO THE OPERATOR FOR APPROVING THE MEL

FAA Letterhead

[date]

Mr. Robert Smith
Director of Operations
ABC Airlines
1 Park Avenue
New York, NY 11021

Dear Mr. Smith:

This letter is to inform you that the Minimum Equipment List (MEL) submitted for approval on June 6 has been approved. The control page has been signed and paragraph D095 of the Operations Specifications has been issued.

Sincerely,

John Doe
Principal Maintenance or Avionics Inspector

SECTION 4. MEL USE IN SERVICE PARTS 121, 129, AND 135 OPERATORS

1. GENERAL. This section contains specific direction, guidance, and procedures for ASIs on the revision, administration, and policy application for administering MELs that have been approved for use by air carriers operating under the provisions of parts 121, 129, and 135.

3. REVISION PROCEDURES.

A. Revisions to an MEL. Either the operator or the FAA may initiate revisions to an operator's MEL. Operator-initiated revisions may be equal to or more restrictive than the MMEL. It is not necessary for an operator to submit an entire MEL when requesting the approval of a revision. The minimum submission would consist of only the affected pages; the approval by the PI may only consist of specific items. These items are approved within a controlled process, and the carrier will produce the final MEL document. If the revision results in individual pages either being added or deleted, a revised table of contents page is also required. The issuance of an AD will not be the basis for change to an operator's MEL. Instead, ADs will be referred to the FOEB chairman for appropriate changes to the MMEL.

NOTE: When operations "O" or maintenance "M" procedures are required per the MMEL, it is the operator's responsibility to develop appropriate procedures or to use manufacturer-developed procedures to meet the requirements for inclusion of the item on the MEL. The PI is not authorized to grant MEL relief unless the operator provides acceptable "O and M" procedures.

B. MEL Revision Initiated by the Operator. An operator-initiated MEL revision will normally fit into one of the following three categories:

(1) Items not Requiring an MMEL Change. Operators may propose changes to an MEL that are equal to, or more restrictive than, the MMEL. The PI using the same procedures as those required for an original MEL approval approves these revisions.

(2) Items Requiring an MMEL Change. Operators may request changes to an MEL that are less restrictive than the MMEL. However, the MEL cannot be revised until the MMEL has been revised to permit the proposed MEL change. The most common instance of a revision request of this type occurs when an operator installs additional equipment on an aircraft and provisions for that equipment are not included on the current MMEL.

(3) Major Aircraft Modifications. Major aircraft modifications, such as an STC, a major alteration (FAA Form 337, Major Repair and Alteration) or a TC amendment, may invalidate the MEL for that aircraft. Operators should review the MEL to assess the impact of any planned modification and should immediately notify the PI of these modifications and the impact on the MEL. The PI should obtain guidance from the appropriate AEG to determine if a revision to the MMEL is required.

C. MEL Revisions Initiated by the FAA. When the FAA revises an MMEL, operators, manufacturers, and CHDO receive notification by a postcard generated by the automated MMEL Subsystem.

(1) Non-Mandatory Revision. MMEL revisions that only provide additional relief are reflected by a lower case letter suffix following the MMEL numeric revision number; for example, MMEL Revision No. 8 would become non-mandatory Revision No. 8a. Any MMEL change that is less restrictive than the operator's MEL may be ignored by the operator. An example of a non-mandatory revision is when the MMEL has been revised to provide for optional equipment normally not installed on all aircraft of a particular type, such as logo lights. Operators that operate aircraft with logo lights may choose to revise the MELs, while operators operating without logo lights would not.

(2) Global Change. A global change is another type of non-mandatory revision. A global change generally applies to items of equipment that are required to be installed by a new regulatory requirement, such as a cockpit voice recorder (CVR), or a traffic alert and collision avoidance system (TCAS). The global change does not replace the normal MMEL revision process (section 2 of this chapter). When a standard revision to an MMEL is issued, it will include all global changes issued to date. However, since the process for revising the MMEL can be lengthy, and the operator's MEL must be based on the MMEL, a global change will allow an operator to revise its MEL prior to the change in the MMEL. The PI has the authority to approve the operator's MEL revision on the basis that the global change is an approved addendum to the existing MMEL.

Availability of global changes will be transmitted to FSDO via e-mail. A list of global changes can also be obtained through the MMEL Subsystem (see section 5 of this chapter for guidance).

(3) Mandatory Revisions. Mandatory changes, which are more restrictive and may remove relief from the current MMEL, are reflected by the next successive change to the basic MMEL revision number itself. For example, the next mandatory revision following the non-mandatory revisions 6a, 6b, or 6c would be revision 7. Any MMEL changes that are more restrictive than the operator's MEL will be implemented by the operator as soon as possible. In some cases when relief is removed from the MMEL, there will be a specific date for compliance, or guidance for an acceptable date to be negotiated between the PI and the operator.

(4) PMI/PAI-Initiated Revision. A PMI/PAI may initiate an MEL revision that is not based on a revision to the MMEL. The PIs should make such a request to the operator in writing, stating specific reasons why the revision is necessary. A PI-initiated revision may be made upon the discovery that an operator has modified an aircraft or that faulty maintenance or operations procedures exist. The PI should work closely with the operator and make every effort to resolve the matter in a mutually agreeable manner. The operator should be given a reasonable time period to make the required changes depending on whether safety of flight is affected. In the event that the operator declines to make the required change, the PI may consult with the PMI to initiate an amendment of the operator's OpSpecs to rescind the authority for the MEL. In such a case, the procedures contained in volume 3, chapter 1, section 7, of Order 8400.10, Air Transportation Operations Inspector's Handbook, should be followed.

D. Modifications Within a Fleet. If an operator has been granted approval to use the MEL for a fleet, and the operator installs a new piece of equipment in one or more aircraft, the operator may continue to operate that aircraft under the provisions of the currently approved MEL. The operator may not defer repair of the new item until an appropriate revision to the MEL has been approved.

5. TRACKING OF REVISION STATUS. PIs shall maintain a copy of the current MEL for each assigned operator's aircraft type. The PI shall update the MMEL Subsystem to record and track the revision status of the operator's MEL.

7. AVAILABILITY OF MEL FOR FLIGHT CREWMEMBERS. Parts 121 and 135 require that flight crewmembers have direct access to the MEL at all times prior to flight. Although not required, the easiest method of compliance with this requirement is for the operator to carry the MEL aboard each aircraft. The operator may choose to use some system of access to the MEL other than the MEL document. For example, the flightcrew may obtain access to the MEL through the ARINC Aircraft Communications Addressing and Reporting System (ACARS). The critical element in approving an alternate form of access is whether or not the flightcrew has a direct means of access to the appropriate information in the MEL, specifically "O" and "M" procedures. Direct access should not be construed to mean access through telephone or radio conversations with maintenance or other personnel. If the operator chooses to provide the flightcrew with access to the MEL by other than printed means, the method must be approved in the operator's MEL program.

9. METHOD OF AUTHORIZING FLIGHT CREWMEMBER ACCESS TO MEL. PIs may approve a method other than printed means for providing the flightcrew with access to the MEL as provided in part 121, § 121.628(a)(2) and part 135, § 135.179(a)(2). Before authorizing such a method, the PI must be confident that the operator has an adequate means in place to provide flightcrews with the complete equivalent of the actual text of the MEL. This method must be described in detail in the operator's FAA-accepted manual system. When the decision is made to authorize this alternative method, the PI should use appropriate provisions. In this case, the "Applicable CFR Section" of the OpSpecs would be either § 121.628 or § 135.179, as appropriate, and the Remarks and/or References section would refer to the appropriate section of the operator's manual.

11. DISCREPANCIES DISCOVERED DURING FLIGHT. Use of the MEL is not applicable to discrepancies or malfunctions that occur or are discovered during flight. Once an aircraft moves under its own power, the flightcrew must handle any equipment failure in accordance with the approved flight manual. A flight is considered to have departed when the aircraft moves under its own power for the purpose of flight. Discrepancies occasionally occur between the time the flight departs and the time it takes off. If the flight manual contains procedures for handling that discrepancy, or if the PIC deems that the

discrepancy does not affect the safety of flight, the flight may continue. The discrepancy must be addressed prior to the next departure. For those operators who are required to use a dispatch or flight release, the PIC must handle a discrepancy that occurs after the issuance of the release, but before the flight departs, in accordance with the MEL. The PIC must obtain a new or amended dispatch or flight release, as well as any required airworthiness release. This new or amended release must contain any applicable flight restrictions necessary for operation with any item of equipment that is inoperative.

13. DOCUMENTATION OF DISCREPANCIES. Provisions of the MMEL preamble require that an airworthiness release be issued or an entry be made in the aircraft maintenance record or logbook prior to conducting any operations with items of equipment that are inoperative. Part 121 operators and those part 135 operators who use a Continuous Airworthiness Maintenance Program (CAMP) generally require the use of a formal airworthiness release issued by an authorized maintenance person. Other part 135 operators must have adequate methods for recording the authorization to operate the aircraft with items of equipment that are inoperative. This does not imply that the involvement of an FAA-certified mechanic or other person authorized under 14 CFR part 43 to approve an aircraft for return to service is required in all cases. Unless maintenance actions are performed on the aircraft, part 135 flightcrews may make appropriate documentation in the aircraft maintenance log required by part 135, § 135.65.

15. CONFLICT WITH AIRWORTHINESS DIRECTIVES. Occasionally an AD may apply to an item of equipment that may be authorized to be inoperative under the MEL. The item may not simply be deferred under the MEL in order to avoid or delay compliance with the AD or an FAA-approved alternate means of compliance with the AD. In all cases, when an AD has been issued, the operator must comply fully with the terms of the AD or an FAA-approved alternate means of compliance with the AD. The FAA must approve any alternative method of compliance with the AD as provided in the AD. In other cases, the provisions of an AD may allow operation of the aircraft on the condition that certain items of installed equipment be used or be operable. In those cases, the affected items must be operable even though the MEL may provide for deferral of repair.

17. INTERRELATIONSHIPS OF INOPERATIVE COMPONENTS. When the MEL authorizes a component of a system to be inoperative, only that component may be affected. When a system is authorized to be inoperative, individual components of that system may also be inoperative. Any warning or caution systems associated with that system must be operative unless specific relief is authorized in the MEL. The operator must consider the interrelationship of inoperative components. This consideration must include the following:

- The interrelationship of one piece of equipment on another
- The crew workload
- The operation of the aircraft
- The flight restrictions

19. REPAIR CATEGORIES. When an item of equipment becomes inoperative, and repair is deferred under an MEL, the operator must make repairs as specified by the associated repair category designator (A, B, C, or D) and the operator's MEL management system. In the event that more items are installed then those that are required for normal operation, the C repair category may be used. For example, if one altitude alerting system is required and the associated repair category is B, but there are two such systems installed, failure of the first system could be deferred as specified for a C category item (10 days). Failure of the remaining system would limit at least one system to the repair category for the B category item (3 days). See the definitions section of the MMEL for an explanation of repair categories.

21. PTRS INPUT. Airworthiness inspectors should use activity code 3312 or 3313 (airworthiness) or 5312 or 5313 (avionics) to record each MEL revision into the PTRS. The inspector keeping the record open until the revision is approved should document the revision process in the PTRS.

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SECTION 5. MMEL SUBSYSTEM

1. BACKGROUND. The FAA created the MMEL Subsystem to automate the process of creating, revising, approving, and distributing MMELs.

3. GENERAL. The MMEL Subsystem is a component of the ASAS. The MMEL Subsystem primarily provides information to Flight Standards personnel on the status of approved MMELs. This section contains information, direction, and guidance for inspectors on the use of the MMEL Subsystem.

5. SYSTEM CAPABILITY. The MMEL Subsystem is capable of the following:

A. Allowing MMELs to be accessed online, downloaded, and printed.

B. Providing a means of automatically notifying inspectors and operators when a revision to an MMEL occurs (those revisions may require an operator to revise its MEL).

C. Printing or reviewing copies of global changes to MMELs online.

D. Allowing an inspector to generate various types of reports concerning the status of an operator's MEL.

E. Providing access to information that an inspector may use when evaluating documents, such as an MEL and flightcrew training programs, to include the following reports and information:

- FOEB reports
- Flight Standardization Board (FSB) reports and training requirements
- Maintenance Review Board (MRB) reports
- Pilot type rating information
- MMEL policy book
- Advisory circulars (AC)
- Listing of MEL coordinators
- Certification Maintenance Procedures (CMP)

7. SYSTEM ACCESS INSTRUCTIONS AND SUPPORT. The MMEL Subsystem is accessed through a menu option on the ASAS menu in the same manner as the Integrated Safety Information Subsystem (ISIS) and the National Aircraft Registry Information Subsystem (NARIS). The MMEL Subsystem User's Manual contains specific instructions for the use of the system. Each FSDO should maintain this document as a reference. The users manual can be accessed or printed online, from the "References" option on the "MMEL Main Menu."

9. AUTOMATIC NOTIFICATION. After granting the final approval of an MEL or a revision, inspectors must access the MMEL Subsystem to enter data about the operator and its approved MEL. The MMEL Subsystem uses this information to automatically notify operators and CHDOs of MMEL changes by postcard.

11. MEL STATUS REPORTS. MEL status reports can be generated based on the information entered about an operator for the postcard notification process. These reports are useful for determining the status of an operator's MEL and for planning surveillance activities. This reporting function can also be used to determine which CHDOs have approved an MEL for a particular make and model of aircraft. This information also allows inspectors to consult with one another about problems they may encounter while approving an MEL.

13. GLOBAL CHANGES. Copies of global changes can be printed or reviewed online. Access is gained through the "MMEL Policy Book" option on the "MMEL Main Menu." AFS-260 maintains a current list of global changes and policy letters on http://www.opspecs.com for access by all interested parties.

15. PUBLIC ACCESS TO MMEL. The general public is allowed access to MMEL-related documents through http://www.opspecs.com.

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SECTION 6. CONFIGURATION DEVIATION LISTS

1. GENERAL. This section contains information for ASIs concerning the development and approval processes of CDLs. Aircraft certificated under the provisions of parts 23 and 25 and CAR 4b may be approved for operations with missing secondary airframe and engine parts. Approval for operating with these parts missing would be authorized by the appropriate aircraft directorate, under an amendment to the TC. Evaluation and approval of CDLs are functions of the ACO. (See section 1 for CDL definition.)

3. DEVELOPMENTS AND APPROVAL OF A CDL. An aircraft manufacturer develops a proposed CDL for a specific aircraft type. Engineering specialists submit the proposed CDL to the responsible ACO for approval. The ACO will then coordinate with the appropriate AEG to resolve any problems and discrepancies prior to approving the CDL. For U.S.-certificated airplanes, the CDL, once approved, is incorporated into the limitations section of the AFM as an appendix. For manufacturers outside the United States, the CDL may be a stand-alone document and part of the Structural Repair Manual, or another manufacturer's document. Some operators may choose to attach a copy of the CDL to their MEL for easy and ready reference by flightcrews.

5. USE OF THE CDL. Operators must follow the CDL limitations when operating with a configuration deviation. Operators are required to observe the following:

- The limitations in the CDL when operating with certain equipment missing (except as noted in the appendix to the approved flight manual)
- The flight operations, restrictions, or limitations that are associated with each missing airframe and engine part
- Any placard(s) required by the CDL describing associated limitations, which must be affixed in the cockpit in clear view of the PIC and other appropriate crewmembers

7. OPERATIONAL CONTROL. The PIs must ensure that the operator has developed appropriate procedures for the PIC and, if appropriate, procedures for notifying dispatch of the CDL missing parts by an appropriate notation in the aircraft logbook or other acceptable means.

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SECTION 7. APPROVE PART 125 MEL/REVISION

1. GENERAL.

A. An MEL allows an operator to continue a flight or series of flights, with certain equipment inoperative, to a place where repairs can be made. For the operator to be able to use the MEL, the procedural requirements for the equipment loss must be met. In the absence of an approved MEL, further flights will be suspended until the repair or replacement of nonfunctioning equipment is accomplished.

(1) The failure of any instruments or equipment required or installed in the aircraft must be compensated for by controlled conditions providing an acceptable level of safety. Controlled conditions include the following:

- Restrictions for certain flight operations
- Changes to in-flight operational procedures
- Temporary deactivation of components

(2) An operator, through a controlled program, must make repairs within specific timeframes referenced by current guidance and the operator's approved maintenance program. Although the approved lists provide for specific time limitations for certain items, the operator should repair or replace the affected item before the time limit expires.

B. Many aircraft have installed equipment that is not essential for safe operations under all operating conditions. Much of this equipment is required for certain kinds of operations, such as night, IFR, or operation in icing conditions. Other equipment, such as entertainment systems and galley equipment, may be installed for convenience. If some deviation from the TC'd configuration and equipment were not permitted, the aircraft could not be flown unless all such equipment was operable and/or installed.

(1) The MEL and the CDL should be carried onboard the aircraft.

(2) No flight can take off from any airport with inoperative equipment other than the items provided for in the MEL and/or CDL.

3. REDUNDANT EQUIPMENT ITEMS. Most aircraft have some redundancy of systems and equipment to provide both schedule reliability and the necessary level of safety. The FAA encourages aircraft manufacturers and operators to install additional items of equipment to serve as alternatives for required instruments/equipment under certain conditions.

5. AIRCRAFT SYSTEMS. The MEL must address specific aircraft systems to ensure that airworthiness is not degraded.

A. Where the MMEL states for a particular item, "as required by the CFR," the operator's MEL should specify in the remarks column the conditions under which the specific item may be inoperative. This will provide definitive guidance to the maintenance and operations personnel as to which equipment may be inoperative for a particular operation.

B. The operator's MEL and CDL may be more restrictive than the MMEL. Under no circumstances may the operator's lists be less restrictive.

(1) The operator's lists must be compared item by item with the current MMEL and AFM for the subject aircraft.

(2) Placards alternate operating procedures, and instructions for the isolation of malfunctions must be technically correct.

7. PI RESPONSIBILITIES. The PIs (PMI, POI, PAI) should work as a team during the acceptance and approval process of the MELs and CDLs.

9. MMELs. The MMEL serves as a guideline in the development of an MEL.

A. MMELs are developed by FOEBs.

B. Instruments and items of equipment that will be covered by an MEL include:

- The minimum items required for type certification
- The minimum items required by the operating rules
- Any optional items not evaluated in an inoperative condition during type certification flight test
- Equipment considered as part of the type design

11. CDLs. Under an amendment to the TC, the ACO may approve the operation of aircraft with missing secondary airframe and engine parts. To qualify, the aircraft must be certificated under part 25

or CAR 4b, and intended for use under the operating rules of part 125.

A. The aircraft manufacturer develops the CDL and submits it to the ACO for approval. The approved list is incorporated into the limitations section of the AFM as an appendix.

B. The CDL must be a part of the operator's manual system.

13. REFERENCE AND MANUAL REQUIREMENTS.

A. The standard MEL preamble will be used for all MELs.

B. The operations and maintenance procedures in the operator's MEL may reference instructions in the operator's manual.

C. The operator's maintenance manual must include instructions governing use of the MEL and CDL.

D. The operator must have a page control system to show that the MEL and CDL are current and complete.

E. Changes to an operator's MEL and CDL may affect training programs and the instructions in the operator's manual. The POI or the manager of the CHDO must approve both the initial lists and any subsequent changes, with the concurrence of the assigned avionics and maintenance inspectors.

F. The operator's maintenance manual must include instructions and provisions appropriate to the use of the MEL and CDL.

G. Procedures must be established for advising the PIC of any inoperative or removed items prior to a flight.

15. DELETING ITEMS FROM THE MEL/CDL.

PIs may act to delete certain items from the operator's MEL and CDL when repairs or replacements are not accomplished according to approved procedures.

SECTION 8. MEL APPROVAL PROCESS FOR PART 125 AND FRACTIONAL OWNERS

1. PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites:

- Knowledge of part 125
- Knowledge of MEL preamble
- Successful completion of the Airworthiness Inspector Indoctrination course(s), or previous equivalent

B. Coordination. This task requires close coordination between operations and airworthiness staffs. Coordination may also be required with the FOEB, FOPB, and regional specialists.

3. REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- FAA Order 8110.4, Type Certification
- FAA Order 8300.10, vol. 2, ch. 84
- FAA Order 8400.10, vol. 4, ch. 4
- Air Transportation Oversight System (ATOS) Element DCT's (1X Tool): Safety Attribute Inspection (SAI)/Element Performance Inspection (EPI) 1.3.5
- Approved AFM or RFM
- Fractional Program Manager's Operating Manual
- MMEL for subject aircraft
- Operator's AFM for subject aircraft
- Operator's Aircraft Operating Manual for subject aircraft
- Operator's General Maintenance Manual
- Operator's General Operations Manual (GOM)

B. Forms:

- Management Specification (MSpec) MD095, MEL Authorization
- OpSpec D095, MEL Authorization

C. Job Aids:

- JTAs: 3.3.35, 3.3.86, 3.3.99

5. PROCEDURES.

A. Receive the Operator's or Fractional Program Manager's Submitted MEL. If this task is done as part of an original certification, or the original issuance of MSpecs to a fractional program manager (hereafter referred to as the program manager), review the Schedule of Events to ensure this task can be accomplished according to the schedule.

B. Evaluate the Proposed MEL.

(1) Ensure that the MEL addresses all installed items listed in the MMEL that the operator or program manager requests relief from.

(2) Ensure that the MEL repair intervals are not less restrictive than the MMEL.

(3) Ensure that the "Number Required" section is not less restrictive than the MMEL and that the column agrees with the number actually installed according to the current airplane equipment list.

(4) Ensure that the Remarks or Exceptions column includes the following information:

- All restrictions and special provisions of the MMEL
- All maintenance procedures required, identified by an "M", or
- A specific reference to the document containing maintenance procedures

(5) Review all maintenance procedures described in the Remarks and Exceptions column for completeness.

(6) Ensure that the operator has a revision system for the proposed MEL to guarantee that changes to the MMEL will be reflected.

(a) Instructions for the use of the revision system must be provided.

(b) The MEL must be current. The document must contain a List of Effective Pages.

(7) Ensure that the standard MEL preamble is used in its entirety, without modification.

(8) Ensure that the list includes a table of contents, and that pages are numbered according to the

applicable ATA numbering system (e.g., Air Conditioning Systems, pages 21-1, 21-2, 21-3, etc.)

(9) Ensure that all abbreviations and symbols used in the document are defined.

C. Ensure Required Procedures Are Developed and Included in the Operator's Maintenance Manual.

(1) Ensure the operator's maintenance manual includes the following:

- A list of personnel responsible for MEL management
- A list of personnel authorized to defer maintenance in accordance with the MEL
- A description of personnel training requirements for MEL procedures
- Procedures for authorizing personnel to defer maintenance on the MEL
- Instructions for the placarding of inoperative/removed items, and samples of placards

(2) Ensure the operator's maintenance manual contains procedures for control of MEL deferred maintenance items, including:

- Parts procurement and distribution for corrective action of deferred items
- Scheduling of corrective action, describing when and where maintenance will be performed
- Coordination between the operator's maintenance and flight departments for possible restrictions, exceptions, and procedures
- Reporting and recording of the deferral and subsequent corrective maintenance, pertinent to both maintenance and flight departments

D. Analyze Findings. Determine what, if any, corrective action is required. Provide the POI with the findings.

E. Schedule and Conduct Meetings. If deficiencies are discovered during the review, coordinate with assigned principal inspectors to schedule a meeting with the operator to discuss the problem areas. Brief the operator on the findings and discuss how to resolve any deficiencies.

7. TASK OUTCOMES.

A. Complete PTRS.

(1) A new PTRS activity code for MEL surveillance is to be developed. It is recommended that air carrier inspectors use the ATOS version 1.X data collection tools (SAI/EPI) as a guide to accomplish this activity.

(2) Document the inspection findings in PTRS under the activity codes 3312/5312.

B. (TBD).

9. FUTURE ACTIVITIES. Surveillance.

SECTION 9. MAINTENANCE AND MEL FOR U.S.-REGISTERED AIRCRAFT OPERATED UNDER PART 129

1. GENERAL.

A. Part 129, §129.14. This regulation provides the maintenance and minimum equipment requirements for U.S.-registered aircraft operated by a foreign air carrier or any foreign person engaged in common carriage solely outside the United States. Each foreign operator of a U.S.-registered aircraft must ensure that the aircraft is maintained in accordance with a program acceptable to the Administrator, which is consistent with the aircraft maintenance program requirements of part 121 or 135, as applicable. See § 129.14(a) and (b).

B. International Civil Aviation Organization (ICAO) Annex 8. Paragraph 4, Continuing Airworthiness of Aircraft states that the continuing airworthiness of an aircraft shall be determined by the state of registry in relation to the appropriate airworthiness requirements in force for that aircraft at the time of inspection. This applies to both normal inspections and to inspections after the aircraft has been damaged.

3. APPROVAL. Section 129.14(b) provides for the approval and use of an MEL by a foreign operator. Each foreign operator may develop its own MEL based on the MMEL approved by the FAA for the specific aircraft type. In seeking approval of its MEL, the foreign operator must show that the maintenance procedures in its maintenance program are adequate to support the use of its MEL. Alternatively, if the foreign operator has leased a U.S.-registered aircraft from a U.S. air carrier, the foreign operator may decide to maintain and operate the aircraft in accordance with the U.S. air carrier's CAMP and the U.S. air carrier's FAA-approved MEL. In either case, the foreign operator must submit for processing and approval both the MEL and the maintenance program to the FSDO having responsibility for the foreign operator.

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SECTION 10. APPROVAL/REVISION OF PART 91 OR SECTION 91.213 MEL

1. GENERAL.

A. Certain kinds of operations, such as night flight, IFR, or operation in icing conditions require specific equipment that is not essential under all operating conditions. Other equipment, such as entertainment systems and galley equipment, may be installed for convenience. If some deviation from the type certificated configuration were not permitted, the aircraft could not be flown unless all such equipment was operable.

(1) Most aircraft have some redundancy of systems and equipment to provide schedule reliability and the necessary level of safety.

(2) Certain controlled conditions are allowed to compensate for the failure or deactivation of specific instruments or equipment. These controlled conditions include the following:

- Restrictions for certain flight operations
- Changes to in-flight operational procedures
- Temporary deactivation of components

B. An MEL allows an operator to continue a flight or series of flights, with certain instruments or equipment inoperative, to a place where repairs can be made. For the operator to be able to use the MEL, the procedural requirements for the equipment loss must first be met.

C. The MMEL serves as a guideline in the development of an MEL. FOEBs develop MMELs.

3. AIRCRAFT SYSTEMS. The MMEL addresses specific aircraft systems to ensure that airworthiness is not degraded. The MMEL must provide definitive guidance to the maintenance and operations personnel as to which equipment may be inoperative for a particular operation. The operator's MEL may be more restrictive than the MMEL. Under no circumstances may the operator's list be less restrictive.

A. The MEL is designed to reflect the actual aircraft operated. Therefore, the operator, in developing an MEL, may omit items that are not installed in his/her aircraft due to configuration or personal preference. The operator may not add any items that are not already addressed in the MMEL. If an unlisted item, system, or component becomes inoperative, that item must be repaired before further operation of the aircraft.

B. Placards alternate operating procedures, and instructions for the isolation of malfunctions must be technically correct.

5. PROCEDURAL REQUIREMENTS. Not all part 91 operators are required to have a maintenance program or any form of operations manual. However, all operators seeking to develop and use an MEL must have some form of instructions and/or procedures stating how the MEL is to be used. These instructions or procedures should include a method for recording a description of the inoperable instruments and equipment.

A. The MMEL preamble, notes, and definitions must be incorporated into the operator's MEL.

B. Changes to the MEL may affect the operator's procedures. Any revisions must be approved by the FAA before implementation.

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SECTION 11. PROCEDURES

1. PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites:

- Knowledge of part 91
- Knowledge of MMEL preamble

B. Coordination. This task requires close coordination between airworthiness, avionics, and operations inspectors. Coordination may also be required with the FOEB, FOPB, and regional specialists.

3. REFERENCES, FORMS, AND JOB AIDS.

A. References:

- MMEL for subject aircraft

B. Forms. None.

C. Job Aids. None.

5. PROCEDURES.

A. Receive an Operator's MEL Request. Provide the operator with a copy of the appropriate MMEL. Discuss the purpose and function of the MEL with the operator. Advise the operator as to acceptable formats for the specific MMEL.

B. Receive the Operator's MEL. Coordinate with other inspectors assigned to the task. Ensure that any additional documentation required for the evaluation is provided.

C. Evaluate MEL.

(1) Ensure the operator's proposed MEL contains only items that are included on the MMEL.

(2) Ensure that the information in the Number Installed column of the MEL represents the number of equipment items actually installed in the aircraft.

(3) Ensure that the Remarks or Exceptions column includes the following:

- All restrictions and special provisions of the MMEL
- All maintenance procedures required (identified by an "M") and all operations procedures (identified by an "O")
- A specific reference to any document containing maintenance procedures

(4) Review all procedures described in the Remarks and Exceptions column for completeness.

(5) Ensure that both the preamble and the notes and definitions from the MMEL are used in their entirety, without modification.

(6) Ensure that all abbreviations and symbols used in the document are defined.

D. Analyze Results. If deficiencies are discovered during the review and a meeting is necessary, coordination with assigned inspectors. Brief the operator on the findings and discuss how to resolve any deficiencies.

7. TASK OUTCOMES. Complete PTRS.

9. FUTURE ACTIVITIES. Surveillance.

FIGURE 7-4. MEL ORDER 8300.10 HANDBOOK READY REFERENCE

VOLUME	CHAPTER/CHANGE	MEL REFERENCE
APPENDIX	APPENDIX 1	Acronyms and Abbreviations (spell out MEL).
APPENDIX	APPENDIX 4	Appendix 4 is for Flight Standards Information Bulletins.
APPENDIX	APPENDIX 6	National Aviation Safety Inspection Program (NASIP) Inspection Checklist pages 6-11 and 6-33.
INDEX	COMPREHENSIVE INDEX	Alphabetical subject listing MEL reference chapters.
VOLUME 1	CHAPTER 3	For example, an operator may need, want, or be required to have a MEL change. The operator initiates the process by inquiring about the correct procedures to receive approval from the FAA for the change.
VOLUME 2	CHAPTER 3	Review the MEL appropriate sections to identify revisions for CAT II required systems and special procedures, if applicable.
VOLUME 2	CHAPTER 5	The MEL, if used, must incorporate the required changes stated in the MMEL per Global Change 59 (formerly Policy Letter PL-84) dated Aug. 15, 1997.
VOLUME 2	CHAPTER 61	Demonstration and Inspection phase procedures references conducting a MEL inspection, if applicable.
VOLUME 2	CHAPTER 68	Receive the formal application and accompanying documentation, including the MEL (as required).
VOLUME 2	CHAPTER 72	Review the manual for provisions for use of approved MEL.
VOLUME 2	CHAPTER 82	Surveillance should also be directed toward identifying/ correcting abuse of the MEL.
VOLUME 2	CHAPTER 84	Paragraph D095, Minimum Equipment List Authorization.
VOLUME 2	CHAPTER 92	Pg. 92-4, Deferred maintenance, as authorized by the MEL, is deferred per the MEL.
VOLUME 2	CHAPTER 93	Ensure the manual has procedures for use of the MEL and for recording and correcting mechanical irregularities listed therein.
VOLUME 2	CHAPTER 104	ASI reviews of operator's MEL manual procedures.
VOLUME 2	CHAPTER 125	Foreign air carriers operating U.S.-registered aircraft shall maintain approved maintenance program, MEL, and other records.
VOLUME 2	CHAPTER 126	Each foreign air carrier may obtain approval for an MEL under section 129.14. Evaluate the MEL, if operator applies for an MEL; ensure that an MMEL exists for that aircraft.
VOLUME 2	CHAPTER 238	Review the MEL to ensure the appropriate sections have been revised.
VOLUME 3	CHAPTER 3	Ensure that all MEL items are deferred in accordance with the provisions of the operator's approved MEL.
VOLUME 3	CHAPTER 4	Performing the cockpit en route inspection open discrepancies or improperly deferred MEL items.

CHAPTER 8. CERTIFICATE REPAIRMAN FOR LIGHT-SPORT AIRCRAFT

SECTION 1. BACKGROUND

1. PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

- *Maintenance*: 3527

3. OBJECTIVE. This chapter provides guidance for the issuance of repairman certificates for light-sport aircraft and the cancellation of surrendered certificates.

5. GENERAL. Repairman certificates may be issued for the following light-sport aircraft classes: airplane, glider, gyroplane, lighter-than-air, powered parachutes, and weight-shift-control. The class of aircraft eligible to be inspected or maintained will be identified on the repairman's certificate.

A. Definitions. For the purpose of this order, the following definitions will apply:

(1) Experimental Light-Sport Aircraft. Identified as an ELSA for the purpose of this order. An ELSA is an aircraft issued an experimental certificate under Title 14 of the Code of Federal Regulations (14 CFR) part 21, § 21.191(i).

(2) Light-Sport Category Aircraft. Called a Special by industry, this aircraft will be identified as an SLSA for the purpose of this order. An SLSA is an aircraft issued a special airworthiness certificate under part 21, § 21.190.

B. Ratings. The following ratings for repairman certificates for light-sport aircraft may be issued:

(1) Inspection ratings will be limited to aircraft with an ELSA airworthiness certificate that is owned by the applicant. The classes of eligible aircraft are: airplane, glider, gyroplane, lighter-than-air, powered parachutes, and weight-shift-control. The owner's aircraft will be identified by the class, registration number, and serial number on the repairman certificate. More than one class can be listed on the repairman certificate if required class training is accomplished and the additional aircraft(s) is owned by the repairman.

(2) Maintenance ratings are issued for the following SLSA aircraft: airplane, weight-shift-control, powered parachutes, lighter-than-air, and glider. A maintenance rating will not be issued for gyroplane class. The class of SLSA that is to be inspected or maintained will be identified on the repairman certificate. More than one class can be listed on the repairman certificate if required training is accomplished.

C. Certificates. Two kinds of airworthiness certificates are issued to light-sport aircraft:

(1) Experimental, Operating Light-Sport Aircraft (ELSA). The operating limitations for ELSA require that they have an annual condition inspection every 12 calendar-months. This inspection may be performed by:

- The owner who has a repairman certificate with an inspection rating, and that aircraft is identified on the repairman certificate by class and registration and serial number
- A repairman with a maintenance rating for the appropriate class of ELSA
- A mechanic with airframe and powerplant (A&P) ratings that meets the requirements of 14 CFR part 65, § 65.81, for the appropriate class of ELSA
- An appropriately-rated 14 CFR part 145 repair station

(2) Special Light-Sport Category Aircraft (SLSA). These aircraft may be operated for private use or flight training, rental, and towing operations for hire. For aircraft used for flight training and towing, a

100-hour inspection is required. SLSA must be inspected and maintained by a repairman with a maintenance rating for the appropriate class of light-sport aircraft; or by a mechanic with A&P ratings that meets the requirements of § 65.81 for the appropriate class of SLSA; or by an appropriately-rated part 145 repair station. An SLSA special airworthiness certificate will not be issued for gyroplane class because additional design and stability issues for that class of aircraft must be resolved.

NOTE: To maintain SLSA, part 145 repair stations, A&P mechanics, and light-sport repairmen must have available the necessary data and tools to maintain the appropriate class of SLSA (i.e., airplane, weight shift, lighter-than-air, powered parachute, and glider).

7. LIGHT-SPORT REPAIRMAN ELIGIBILITY REQUIREMENTS. The applicant must be:

A. A U.S. citizen or a citizen of a foreign country lawfully admitted for permanent residence in the United States.

B. At least 18 years old.

C. Able to read, speak, write, and understand the English language. If for medical reasons the applicant cannot meet one of these requirements, the FAA may place limits on the certificate to make sure the applicant can safely perform the actions authorized by the certificate and rating.

D. Able to demonstrate the requisite skill to determine if the aircraft is in a condition for safe operation by passing an FAA-accepted training course designed for each rating and/or class of light-sport aircraft to be worked on.

9. PRIVILEGES AND LIMITATIONS OF THE REPAIRMAN (LIGHT-SPORT AIRCRAFT) CERTIFICATE. Two ratings are issued on the repairman (light-sport aircraft) certificate: inspection and maintenance. The rating(s), and appropriate limitation(s) by class, will be identified on the repairman certificate.

A. Inspection Rating. The owner of an ELSA may apply for a repairman certificate with an inspection rating after successful completion of required training. The privileges of the repairman (light-sport aircraft) with inspection rating will be limited to the experimental light-sport aircraft that is owned by the certificate holder and will be identified by the class, registration number, and serial number on the repairman certificate. This is similar to the privilege granted a holder of a repairman certificate for amateur-built aircraft under part 65, § 65.104.

B. Training Required for Inspection Rating. In addition to the eligibility requirements, the applicant must complete a 16-hour training course accepted by the FAA on the inspection procedures of a particular class of ELSA.

C. Maintenance Rating. Any individual may apply for a repairman (light-sport aircraft) certificate with a maintenance rating after successful completion of required training. The repairman may only inspect or maintain SLSA of the same class in which he or she is rated. This rating will allow the individual to perform annual condition inspections on light-sport aircraft certificated as an ELSA or on a SLSA aircraft. In addition, a repairman with a light-sport aircraft maintenance rating may also perform maintenance, 100-hour inspections, comply with Airworthiness Directives (AD) on FAA-approved products installed in a light-sport aircraft only, and perform with applicable manufacturer's safety bulletins on an SLSA for which the repairman is rated.

11. MAJOR REPAIRS/ MAJOR ALTERATIONS.

A. Major repairs and major alterations may only be accomplished on SLSA by a repairman (light-sport aircraft) with a maintenance rating, a certificated mechanic with A&P ratings, or a certificated repair station. The manufacturer must provide the technical data for such a repair or alteration and identify the training required, if any, to perform that repair or alteration. This limitation is necessary because SLSA are built under an industry-developed consensus standard and not under an FAA Type/Production certificate, so Civil Aviation Regulations (CAR) 3 and 14 CFR part 23 standards do not apply. In addition, the required training for repairman certification does not include all the training necessary for the performance of major repairs or alterations.

B. To perform major repairs or major alterations on FAA-approved products, the light-sport repairman (maintenance) must have received training from the FAA approved product manufacturer or equivalent and perform the work in accordance with 14 CFR part 43.

13. TRAINING REQUIRED FOR MAINTENANCE RATING. The repairman with a maintenance rating must complete the required amount of training for each class of light-sport aircraft as detailed below:

NOTE: For an in-depth explanation of the training requirements for light-sport repairmen with the maintenance rating, see FAA Order 8000.84, Procedures to Accept Industry-Developed Training for Light-Sport Repairmen.

A. Airplane. A total of 120 hours of instruction.

B. Weight Shift. A total of 104 hours of instruction.

C. Powered Parachute. A total of 104 hours of instruction.

D. Lighter-Than-Air. A total of 80 hours of instruction.

E. Glider. A total of 80 hours of instruction. To maintain powered gliders, a total of 112 hours of instruction is required.

15. CREDIT FOR LIGHT-SPORT AIRCRAFT PRACTICAL EXPERIENCE TOWARD MECHANIC QUALIFICATION REQUIREMENTS UNDER PART 65, § 65.77. A repairman (light-sport aircraft) with a maintenance rating may document time working on either ELSA or SLSA. To apply for a mechanic's rating the repairman must show that he or she has at least 18 months of practical experience working on either powerplants or airframes, or that he or she has at least 30 months of practical experience working on airframes or powerplants concurrently. One month's practical experience is 160 hours of documented time.

17. DURATION OF REPAIRMAN (LIGHT-SPORT AIRCRAFT) CERTIFICATES.

A. A repairman (light-sport aircraft) certificate with inspection rating remains valid until the repairman no longer owns the light-sport aircraft identified on the repairman certificate, or the certificate is surrendered, suspended, or revoked by the FAA.

B. A repairman (light-sport aircraft) certificate with maintenance rating remains valid until that repairman certificate is surrendered, suspended, or revoked by the FAA.

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SECTION 2. PROCEDURES

1. PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites. Knowledge of 14 CFR parts 21, 39, 43, and 65.

B. Coordination. This task may require coordination with other Airworthiness aviation safety inspectors (ASI) familiar with the applicant's skill and knowledge. For unusual conditions or situations outside the normal, contact the Aircraft Maintenance Division, AFS-300.

3. REFERENCES, FORMS, AND JOB AIDS.

A. References:

- FAA Order 8000.84, Procedures to Accept Industry-Developed Training for Light-Sport Repairmen
- Part 65, subpart E

B. Forms:

- FAA Form 8610-2, Airman Certificate and/or Rating Application
- FAA Form 8060-4, Temporary Airman Certificate

C. Job Aids. None.

5. PROCEDURES.

NOTE: These application procedures will be incorporated into the Integrated Airman Certification and/or Rating Application (IACRA) electronic application system on or before July 2005.

A. Receive the Application. To apply for a repairman (light-sport aircraft) certificate with either an inspection or maintenance rating, the applicant must provide the following documentation to any FSDO:

(1) Photo identification, such as a valid U.S.-issued driver's license, passport, or other positive documentation that will show that the applicant meets the minimum age and citizenship requirements.

(2) A completed Form 8610-2.

(a) The applicant should put a check in the repairman block at the top of the form and specify the rating requested (i.e., light-sport inspection or light-sport maintenance) on the line under the repairman block.

(b) For inspection ratings, the applicant must provide in Block III, Record of Experience, under Type of Work Performed, the registration number, serial number, and class of ELSA owned by the applicant. An applicant who owns multiple ELSA (in the same or different classes) may apply for adding additional aircraft. When adding additional aircraft, the applicant will check the "added rating" box on a new application form and the additional aircraft will be listed in Block III. All aircraft owned by the certificate holder may be listed on one repairman certificate.

(c) For maintenance ratings, the applicant must provide in Block III the class(es) of SLSA to be maintained.

(3) Without any assistance, the applicant must *read and sign* the applicant's certification on the front of the form in the proper location in the presence of an FAA Airworthiness ASI or designated representative. If there is doubt that the applicant can read, write, and understand the English language, have the applicant verbally read the applicant certification block on the front of the form or administer another test to prove command of the English language.

(4) Provide proof that the applicant has received 16 hours of FAA-accepted training for the inspection rating or 80/120 hours of FAA-accepted training for the maintenance rating in the class of light-sport aircraft to be maintained. Proof of training would be a certificate of training or graduation certificate. The certificate of training or graduation certificate for either inspection or maintenance rating must have an FAA acceptance number, name of the organization giving the training, hours of training received, name of the instructor, name of the course, class of light-sport aircraft on which training was received, and date instruction was completed. If there is doubt concerning the validity of certificate of

training/graduation, contact AFS-610 and check the class number and dates of instruction.

B. Review the Application. The inspector shall:

(1) Review the documentation submitted by the applicant for accuracy and completeness.

(2) Return the proof of training certificate to the applicant.

(3) If the repairman certificate is to be issued, check the appropriate blocks on the FAA Inspector's Report block at the bottom of the second page and provide the date, signature, and FSDO identification.

C. Complete FAA Form 8060-4, Temporary Airman Certificate.

(1) In Block III, insert the word "pending."

(2) In Block IV, fill out the name, address, and physical description.

(3) In Block IX, for an inspection rating, insert the words "Repairman (Light-Sport Aircraft)."

(4) In Block XII, first insert the words: "Inspection." Directly underneath put the class of light-sport aircraft (e.g., airplane, glider, powered parachute, weight-shift-control, gyroplane, lighter-than-air) _____, followed by the aircraft's Registration Number N ____ and Serial Number _____.

(5) For a maintenance rating, in Block XII, insert these word "Maintenance" followed by the class (or classes) of light-sport aircraft the repairman is qualified to work on (e.g., airplane, glider, powered parachute, weight-shift-control, lighter-than-air) _____."

NOTE: Inspection and maintenance ratings may both appear on the same repairman light-sport aircraft certificate.

(6) Review the Form 8060-4 for accuracy. If the rating is to be issued, the inspector or designated representative signs and dates Block X, then the applicant signs Block VII.

7. TASK OUTCOMES.

A. Complete PTRS.

B. Issue the Temporary Certificate. After determining that the applicant meets all the requirements for certification, approve the application by signing it. Complete Form 8060-4 in duplicate.

(1) Give the applicant a copy of Form 8060-4. Both the applicant and the inspector must sign this form.

(2) Send Form 8610-2 and the original Form 8060-4 to the Airmen Certification Branch, AFS-760, within 1 business day.

C. Deny Certificate. If the application is disapproved, return it to the applicant with a letter explaining the denial.

9. FUTURE ACTIVITIES. The FAA may take enforcement action against the repairman if the aircraft is maintained in a manner contrary to the inspection/maintenance requirements contained in its operating limitations and/or applicable Federal aviation regulations.

[CHAPTERS 9 THROUGH 20 RESERVED]

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CHAPTER 24. CERTIFICATE REPAIRMAN/ADDED PRIVILEGES

SECTION 1. BACKGROUND

1. PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

A. Maintenance: 3510

B. Avionics: 5510

3. OBJECTIVE. This chapter provides guidance and describes procedures for certificating applications for repairman certificates and added privileges.

5. GENERAL.

A. Applicants for repairman certification are employed by repair stations or air carriers. Practical experience of at least 18 months of formal training appropriate for the position, as well as the satisfaction of the Administrator, are the basis for issuance of a repairman certificate. Applicants must be at least 18 years of age and able to read, write, speak, and understand English.

(1) According to Title 14 of the Code of Federal Regulations (14 CFR) part 145, section 145.159, an applicant may choose to use repairmen to meet the applicable personnel requirements within the repair station.

(2) An air carrier or repair station may assign an applicant employee to a position requiring at least one of the following:

- Responsibility for the work of a shop or department that performs maintenance
- Authorization to sign the airworthiness release or log entry according to the air carrier's manual
- Performance of inspections required by the air carrier's manual

(3) A repairman employed by an air carrier or repair station that also holds a repair station certificate may apply for one certificate if the duties are the same in both operations. The Airmen Certification Branch (AFS-760) will issue one certificate with the same privileges listing each operation in the limitations section. If a repairman is employed at either the operator or the repair station and subsequently wishes to be added to the other, certification will be handled as an added privilege.

(4) A repairman employed and certificated by more than one repair station or by more than one operator, where the employers are distinctly different business entities, will need a separate airman certificate for each repair station or operator.

(5) A repairman employed by a repair station using stations at different locations may serve in any station in that system in accordance with §145.107(b).

B. With each request for a certificate/rating, an applicant should submit the following:

(1) One copy of Federal Aviation Administration (FAA) Form 8610-2, Airman Certificate and/or Rating Application, with items I through IV completed. Applicants should check the box for Repairman Certificate and indicate the privileges sought.

(2) A letter of recommendation from the applicant's employer clearly stating that the applicant meets the requirements of 14 CFR part 65, § 65.101. The letter should describe the specialized jobs the applicant will perform or supervise as a repairman.

C. Ratings for an applicant employed by an air carrier or repair station should coincide with ratings issued at the repair station limited to the specific job for which the person is employed to perform or supervise.

(1) In no instance should a repairman certificate be issued with an airframe and/or powerplant rating to circumvent the process of obtaining a mechanic certificate. If a repairman certificate has been issued with airframe and/or powerplant ratings, request that the airman surrender the certificate. Issue a repairman certificate with the appropriate privileges and limitations.

(2) Reserve repairman certificates for applicants that have special skills, such as:

- Argon-heliarc welding

- Cylinder plating
- Nondestructive testing
- Propeller overhaul
- Electrical system analysis and repair (this type of certificate should be reserved for specific systems only, such as flight guidance databus and power distribution)
- Radio and/or instrument repair (for these repairman certificates, the applicable privileges may be entered as “radio and instrument” or “radio” or “instrument”)

SECTION 2. PROCEDURES

1. PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites:

- Knowledge of the regulatory requirements of 14 CFR parts 43, 65, and 145

B. Coordination. This task may require coordination between maintenance and avionics aviation safety inspectors (ASI).

3. REFERENCES, FORMS, AND JOB AIDS.

A. References:

- Advisory Circular (AC) 65-24, Certification of a Repairman (General), current edition

B. Forms:

- FAA Form 8610-2, Airman Certificate and/or Rating Application
- FAA Form 8060-4, Temporary Airman Certificate

C. Job Aids:

- Figure 24-1, Temporary Airman Certificate
- JTA: 1.2.2

5. PROCEDURES.

A. Verify Eligibility. Ensure that the applicant is at least 18 years of age and reads, writes, speaks, and understands English.

B. Review the Application and Letter of Recommendation.

(1) Ensure that the applicant checks the box for Repairman Certificate and indicates the privilege(s) sought on the front of FAA Form 8610-2. Determine if the applicant meets the requirements of part 65.

NOTE: AFS-760 no longer requires that the "Applicant's Certification," A or B, on the reverse side of FAA Form 8610-2, be filled out for a Repairman Certificate.

(2) Verify that the letter of recommendation contains the following elements:

- A certification that the applicant meets the requirements of the privilege(s)/ limitation(s) sought
- A statement recommending the applicant for the privilege(s)/limitation(s) sought

7. TASK OUTCOMES.

A. Complete PTRS.

B. Issue Certificate. When it has been determined that the applicant meets all the requirements for certification, sign the applicant as approved and complete FAA Form 8060-4 in duplicate.

(1) Check the Airman Information portion of the National Vitals Information Subsystem (NVIS) to determine whether the applicant already possesses a certificate. An applicant seeking added privileges to a specific certificate must surrender the applicable Airman Certificate, FAA Form 8610-2, held at the time of application approval.

(2) Give the applicant a copy of FAA Form 8060-4. Both the applicant and the ASI must sign this form.

(3) Complete the ASI's report portion on the reverse side of FAA Form 8610-2.

(4) Send the original FAA Form 8610-2, the letter of recommendation, Airman Certificate (for an added privilege, as applicable), and the original FAA Form 8060-4 to AFS-760.

C. Deny Certificate. If the application is disapproved, return it to the applicant with a letter explaining the denial.

9. FUTURE ACTIVITIES.

A. Review repair station and air carrier records to determine if the scope of the applicant's employment is consistent with the job described in the letter of recommendation.

B. Send Airman Certificates surrendered in accordance with § 65.15(c) to AFS-760 with a brief statement relating to the circumstances.

FIGURE 24-1. TEMPORARY AIRMAN CERTIFICATE

To issue FAA Form 8060-4, Temporary Airman Certificate, for an application to work at a repair station, fill out the form as indicated below:

A. In Item III, type the social security number, or if an exclusive number is requested, type the word "Pending."

B. In Item IX, type the word "Repairman."

C. In Item XII, type the following: "Certificate privileges of 14 CFR part 65, § 65.103 valid for [applicable privileges] while employed by [name of repair station, city, state]."

D. In Item XIII, type the repair station certificate number.

CHAPTER 37. APPROVE FAR § 91.30 MINIMUM EQUIPMENT LIST/REVISION

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CHAPTER 84. PART 121/125/135 OPERATIONS SPECIFICATIONS

SECTION 1. BACKGROUND

1. PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

A. Maintenance: 3315, 3316

B. Avionics: 5315, 5316

3. OBJECTIVE. This chapter provides guidance for the issuance of automated operations specifications (OpSpecs) of Title 14 of the Code of Federal Regulations (14 CFR) parts 121, 125, and 135. Specific OpSpec paragraph guidance is also available in the Operations Specifications Subsystem (OPSS).

5. GENERAL.

A. Role of OpSpecs. OpSpecs transform the general terms of applicable regulations into an understandable legal document tailored to the specific needs of an individual certificate holder. OpSpecs are as legally binding as the regulations (reference 14 CFR part 119, §§ 119.5, 119.7, 119.9, 119.21, 119.23, 119.25, 119.31, 119.33, and part 125, § 125.31).

B. History.

(1) Until 1953, OpSpecs were not a working part of the Federal system for authorizing air commerce operations. The early requirements for air commerce comprised operating certificates/temporary permits and valid competency letters issued by the Secretary of Commerce. The competency letters contained the information that related to the certificate holder's services, routes, aircraft, maintenance, airmen, and weather procedures. These letters were considered part of the operating certificate and could be amended as the circumstances dictated.

(2) In 1953, the Civil Aeronautics Board (CAB) revised the Civil Air Regulations (CAR) to require OpSpecs to replace and standardize the competency letters then being used. These revised regulations stated that OpSpecs should not be considered a part of an air carrier certificate.

(3) Title 49 of the United States Code (49 U.S.C.), through the Secretary of Transportation, empowers the Federal Aviation Administration (FAA) to issue certificates to qualified air operators. Included in FAA certificates issued to air operators conducting operations under parts 121, 125, and 135 is a stipulation that those operations must be conducted in accordance with the provisions and limitations specified in the OpSpecs. The regulations in part 119 require that the OpSpecs issued to parts 121, 125, and 135 certificate holders specify the authorizations, limitations, and certain procedures under which each type of operation must be conducted and under which each class and size of aircraft must be operated. Part 119 specifies in general terms the basic content of OpSpecs for each kind of operation. The regulations also state that a person engaged in operations governed by OpSpecs issued under part 121, 125, or 135 may not conduct those operations either without OpSpecs or in violation of the appropriate OpSpecs. These regulations also stipulate that the Administrator may add to or amend the OpSpecs whenever necessary to address particular situations. In addition, the rule provides for the suspension or cancellation of OpSpecs for cause.

C. Automated OpSpecs. Automated OpSpecs provide computerized access to a standardized format, which include only those authorizations, limitations, standards, and procedures that are applicable to the individual certificate holder. See Order 8400.10, Air Transportation Operations Inspector's Handbook, vol. 3, ch. 1, section 2 for further instructions.

D. Paragraphs. OpSpecs paragraphs are categorized as follows:

(1) Standard paragraphs are developed by the Flight Standards Service at Washington headquarters. During development, OpSpecs are coordinated with other FAA offices and affected industry groups.

(2) Nonstandard paragraphs are developed for situations unique to a specific certificate holder. Washington headquarters must approve the issuance of a nonstandard OpSpec.

7. AVIATION SAFETY INSPECTOR (ASI) RESPONSIBILITIES.

A. When working with a certificate holder in developing OpSpecs, coordination between all of the involved principal inspectors (PI) is crucial. Coordination ensures the following:

(1) That all ASIs are aware of pending changes to an existing certificate holder's operation.

(2) That the certificate holder/applicant is not needlessly bothered by repetitious questions.

NOTE: See Order 8400.10, vol. 3, ch. 1, section 2, for additional guidance on ASI roles and responsibilities.

B. OpSpecs are divided into six parts, each of which has an assigned letter designator and contains consecutively-numbered standard paragraphs.

(1) Part A, General. Part A paragraphs are generally considered to be the responsibility of both Airworthiness and Operations. Contents of these paragraphs must be carefully coordinated between Operations, Avionics, and Maintenance ASIs before approval. Approval of these paragraphs may be indicated by the signature of any one of the three assigned PIs.

(2) Part B, En Route Authorizations, Limitations, and Procedures. Part B paragraphs are primarily the responsibility of the Operations ASIs. Coordination between Operations, Maintenance, and Avionics ASIs is essential to ensure that the aircraft equipment is properly installed and certified to perform the approved operations.

(3) Part C, Airplane Terminal Instrument Procedures and Airport Authorizations and Limitations. Part C pertains to fixed wing airplanes only. Part C paragraphs are primarily the responsibility of the Operations ASI. Coordination between Operations, Maintenance, and Avionics ASIs is essential.

(4) Part D, Aircraft Maintenance. Part D paragraphs are primarily the responsibility of the Maintenance and Avionics ASIs. In their absence, the principal operations inspector (POI) can prepare and issue OpSpec D095, Minimum Equipment Limitation Authorization.

(5) Part E, Weight and Balance. Part E paragraphs are primarily the responsibility of the Maintenance ASI. The Maintenance ASIs must carefully coordinate the Part E OpSpecs authorization with Operations ASIs.

(6) Part H, Helicopter Terminal Instrument Procedures and Airport Authorizations and Limitations. Part H is the rotorcraft equivalent to the Part C paragraphs for fixed-wing operations. Operations ASIs are primarily responsible for preparing and approving the paragraphs in Part H. (Part 121 and 125 operations will not have Part H in the databases.)

9. USING AUTOMATED OPSPECS.

A. OpSpecs Generation. The system for generating automated OpSpecs is designed to allow ASIs to collect and record the required information. Before attempting to enter information directly into the OPSS, the user should be familiar with the OPSS and the most current OPSS user's manual, which can be found online at http://www.opspecs.com/.

NOTE: See Order 8400.10 vol. 3, ch. 1, section 7 for additional guidance on amendment, surrender, and suspension of OpSpecs.

B. Operator-Requested or FAA-Initiated OpSpecs Changes. The OPSS provides for general notations at the signature block point in the processing of each OpSpec. The tab is labeled "Origin (FAA or Operator)" and when opened has a selection button for either "Issued by the Federal Aviation Administration" or "The Certificate Holder applies for the operations in this paragraph." When the latter button is selected, the "Support Information Reference" clear text box allows for you to briefly document the issuance or amendment. Suggestions for this clear text box might be to refer to the date of the letter from the operator prior to making the change as well as other documentation of actions required by the operator, may also be noted for the issuance of this OpSpec such as an amendment to a training program or operations manual. If it is an FAA-initiated change, the revision history of the standard OpSpec in the OPSS will give a brief synopsis of the reason for the certificate holder or operator's amendment. The OPSS should also contain the official handbook documentation with applicable guidance for the revision.

C. Draft OpSpecs, Mandatory and Nonmandatory OpSpec Changes.

(1) ASIs should coordinate the draft OpSpecs with the operator. This coordination should involve the operator throughout the final preparation of the OpSpecs. This provides an opportunity to develop a common understanding between the operator and the FAA about the authorizations, limitations, and provisions in the OpSpec authorizations. The operator must also be given the ability to verify that added operator-specific information is correct.

(a) The OPSS provides access to various guidance documents in association with individual OpSpecs. These documents should be reviewed with the certificate holder or operator along with a draft of the OpSpec to see what must be done in order to be in compliance prior to the issuance of the requested or required paragraph.

(b) Access to these documents is found under the OPSS tool bar "Paragraph—Guidance Documents."

(2) After the draft OpSpecs have been reviewed and final corrections made, if any, the final OpSpec paragraphs can be printed and physically signed or if the certificate holder or operator has electronic signature capability, the OpSpec paragraphs can be electronically signed. The FAA must sign (electronically) in order to move the OpSpec paragraph to the certificate holder's or operator's grid as a final document. The certificate holder or operator should sign the final document (either electronically or physically) but does not have to do so for the OpSpec to be effective.

11. MANDATORY AND NONMANDATORY OPSPEC CHANGES. OpSpec changes are either mandatory (policy change) reflected by the color red or tan, or nonmandatory (minor text/format change) reflected by the color green to alert the OPSS users of changes. Turning the old OpSpec "tan" instead of "red" allows for a period of time for the certificate holders or operators to come into compliance with the newly released mandatory OpSpec change before the existing OpSpec paragraph is rendered "inactive" (turns "red") and no longer usable. The tan filter color may also be used for an OpSpec paragraph that has an expiration date after which it will no longer be effective or valid. The filters also allow users to view previously issued OpSpecs.

A. Whether it is a mandatory or nonmandatory change, an initial review of the revision history in the OPSS should be the first step to determine what has caused the change to the template. If the change occurs due to new policy, that new policy document will be referred to in the revision history and it will also be available for viewing, printing, or extracting from the OPSS for that OpSpec.

B. If a mandatory change is made and the PIs determine that it affects any particular operator(s) then it is necessary to amend and reissue the OpSpec as soon as appropriate or within 30 days for all those affected. A mandatory change will typically be as a result of a policy or regulatory change in which the standard OpSpec itself has been revised by Headquarters (HQ). If a mandatory change is made, the HQ Revision number changes, i.e., from HQ Revision 010 to HQ Revision 020.

C. If a nonmandatory change is made and the PIs determine that it affects any particular operator(s) then it is necessary to amend and reissue the OpSpec as soon as appropriate, by a predetermined date, or within 90 days for all those operator(s) affected. The nonmandatory changes may be due to a text/format change or as a result of the issuance of new or additional policy for that authorization but the standard language of the OpSpec itself did not change. If a nonmandatory revision is made, the HQ Revision changes, i.e., HQ Revision 010 to HQ Revision 01a or from 02b to 02c.

NOTE: See Order 8400.10 vol. 3, ch. 1, section 7, paragraph 37D for guidance on archived OpSpecs paragraphs.

13. NONSTANDARD PARAGRAPHS.

A. Generating Nonstandard Paragraphs. There are *two methods* of generating nonstandard paragraphs: the addition of subparagraph text to a standard paragraph and the issuance of an individually-developed nonstandard paragraph.

(1) Subparagraph Text. The ASI may need to add *subparagraph text* to a standard paragraph to address certificate holder/applicant situations that are unique or to satisfy a certificate holder/applicant's request.

(a) The provisions within the additional text must not be less restrictive than or contrary to the provisions in standard OpSpecs developed by Washington headquarters.

(b) If an added subparagraph is more restrictive than the standard, the ASI must have a justifiable reason since a more restrictive provision results in unique treatment and could adversely affect a certificate holder's competitive position.

(c) Examples of situations that may justify adding additional text to a standard paragraph include the following:

- A series of accidents, incidents, or enforcement actions
- Certificate holder initiated inspection time interval increases without justification
- Restrictions or procedures requested by the certificate holder/applicant to be specified in OpSpecs

(2) Nonstandard paragraph. The ASI may request a *nonstandard paragraph* to be used in situations unique to a specific certificate holder. Nonstandard paragraphs are individually developed by Washington headquarters in the automated OpSpecs program.

NOTE: A nonstandard paragraph should be considered for use only when the subject matter does not relate to any standard paragraph and it would be inappropriate to add the information as an extra subparagraph.

CAUTION: Do not change or add anything to the language, format, or numbering of the standard OpSpecs as issued by headquarters. If the standard OpSpec is changed in any way, this may invalidate headquarters policy.

B. Approval of Nonstandard Paragraphs– Operator-Requested OpSpecs. Any nonstandard OpSpec request must be submitted from the operator to the principal maintenance inspector (PMI).

(1) The PMI must evaluate and substantiate the information. If the PMI does not concur with the proposal, a letter denying the application for the nonstandard paragraph along with an explanation of the reasons for denial shall be forwarded to the operator.

(2) If the PMI concurs, then prior to approval an evaluation must be made by the Aircraft Maintenance Division, AFS-300. A copy of each proposed nonstandard paragraph shall be forwarded under a letter of transmittal from the PMI through the appropriate regional airworthiness branch for concurrence and then to AFS-300. The letter from the PMI must describe the circumstances and justification for issuance of the nonstandard paragraph. Reserved OpSpecs paragraph numbers are no longer applicable; therefore do not attach a number to the paragraph proposal.

NOTE: To expedite the process, headquarters divisions may accept the completed package as attachments through e-mail as long as the hardcopy package is subsequently forwarded to the appropriate division. Prior to sending it electronically, contact the respective division to ensure that electronic processing is acceptable and to ensure proper coordination.

(3) Headquarters approval is required for proposed nonstandard subparagraph text or nonstandard paragraphs. AFS-300 will evaluate each proposed nonstandard paragraph to determine the following:

- Alignment with current national policy
- Necessity of the proposed paragraph
- Whether other certificate holders may be similarly affected, necessitating incorporation of the nonstandard OpSpec into the automated program

(4) AFS-300 will review the application, the proposed nonstandard OpSpec, the supporting information, and the recommendations. If headquarters agrees with the recommendation, the PMI will be advised by a memorandum with a copy sent to the regional office. If the headquarters division does not concur with the PMI recommendation, the memorandum indicating nonconcurrence will include an explanation of the reasons. Once the nonstandard OpSpec is authorized, headquarters will assign an appropriate number and the PMI may issue the nonstandard OpSpec.

15. MAINTENANCE OPSPECS ─ PARTS D AND E.

A. OpSpec D072, Aircraft Maintenance – Continuous Airworthiness Maintenance Program (CAMP) Authorization.

(1) OpSpec D072 is issued to operators subject to a continuous airworthiness maintenance program (CAMP) under part 121 and part 135, § 135.411(a)(2). This OpSpec contains the conditions that must be met for a certificate holder to operate its aircraft and lists the reference documents that contain the details of the operator's program. See FAA Order 8300.10, Airworthiness Inspector's Handbook, vol. 2, ch. 64.

(2) The certificate holder is authorized to conduct operations using identified aircraft maintained in accordance with the CAMP and limitations specified in these OpSpecs.

(3) A part 125 operator may use a continuous inspection program that is part of a current CAMP approved for use under part 121 or 135.

B. OpSpec D073, Approved Aircraft Inspection Program (AAIP).

(1) This OpSpec identifies aircraft subject to part 125, § 125.247(a)(3), and part 135, § 135.419.

(2) Each aircraft subject to the requirements of part 135, § 135.421 (Additional Maintenance Requirements) identified in this OpSpec, will be issued the appropriate OpSpec paragraph(s) 101 through 104. This OpSpec may be issued for turbine-powered aircraft type-certificated for 9 passenger seats or less or having a Supplemental Type Certificate limiting the seating configuration to nine seats or less. Additional guidance is found in Order 8300.10, vol. 2, ch. 83, 105, and 107.

C. OpSpec D074, Reliability Program Authorization: Entire Aircraft. OpSpec D074 is authorized for operators subject to a CAMP under part 121 and § 135.411(a)(2). This OpSpec authorizes the use of a maintenance reliability program that contains standards for determining maintenance intervals and processes. This program controls the inspection, check, overhaul or restoration times for the entire aircraft and is the sole control as far as OpSpecs are concerned. Each make/model/series of aircraft controlled by reliability and its approved reliability document shall be identified on this OpSpec. Guidance for approving a reliability program is found in Order 8300.10, vol. 2, ch. 66.

D. OpSpec D075, Reliability Program Authorization: Airframe, Powerplant, Systems or Selected Items. OpSpec D075 is authorized for operators subject to a CAMP under part 121 and § 135.411(a)(2). This OpSpec authorizes the use of a maintenance reliability program containing the standards for determining maintenance intervals and processes. The program controls the inspection, check, overhaul, or restoration time for airframe, powerplant, systems, or individually selected items within a system (e.g., hydraulic system, pumps, valves, actuators, etc.) and must be identified on the OpSpecs.

(1) Airframe, powerplant, systems, or items controlled by reliability shall be identified in the Maintenance Time Limitations Section by an asterisk or other identifier, and a note.

(2) If preferred, a certificate holder may reference in its Maintenance Time Limitations Section a document approved by the Administrator. The referenced document shall contain at least that information required by the Maintenance Time Limitations Section.

(3) Guidance for approving this program is found in Order 8300.10, vol. 2, ch. 64 and 66.

NOTE: Components not subject to the certificate holder's partial reliability program must be controlled by a time limitations manual or document. This manual or document must be listed in table 1 of OpSpec D088.

E. OpSpec D076, Short-Term Escalation Authorization.

(1) OpSpec D076 is authorized for operators subject to a CAMP under part 121 and § 135.411(a)(2). OpSpec D076 authorizes a certificate holder to use short-term escalation procedures with aircraft, powerplant, systems, or selected items without pre-approval by the PI.

(2) Certificate holders who have short-term escalation procedures incorporated into their reliability program (OpSpec D074) or partial reliability program (OpSpec D075) do not need OpSpec D076 authorization for items covered in those programs. Items not subject to a partial reliability program must have OpSpec D076 authorization to use short-term escalations.

NOTE: See Order 8300.10, vol. 2, ch. 80.

F. OpSpec D077, Maintenance Contractual Arrangement Authorization: For an Entire Aircraft. OpSpec D077 is authorized for operators subject to a CAMP under part 121 and § 135.411(a)(2). This OpSpec authorizes a certificate holder to use a part 121 or § 135.411(a)(2) certificate holder's approved maintenance program for maintenance of its entire aircraft. If applicable, this includes participation in the contractor's reliability program. See Order 8300.10, vol. 2, ch. 66 and ch. 69.

G. OpSpec D078, Maintenance Contractual Arrangement Authorization for Specific Maintenance. OpSpec D078 is authorized for operators subject to a CAMP under part 121 and § 135.411(a)(2). This OpSpec authorizes a certificate holder to use another part 121 or § 135.411(a)(2) or certificate holder's approved maintenance program for specific maintenance functions. This OpSpec identifies the functions to be performed by the contractor on the certificate holder(s) aircraft listed in the table. This OpSpec may be used for one or more contracts, aircraft/engine makes and models, or components. See Order 8300.10, vol. 2, ch. 69.

H. OpSpec D079, Reliability Program Contractual Arrangement Authorization. This OpSpec authorizes operators subject to a CAMP under part 121 and § 135.411(a)(2) to participate in another part 121 or § 135.411(a)(2) (contractor's) FAA-approved reliability program for its aircraft, powerplant, systems, or selected components. See Order 8300.10, vol. 2, ch. 67.

NOTE: Operators authorized OpSpec D079 will be automatically issued OpSpec D088.

I. OpSpec D080, Leased Aircraft Maintenance Program Authorizations: U.S.-Registered Aircraft. This OpSpec authorizes operators subject to a CAMP under part 121 and § 135.411(a)(2) to use a lessor's approved maintenance program for the leased aircraft. This OpSpec applies only to leases of aircraft intended to return to the lessor at a time specified in the lease. See Order 8300.10, vol. 2, ch. 73.

J. OpSpec D081, Parts Pool Agreement Authorization. This OpSpec authorizes a part 121 certificate holder operating outside the United States under the provisions of part 121, § 121.361(b) to enter into a parts pooling agreement with foreign air carriers or agencies whose employees do not hold U.S. airman certificates. See Order 8300.10, vol. 2, ch. 87.

K. OpSpec D082, Prorated Time Authorization. This OpSpec authorizes operators subject to a CAMP under part 121 and § 135.411(a)(2) to use aircraft for which inspection and overhaul times have been established using the prorating process. See Order 8300.10, vol. 2, ch. 88.

L. OpSpec D083, Short-Term Escalation for Borrowed Parts Subject to Overhaul Requirements. This OpSpec authorizes operators subject to a CAMP under part 121 and § 135.411(a)(2) relief from approved overhaul time limits when borrowing parts from another certificate holder. See Order 8300.10, vol. 2, ch. 87.

M. OpSpec D084, Special Flight Permit with Continuous Authorization to Conduct Ferry Flights. This OpSpec authorizes operators subject to a CAMP under part 121 and § 135.411(a)(2) to issue a special flight permit with continuing authorization to conduct ferry flights. This permit can only be issued under the guidelines as set forth in 14 CFR part 21, § 21.197(c). See Order 8300.10, vol. 2, ch. 89.

N. OpSpec D085, Aircraft Listing. Certificate holders conducting operations as domestic, flag, supplemental, commuter, and on-demand under 14 CFR who are required to maintain liability insurance coverage under 49 U.S.C. section 41112 and its implementing regulation, and 14 CFR part 205, § 205.4(b) will list all aircraft in these OpSpecs.

(1) Section 205.4(b) states, in part, that "Aircraft shall not be listed in the carrier's operations specifications with the FAA and shall not be operated unless liability insurance coverage is in force." All air carrier certificate holders are required to have continuous,

effective liability insurance coverage and in effect to ensure that the public is protected in the event of an accident. Effective liability insurance coverage is a condition for them to hold Office of the Secretary of Transportation (OST) economic authority.

(2) For air carrier certificate holders that request to hold the liability insurance coverage in suspension on aircraft for specific periods of non-use, see Handbook Bulletin for Airworthiness (HBAW) 03-02, Liability Insurance Suspension for Seasonal Operations (OpSpec Paragraph A501) and Aircraft in Long-Term Maintenance or Storage (OpSpec Paragraph D106), as amended.

(3) Certificate holders operating aircraft under part 125 are not required to maintain liability insurance although are required to list authorized airplanes by type and registration number on their OpSpecs per § 125.31(b)(2).

(4) The aircraft listing may also contain the certificate holder's aircraft that are not in revenue service. This includes, but is not limited to, aircraft that are undergoing heavy maintenance, in storage, awaiting parts, newly purchased, or in Supplemental Type Certificate maintenance. However, the certificate holder must have procedures specifying how these aircraft are handled. This applies to parts 121, 125, and 135 certificate holders regardless of the "kind of operations" conducted.

(5) Any aircraft used under an interchange agreement must be identified with an asterisk (*) or other identifier, with a note to reference OpSpec A029.

O. OpSpec D086, Maintenance Program Authorization for Two-Engine Airplanes Used in Extended-Range Operation. This OpSpec authorizes operators subject to a CAMP under part 121 to use certain approved aircraft in extended-range operations. Airworthiness ASIs must be familiar with OpSpec B042 and shall coordinate with the POI before approving OpSpec D086. See Order 8300.10, vol. 2, ch 82.

P. OpSpec D087, Maintenance Program Authorization for Leased Foreign-Registered Aircraft Operated by U.S. Air Carriers. This OpSpec authorizes operators subject to a CAMP under part 121 and § 135.411(a)(2) to maintain leased, foreign-registered aircraft by adopting the foreign air carrier's maintenance program. See Order 8300.10, vol. 2, ch. 81.

NOTE: If a PI approves a revision to an adopted foreign maintenance program, that approval must be done on an individual basis by amending this OpSpec.

NOTE: Any aircraft make, model, and series listed on this OpSpec must also be listed in OpSpec D072.

Q. OpSpec D088, Maintenance Time Limitations Authorization. This OpSpec authorizes operators subject to a CAMP under part 121 and § 135.411(a)(2) requiring a maintenance time limitations manual to use a separate approved document or approved section in the certificate holder's manual. This OpSpec is issued to approve the time limitations of each maintenance task not covered under the partial reliability program. See Order 8300.10, vol. 2, ch. 64 and ch. 66 for further information.

NOTE: This OpSpec must be issued in conjunction with OpSpec D075.

R. OpSpec D089, Maintenance Time Limitations Section.

(1) This OpSpec authorizes operators subject to a CAMP under part 121 and § 135.411(a)(2) requiring a maintenance time limitations manual to use a separate approved document or approved section in the certificate holder's manual. See Order 8300.10, vol. 2, ch. 64.

(2) The referenced document(s) must be approved by the Administrator and must have procedures for affecting revisions and revision control acceptable to the Airworthiness PI.

NOTE: This OpSpec is to be issued only if the operator is not issued OpSpec D074 or D075.

S. OpSpec D090, Coordinating Agencies for Suppliers Evaluation (CASE). This OpSpec authorizes operators subject to a CAMP under part 121 and § 135.411(a)(2) to become a member of the CASE program. See Order 8300.10, vol. 2, ch. 95.

T. OpSpec D091, Authorization to Make Arrangements with Other Organizations to Perform Substantial Maintenance. This OpSpec is issued to operators subject to a CAMP under part 121. Review the air carrier's data to determine that the methods used to accept the substantial maintenance provider was in accordance with the air carrier's manuals. See Order 8300.10, vol. 2, ch. 69.

NOTE: This OpSpec is not to be issued to part 135 operators.

U. OpSpec D092, Maintenance Program Authorization for Airplanes Used for Operations in Designated Reduced Vertical Separation Minimum (RVSM) Airspace. This OpSpec authorizes operators under parts 121, 125, and 135 with an FAA-approved RVSM maintenance program to allow certain approved aircraft to operate in RVSM airspace. See Order 8300.10, vol. 2, ch. 5.

V. OpSpec D093, Helicopter Night Vision Goggle Operations (HNVGO) Maintenance Program. This OpSpec is issued to operators authorized to conduct HNVGO under the limitation and provisions of part 135 and OpSpec A050 using specific approved aircraft.

W. OpSpec D095, Minimum Equipment List (MEL) Authorization. This OpSpec is issued to operators under parts 121, 125, and 135 authorized to use an approved minimum equipment list (MEL).

X. OpSpec D097, Repair Assessment Program for Pressurized Fuselages. This OpSpec is issued to operators subject to a CAMP under part 121 to ensure that a comprehensive assessment for damage-tolerance be completed for fuselage pressure boundary repairs. The following aircraft are affected by this OpSpec: A300 (excluding -600 series), BAC1-11, B-707, B-720, B-727, B-737, B-747, DC-8, DC-9/MD-80, DC-10, L1011, F-28. See FAA Order 8000.40, Maintenance of Pressure Cylinders in Use as Aircraft Equipment.

Y. OpSpec D101, Additional Maintenance Requirements – Aircraft Engine, Propeller, and Propeller Control (Governor). This OpSpec applies to all certificate holders maintaining aircraft under § 135.411(a)(1). This includes aircraft subject to an AAIP under § 135.419. See Order 8300.10, vol. 2, ch. 83 or ch. 91.

Z. OpSpec D102, Additional Maintenance Requirements – Rotorcraft. This OpSpec applies to all certificate holders maintaining aircraft under § 135.411(a)(1). This includes aircraft subject to an AAIP under § 135.419. See Order 8300.10, vol. 2, ch. 83 or ch. 91.

AA. OpSpec D103, Additional Maintenance Requirements – Single Engine IFR. This OpSpec applies to all certificate holders maintaining aircraft under § 135.411(a)(1). This includes aircraft subject to an AAIP under § 135.419. See Order 8300.10, vol. 2, ch. 83 or ch. 91.

BB. OpSpec D104, Additional Maintenance Requirements – Emergency Equipment. This OpSpec applies to all certificate holders maintaining aircraft under § 135.411(a)(1). This includes aircraft subject to an AAIP under § 135.419. See Order 8300.10, vol. 2, ch. 83 or ch. 91.

CC. OpSpec D105, Air Carrier Emergency Evacuation Systems (EES) Maintenance Program Requirements. This OpSpec applies to all certificate holders maintaining aircraft under a CAMP in accordance with part 121. OpSpec D105 contains the EES conditions that must be met on a continuing basis. See Order 8300.10, vol. 2, ch 64 and HBAW 02-04, Air Carrier Emergency Evacuation Systems (EES) Maintenance Program Requirements, as amended.

DD. OpSpec D106, Aircraft in Long-Term Maintenance or Storage. This OpSpec applies to all certificate holders maintaining aircraft in accordance with part 121 or 135 who request to hold the liability insurance coverage (required by their economic authority) in suspension on aircraft for specific periods of non-use, such as long-term maintenance or long-term storage. See HBAW 03-02, Liability Insurance Suspension for Seasonal Operations (OpSpec Paragraph A501) and Aircraft in Long-Term Maintenance or Storage (OpSpec Paragraph D106), as amended.

(1) The aircraft will remain on OpSpecs A003 and D085 during the time it is on OpSpec D106. This ensures the continuation of the aircraft maintenance program.

(2) The aircraft cannot be used to conduct operations in air transportation during the time it is listed in OpSpec D106.

(3) At no time will OpSpecs A501 and D106 be active at the same time. These OpSpecs are developed as separate provisions for specific needs.

EE. OpSpec E096, Weight and Balance Control Procedures. This OpSpec authorizes certificate holders operating aircraft under parts 121, 125, or 135 to use one of two aircraft weight and balance control programs:

(1) The certificate holder is authorized under §§ 121.135, 125.91(b), and 135.185(a) to use individual aircraft weights outlined in the operator's empty weight and balance program.

(2) The certificate holder is authorized under §§ 121.153(b) or 135.185(b)(2) to use average fleet aircraft weights outlined in the operator's weight and balance control program.

NOTE: This OpSpec does not authorize the use of average fleet aircraft weights for a part 135 reciprocating powered aircraft of nine or less passenger seats. For further information see Order 8300.10, vol. 2, ch. 75 and 110; HBAW 04-05, Weight and Balance Operations Specifications Paragraphs A011, A096, A097, A098, A099, and E096; and AC 120-27, Aircraft Weight and Balance Control, current edition.

SECTION 2. PROCEDURES

1. PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites:

- Knowledge of the regulatory requirements of 14 CFR part(s) 121, 125, and/or 135, as applicable
- Previous experience with parts 121, 125, and/or 135 certification projects and certificate management
- Successful completion of the Airworthiness Inspector Indoctrination course(s) or equivalent

B. Coordination. This task requires close coordination between the Airworthiness and the Operations ASIs. Each specialty should be involved in the review process to ensure that all relevant issues are addressed.

3. REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- Advisory Circular (AC) 120-27, Aircraft Weight and Balance Control
- AC 121-1, Standard Operations Specifications—Aircraft Maintenance Handbook
- AC 125-1, Operations of Large Airplanes Subject to Federal Aviation Regulation Part 125
- Order 8000.49, Flight Standards Geographic Program
- Order 8300.10, vol. 2, referenced chapters
- Order 8400.10, vol. 3, ch. 1, section 1

B. Forms:

- Air Operator Vital Information Subsystem (Air Oper VIS) worksheets

C. Job Aids:

- JTAs: 3.3.71, 3.3.96

5. PROCEDURES.

NOTE: It is highly recommended to thoroughly read Order 8400.10, vol. 3, ch. 1, section 1 before actually working with an operator on automated OpSpecs.

A. Conduct Meeting with Operator/Applicant.

(1) New Applicant. When an applicant applies for a new certificate, the certification project manager should conduct a meeting with the applicant along with all involved PIs to acquire information for the following:

- Air Oper VIS
- JTAs

NOTE: The guidance subsystem contained within the OPSS provides relevant guidance documents in association with individual paragraphs. See Order 8400.10, vol. 3, ch. 1, section 2.

NOTE: This meeting should be scheduled at the certification project manager's discretion and not necessarily as part of the initial precertification meeting.

(2) Operator Requiring an OpSpecs Amendment. For an established operator needing an amendment to OpSpecs, review and update the following, as required:

(a) Air Oper VIS worksheets to ensure that all required information is included on the worksheets and that these critical fields of information are current and accurate.

(b) JTAs.

(c) Automated OpSpec paragraphs A – H.

B. Complete the OpSpecs.

(1) Review the completed OpSpecs to determine what information is still required.

(2) Airworthiness ASIs should coordinate with the other ASIs and the operator to confirm the need for issuance of paragraphs.

(3) After a review with the operator/applicant, ensure there is agreement that the selected statements accurately describe the operation.

(4) Enter the data into the OpSpec system. Print the OpSpecs Summary Listing for review.

(5) Review the summary and note those OpSpecs that need additional information or clarification.

C. Review the Draft Copy of the OpSpecs.

(1) Verify that the appropriate OpSpecs have been selected. If a necessary paragraph was not printed, or if an inappropriate paragraph was printed, review the information in either the Air Oper VIS worksheet or the OpSpecs checklist, as applicable.

(2) Correct any errors in the information.

(3) Proofread the information for accuracy. New information will appear in upper-case letters. Enter corrections into the computer.

D. Conduct Final Review of Maintenance OpSpecs — Parts D and E. Verify whether the relevant OpSpecs include the required information.

(1) OpSpec D072, Continuous Airworthiness Maintenance Program (CAMP) Authorization. Table 1 must contain the following:

(a) Each of the aircraft authorized to be maintained in accordance with the CAMP by make, model, and series;

(b) The document(s) that encompass the basic required elements of a CAMP. The certificate holder may have multiple manuals that encompass the CAMP. The PI may elect to list all the manuals encompassing the CAMP or, if one manual references all the other manuals then preferably that particular manual may only be listed; and

(c) The certificate holder's assigned number(s) of the CAMP document(s).

NOTE: Revisions to the certificate holder's CAMP does not require reissuance of this OpSpec unless the manual title or document number changes.

(2) OpSpec D073, Approved Aircraft Inspection Program (AAIP). Table 1 must list the aircraft registration number, serial number, and make, model, and series of each aircraft subject to §§ 125.247 and 135.419 .

(3) OpSpec D074, Reliability Program Authorization: Entire Aircraft. Table 1 must contain the following:

- The make, model, and series of each aircraft controlled by a reliability program; the level of detail in specifying the series of aircraft should match the detail in the operator's program

- The document name that encompasses the reliability program and the certificate holder's assigned number(s) of the reliability document

- The current revision date of the reliability document

(4) OpSpec D075, Reliability Program Authorization: Airframe, Powerplant, Systems or Selected Items. Table 1 must contain the following:

- The make, model, and series of each aircraft controlled by a reliability program; the level of detail in specifying the series of aircraft should match the detail in the operator's program

- The document name that encompasses the partial reliability program and the certificate holder's assigned number(s) of the partial reliability document

- The current revision date of the partial reliability document

NOTE: Operators authorized OpSpec D075 must be issued OpSpec D088.

(5) OpSpec D076, Short-Term Escalation Authorization. Table 1 shall reference the aircraft by make, model, series, and the limitations (if applicable) placed on that particular make, model, and series. The limitations in Table 1 are primarily for airframe check and inspection intervals. Engines and their components, as well as airframe components and appliances, are generally not limited, except for the 10 percent not to exceed 500 hours.

(a) The limitation section of this table is used restrict a particular make, model, and series task below the maximum allowable 10 percent, not to exceed 500 hours. An example would be if an aircraft "A" check has an interval of 200 hours (200 x 10 % = 20 hrs) and the PI limited the A check short-term escalation to not exceed 10 hours.

(b) It can also be used to eliminate certain tasks from being eligible for short-term escalation. (An example would be if the operator was not permitted short-term escalations on a particular make, model, and series aircraft "B" check).

(c) If the limitation section of this table is left blank, then the operator is authorized to short-term escalate all items to the maximum interval described in its manual.

NOTE: If restrictions and eliminations are requested for engine, engine components, airframe components, and appliances, then they may be listed in the limitations for that particular make, model, and series as well.

(6) OpSpec D077, Maintenance Contractual Arrangement Authorization: For Entire Aircraft. OpSpec D077 authorizes and identifies the contractor with whom the certificate holder contracts to perform maintenance of its entire aircraft and if applicable, to participate in the contractor's reliability program. Table 1 must contain the following information:

- Contractor: This field must list the contractor with whom the certificate holder has entered into agreement for the specific maintenance function listed

- Contract Number and Date: Self-explanatory

- Aircraft and Powerplant M/M/S: Self-explanatory

- Reliability Program Name/#/ Date: List the contractor's approved reliability program name, number assigned by the

contractor, and current revision date (if applicable)

(7) OpSpec D078, Maintenance Contractual Arrangement Authorization: For Specific Maintenance. OpSpec D078 authorizes and identifies the functions to be performed by the contractor on the certificate holder's aircraft listed in the table. Table 1 must contain the following information:

- Contractor: This field must list the contractor with whom the certificate holder has entered into agreement for the specific maintenance function listed
- Contract Number and Date: Self-explanatory
- Aircraft and Powerplant M/M/S: Self-explanatory
- Specific Maintenance Function: This field can be as general as stating "All" for the entire aircraft and engines, or it can list specific inspections or checks

NOTE: This OpSpec only applies to the performance of maintenance and inspections.

(8) OpSpec D079, Reliability Program Contractual Arrangement Authorization. Table 1 must contain the following information:

- Contractor: This field must list the contractor with whom the certificate holder has entered into agreement for the specific reliability function listed
- Contract Number and Date: Identifying number from contract (if applicable) and date signed
- Aircraft and Powerplant M/M/S: Self-explanatory
- Reliability Program Name and #: Name of program and number assigned by contractor
- Reliability Program Date: Date of current revision

(9) OpSpec D080, Leased Aircraft Maintenance Program Authorizations: U.S.-Registered Aircraft. The certificate holder is authorized to maintain the aircraft listed in Table 1 in accordance with the lessor's approved maintenance program for the specific make, model, and series aircraft and lease agreements identified in Table 1, except as provided in Table 2.

NOTE: Table 2 identifies specific items that will be maintained in accordance with the certificate holder's approved maintenance program.

NOTE: Specific maintenance program requirements of the certificate holder that are different than the lessor's program will be listed in Table 2.

(10) OpSpec D081, Parts Pool Agreement Authorization. Table 1 must list the participants, along with their location, who are eligible to provide parts to the certificate holder.

(11) OpSpec D082, Prorated Time Authorization. Table 1 lists each aircraft by registration, serial number, make, model, and series that shall be maintained in accordance with the adjusted times identified in the certificate holder's proration document. The table must list the individual proration document number assigned by the air carrier and current effective date.

(12) OpSpec D083, Short-Term Escalation Authorization for Borrowed Parts Subject to Overhaul Requirements. Provided all of the conditions listed on the OpSpecs are met, the certificate holder is authorized to use a borrowed part (overhauled) from another operator when time-in-service of the available part exceeds the certificate holder's approved overhaul time limit.

(13) OpSpec D084, Special Flight Permit with Continuous Authorization to Conduct Ferry Flights. Table 1 shall list the maintenance document, which encompasses the policies, procedures, conditions, and limitations necessary to conduct the ferry flight.

(14) OpSpec D085, Aircraft Listing. The table(s) must list the aircraft registration number, serial number, nose number (if applicable), and aircraft make, model, and series.

(15) OpSpec D086, Maintenance Program Authorization for Two-Engine Airplanes Used in Extended-Range Operation. Complete the following tables as described below:

(a) Table 1 must include the approved aircraft registration number, airplane make, model, and series, and the maximum diversion time in minutes.

(b) Table 2 identifies the reliability program, which continually assess the propulsion and airframe systems with the extended range fleet. The following must be included:

- Airframe and Powerplant M/M/S: Self-explanatory
- Program Name: Enter the name of the reliability program
- Program Number: Assigned number of the program by the air carrier
- Program Date: Enter date of approval

(c) Table 3 identifies the configuration, maintenance, and procedures (CMP) document for extended-range operations and must include the following:

- Airplane and Powerplant M/M/S: Self-explanatory
- FAA-Approved CMP Document Name/Number: Enter document name and assigned number for which the CMP is contained
- Document Date: Enter date the above document was originally approved
- FAA-Approved Amendment No.: Enter in current amendment number, if applicable, to the above approved document

(16) OpSpec D087, Maintenance Program Authorization for Leased Foreign-Registered Aircraft Operated by U.S. Air Carriers.

(a) Table 1 must be completed as follows:

- Foreign Air Carrier: Enter the name of the foreign air carrier
- Identification/Registration Number: Self-explanatory
- Aircraft M/M/S: Self-explanatory
- Lease Date: Self-explanatory
- Maintenance Program Revision Number/Date: Revision number and date of the foreign air carrier's leased maintenance program; original approval of

the maintenance program must be identified with "ORIG"

NOTE: If a PI approves a revision to an adopted foreign maintenance program, that approval must be done on an individual basis by amending this OpSpec.

(b) Table 2 identifies differences between the certificate holder's adopted maintenance programs for leased, foreign-registered aircraft and the certificate holder's approved program (if applicable).

(c) Each item or system that is considered a difference or exception must be listed in Table 2 as follows:

- ATA Chapter: Enter the Air Transportation Association (ATA) code for the applicable item or system
- Primary Maintenance Process: List maintenance requirements for item or system (i.e., overhaul, inspect, replace, etc.)
- Inspection and Check Period: List inspection and/or check frequency/interval
- Other: This field can be used for general comments

NOTE: Do not combine items into one row of this table. Each item must be broken down into ATA chapters and listed individually in this table.

(17) OpSpec D088, Maintenance Time Limitations Authorization. Table 1 must include the following:

- Aircraft M/M/S: Self-explanatory
- Manual/Document Name and Number: Manual name and air carrier-assigned number for that manual which houses the FAA-approved time limitations for maintenance tasks not covered under the partial reliability program
- Manual/Document Date: List the date of the current revision of the manual

(18) OpSpec D089, Maintenance Time Limitations Section. Table 1 must include the following:

- Aircraft M/M/S: Self-explanatory
- Manual/Document Name and Number: Manual name and carrier assigned number for that manual which houses the FAA-approved time limitations for maintenance tasks
- Manual/Document Date: List the date of the current revision of the manual

NOTE: This OpSpec is issued to operators that were not issued OpSpec D074 or D075.

(19) OpSpec D090, Coordinating Agencies for Suppliers Evaluation (CASE). This OpSpec authorizes certificate holders to use CASE as a means of qualifying a vendor for services, parts, and materials to satisfy the requirements of part 121, § 121.373 and/or part 135, § 135.431, as applicable.

(20) OpSpec D091, Authorization to Make Arrangements with Other Organizations to Perform Substantial Maintenance. Table 1 must contain the following information:

- Authorized organization: Must enter in the name and address of the organization

- Certificate Number: Must enter in the entire certificate number of the authorized organization. If arrangements are made with organizations that are not assigned an organizational certificate number (i.e., Canadian AMO), then the user will input "N/A" in this field

- Authorized equipment: List airframe, engine, component, or accessory on which that organization is authorized to perform substantial maintenance

- Work authorized: List general area(s) that organization is authorized to accomplish (i.e., inspections, major repairs/ alterations, overhaul, NDT, etc.)

- Date of authorization: List date the FAA approved the individual organization to perform substantial maintenance

(21) OpSpec D092, Maintenance Program Authorization for Airplanes Used for Operations in Designated Reduced Vertical Separation Minimum (RVSM) Airspace. Table 1 must include the registration number and the make, model, and series of the aircraft approved for RVSM airspace.

(22) OpSpec D093, Helicopter Night Vision Goggle Operations (HNVGO) Maintenance Program. Table 1 of this OpSpec must include the aircraft registration number, serial number, aircraft make, model, and series along with the name of the approved maintenance document for the night vision device.

(23) OpSpec D095, Minimum Equipment List (MEL) Authorization. This table must list the aircraft make, model, and series for aircraft authorized use of an MEL.

(24) OpSpec D097, Repair Assessment Program for Pressurized Fuselages. Table 1 must include the registration number, serial number, aircraft make, model, and series, along with the maintenance document which incorporates the comprehensive repair assessment program.

(25) OpSpec D101, Additional Maintenance Requirements – Aircraft Engine, Propeller, and Propeller Control (Governor). Table 1 must include the following:

- Airplane make, model, and series

- Engine, propeller, and Governor make and model

- Engine, propeller, and Governor maintenance document that contains the additional maintenance requirements

- Engine, propeller, and Governor time-in-service interval

(26) OpSpec D102, Additional Maintenance Requirements – Rotorcraft. Table 1 must include the following:

- Rotorcraft type

- Engine make and model

- Maintenance document for engine, rotor main, and auxiliary that contains the additional maintenance requirements

- Engine time-in-service interval

(27) OpSpec D103, Additional Maintenance Requirements – Single Engine IFR. Table 1 must include the following:

- Registration number

- Serial number

- Aircraft make, model, and series
- Maintenance instructions/ document that contains the additional maintenance requirements
- Other limitations as necessary (i.e., engine trend monitoring, oil analysis program, etc.)

(28) OpSpec D104, Additional Maintenance Requirements – Emergency Equipment. Table 1 must include the following:

- Emergency equipment items
- Maintenance document that contains the additional maintenance requirements
- Limitations and provisions field contains the intervals/frequency of the additional maintenance requirements (in hours, cycles, calendar time, etc.)

(29) OpSpec D105, Air Carrier Emergency Evacuation Systems (EES) Maintenance Program Requirements. Review the operator's program to ensure that all conditions of this OpSpec are met. If review is satisfactory, issue the OpSpec.

(30) OpSpec D106, Aircraft in Long-Term Maintenance or Storage. Table 1 must contain the following:

- End of Operation: Enter the day on which the air carrier elects to cease operating the aircraft
- Registration number: Enter the aircraft registration number
- Serial Number: Enter the aircraft serial number

(31) OpSpec E096, Weight and Balance Control Procedures. Conduct final review of this OpSpec per the guidance in Order 8300.10, vol. 2, ch. 74.

(a) Individual aircraft weights outlined in the certificate holder's empty weight and balance program in Table 1 must include the following:

- Aircraft by make, model, and series
- Weighing interval
- Weight and balance control procedures

(b) Fleet aircraft weights outlined in the certificate holder's weight and balance control program in Table 2 must include the following:

- Aircraft by make, model, and series
- Fleet weighing sample interval
- Fleet weight and balance control program

E. Coordinate the Draft OpSpecs with the Operator/Applicant. Ensure the operator is involved throughout the preparation of the final OpSpecs. The operator should be given opportunities to verify that added information is correct.

F. Conduct Final FAA Review. The Airworthiness PI must perform a final review of the OpSpecs for accuracy and completeness. Ensure the following:

(1) The effective date appears in the bottom left corner.

(2) The operator's certificate number appears in the bottom right corner and is correct.

(3) The operator's correct name appears in the bottom center of the page.

(4) The title, date, and authorized signature of the certificate holder are entered.

G. Approve OpSpecs.

(1) For approval of OpSpecs, complete the following steps for each OpSpec:

(a) Enter the effective date and the amendment number (for original issuance, enter Original or Org in the space provided).

NOTE: Except for emergency amendments, amendments to OpSpecs become effective on the date the amendment is approved by the authorized ASI unless the ASI establishes a different effective date.

(b) Ensure the ASI's name, title, and district office designator is entered correctly in the space provided (auto filled) at the end of each OpSpec.

NOTE: Part D and E OpSpecs may be approved only by the assigned Airworthiness PI(s) or by ASIs authorized by the unit supervisor to sign for the PIs in their absence. Specific paragraphs within Part A of the OpSpecs are the joint responsibility of Operations and Airworthiness PIs. Approval of Part A paragraphs may be indicated by the signature of any one of the three assigned PIs.

(2) To approve OpSpecs, the assigned ASI should compare the effective dates in the table of contents page to each page to ensure the effective dates match.

7. AMENDMENT, SURRENDER, AND SUSPENSION OF OPSPECS. Part 119, § 119.51 specifies that OpSpecs can be amended as a result of a certificate holder or operator's request or because the FAA determines that safety in air transportation or air commerce (in the case of a commercial operator) is affected and the change is in the public interest. In addition, a certificate holder or operator's OpSpecs may be amended by the FAA due to a change in the certificate holder or operator's operating environment. This section contains direction and guidance to be used by PIs for the amendment, surrender, and suspension of OpSpecs for parts 121, 125, and 135 certificate holders. See Order 8400.10, vol. 3, ch. 1, section 7 for guidance on this subject.

9. TASK OUTCOMES.

A. Complete PTRS.

B. Complete the Task.

(1) Issue all part 121, 125, and 135 OpSpecs as follows:

(a) After approving (signing) the OpSpec, forward the original and copy of each paragraph and supplemental paragraph to the certificate holder's representative authorized to receive OpSpecs.

(b) Instruct the certificate holder to do the following:

- Retain the original
- Indicate receipt on the copy
- Return the copy to the district office

(c) File all copies of the OpSpecs, including the table of contents, with the CHDO.

- File together those OpSpecs that are currently in effect for the operator.
- Keep superseded OpSpecs and tables of contents in a separate file for at least 5 years.

(2) Distribute nonstandard text and OpSpecs in accordance with the instructions in section 1, paragraph 13B.

11. FUTURE ACTIVITIES. Conduct additional surveillance for the first 120 days after the approval of new OpSpecs to ensure that operating practices are performed at an adequate level of safety.

CHAPTER 105. EVALUATE PART 125 AIRPLANE INSPECTION PROGRAM AND MAINTENANCE

SECTION 1. BACKGROUND

1. PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

A. Maintenance: 3341, 3342

B. Avionics: 5341, 5342

3. OBJECTIVE. This chapter provides guidance on how to evaluate and approve an operator/applicant submitted Airplane Inspection Program (AIP) and engine maintenance program or revision.

5. GENERAL. This job task provides for interaction between the applicant and the Federal Aviation Administration (FAA) from initial inquiry to approving the program/revision. It ensures that programs, systems, and intended methods of compliance are thoroughly reviewed, evaluated, and tested.

A. The FAA must approve an inspection program selected by an operator/applicant under Title 14 of the Code of Federal Regulations (14 CFR) part 125. Section 125.247(e) lists inspection programs that may be approved for use under this part. The FAA reviews the program to ensure that it meets regulatory requirements, is complete, and is appropriate for the intended operation.

B. Airworthiness aviation safety inspectors (ASI) should have as much knowledge of the operator/applicant's operation as possible. This includes areas of operation, type of equipment, operating history, and maintenance/inspection organization(s).

NOTE: An AIP is authorized for use in operations specifications (OpSpecs) and cannot be transferred.

7. AIRPLANE INSPECTION PROGRAM.

A. A part 125 operator may use a continuous inspection program that is a part of a current continuous airworthiness maintenance program (CAMP) approved for use under 14 CFR part 121 or 135.

(1) A CAMP is an all-encompassing program that includes maintenance, inspections, continuing analysis and surveillance, and so forth.

(2) All elements are closely related and may not be as effective as "stand-alone" programs. Lack of maintenance and quality control in the airworthiness maintenance program could have negative effects.

B. The operator may use inspection programs currently recommended by the manufacturer of the airplane, aircraft engines, propellers, appliances, or survival and emergency equipment. The manufacturer's inspection program might not cover survival equipment and avionics equipment. Additionally, the inspector should consider aircraft use before approving a manufacturer's program. Many manufacturers offer a low-use program if the normal aircraft use falls below certain parameters.

C. The operator/applicant may use an inspection program developed by a certificate holder operating under part 125.

9. ENGINE MAINTENANCE. The operator/applicant must maintain engines in accordance with (IAW) the overhaul intervals that the manufacturer recommends or a program that the Administrator approves.

NOTE: The current version of Advisory Circular (AC) 125-1, Operations of Large Airplanes Subject to Federal Aviation Regulation Part 125, defines proration as a procedure for determining the overhaul time expended under one maintenance system and to establish the time remaining to overhaul under a new program. Thus, proration permits further use of an affected item without need for immediate overhaul.

A. If the manufacturer does not have a recommended overhaul interval, the Administrator may approve a maintenance program that the

manufacturer recommends as an on-condition program/trend analysis program.

B. The operator/applicant may develop an on-condition or overhaul program for approval by the Administrator.

11. CHANGES TO APPROVED TIME INTERVALS.

A. Operator-Initiated Changes. The operator may request approval to amend inspection or overhaul intervals.

(1) The operator must justify the request using past operating experience, environmental conditions, airplane use, and other data necessary to substantiate changes.

(2) Teardown reports, manufacturer recommendations, and the operator's experience may justify engine maintenance programs and overhaul intervals.

(3) Operator-initiated time changes require revisions to both the AIP and OpSpecs.

NOTE: Limitations specified for life-limited items and Airworthiness Directives (AD) shall not be amended or extended unless authorized in writing by the appropriate FAA Aircraft Certification Office (ACO).

B. Manufacturer Escalations.

(1) If a manufacturer extends the recommended inspection or overhaul interval, the operator may request approval to use the extension by submitting a revision to the AIP. The manufacturer's recommendation must accompany the request.

(2) ASIs should not automatically approve a time escalation the manufacturer recommends, but should consider the operator's airplane use and experience to ensure that the escalation will not compromise safety. For example, the operator could consider sampling programs to justify time escalation requests.

13. POLICIES AND PROCEDURES MANUAL.

The operator's policies and procedures manual must include the AIP. The operator should submit a manual revision (IAW manual revision procedures) at the same time the AIP/revision is submitted for approval. This allows the FAA to approve the AIP/revision and accept the manual concurrently, thus expediting the implementation of the program.

SECTION 2. PROCEDURES

1. PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites:

- Knowledge of the regulatory requirements of part 125
- Previous experience with complex maintenance/inspection programs
- Successful completion of the Airworthiness Inspector Indoctrination course(s) or equivalent

B. Coordination. This task may require coordination with and/or assistance from Operations ASIs and/or regional specialists.

3. REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- 14 CFR parts 25, 39, 43, 45, 47, 65, and 91
- Aircraft maintenance inspection notes
- AC 20-42, Hand Fire Extinguishers for Use in Aircraft
- AC 20-53, Protection of Airplane Fuel Systems Against Fuel Vapor Ignition Due to Lightning
- AC 20-136, Protection of Aircraft Electrical/Electronic Systems Against the Indirect Effects of Lightning
- AC 91-56, Continuing Structural Integrity Program for Large Transport Category Airplanes
- AC 125-1, Operations of Large Airplanes Subject to Federal Aviation Regulation Part 125

B. Forms:

- FAA Form 8400-7, Operations Specifications

C. Job Aids:

- JTAs: 2.3.49, 3.3.83, 3.3.201

5. PROCEDURES.

A. Schedule and Conduct a Preliminary Meeting with Operator/Applicant, if Necessary.

(1) Advise the applicant of regulatory requirements and policies.

(2) For an existing operator, remind the operator that the policies and procedures manual must include the AIP/revision.

B. Plan and Coordinate the Task.

(1) Determine if the airplane meets eligibility requirements.

(2) Review the operator file to identify any information concerning the AIP/revision and to determine its effect on other programs or procedures that the operator/applicant uses.

(3) If this task is performed as part of an original certification, review the Schedule of Events to ensure that the task can be accomplished IAW the schedule.

NOTE: When evaluating the program, ensure that all information is clear and easy to understand. It must identify the scope of each task and provide detailed, step-by-step procedures.

C. Evaluate the Proposed Program/Revision.

(1) Evaluate the instructions, procedures, and standards for conducting inspections.

(a) The inspection program must include:

- Airframe
- Aircraft engines
- Propellers
- Appliances
- Survival and emergency equipment
- Component parts for the above items

(b) When establishing an inspection program, for an aircraft to comply with § 125.247, the program should include installed avionics and instrument systems (appliances). These systems are not always installed by the aircraft manufacturers and may not be included in their recommended inspection programs.

(c) Inspection standards, procedures, methods, instructions, or other technical data may be included in the program by reference, eliminating the need to reprint them. Such references may be either the airframe manufacturer's or the appliance manufacturer's service data. However, when both the airframe manufacturer and the appliance manufacturer provide inspection data, that of the airframe manufacturer should be used. In this case, the inspector should ensure that the airframe manufacturer's

inspection data is applicable to the actual systems and equipment (make and model) installed on the aircraft.

(d) The avionics and instrument systems inspection should include a visual and functional check. Therefore, these definitions should be included in the program:

i. Visual Check. Using acceptable methods, techniques, and practices to determine physical condition and safety items.

ii. Operational Check. An operational test to determine whether a system or component is functioning properly in all aspects, conforming with minimum acceptable manufacturer design specifications.

iii. Functional Check. This test may require the use of appropriate test equipment.

(e) The avionics and instrument systems inspections should be incorporated into the basic airframe program. The visual inspection of the avionics and instrument systems should be accomplished at an interval corresponding to the airframe inspection interval (e.g., inspect avionics and instrument equipment, wiring, connectors, bonding straps, circuit breakers, and switches forward of the instrument panel) at the same interval that flight controls and other structural inspections are performed in that area.

(f) Functional checks of the avionics and instrument systems, using appropriate ramp test equipment, should be performed at intervals as a function of the aircraft operating environment (i.e., one year of the manufacturer's design specifications). The term "avionics" means aviation electronics and includes the following systems:

- Communications
- Navigation
- Electrical
- Instrument
- Lights
- Autopilot/flight director system

(g) The program should include maintenance/inspection requirements for protection of applicable electric/electronic systems from High Intensity Radio Frequency (HIRF) and lightning hazards. Such systems include, but are not limited to, power distribution and generating equipment and electromechanical devices, systems that use data buses for critical functions, and electronic engine and flight controls (including Full Authority Digital Engine Control (FADEC)), as well as associated interconnecting wiring or cables.

(h) All required tests and checks recommended by the aircraft or equipment manufacturer must be addressed.

(2) Identify the individuals responsible for performing the work.

(3) Ensure that the instructions, procedures, and standards are clear and easily understood. They must identify the scope of each task and provide a detailed outline of each step that must be accomplished to perform the inspection and ensure that established standards are met.

D. Evaluate the Procedures for Controlling Life-Limited Parts. The program must contain provisions to ensure that records are current. Life limits must be expressed by one of the following measures:

- Length of time-in-service
- Number of cycles
- Number of landings
- Calendar time
- A combination of the above measures

E. Evaluate the Procedures for Scheduling Inspections. The program must list inspection intervals and describe personnel responsibilities for scheduling and performing inspections.

F. Evaluate the Procedures to Ensure that Inspections Are Performed by Properly Certificated Personnel. Procedures must ensure that inspections are performed by properly certificated, qualified, trained, current, and authorized personnel. The program must identify, by title, the person responsible for ensuring that inspection personnel meet FAA requirements. The manual must list those persons whom the operator has arranged for inspection performance under part 125. The list must include the names and addresses of these persons.

G. Evaluate Engine Maintenance/Overhaul Intervals. Ensure that engine overhaul periods correspond to the recommended overhaul intervals in the engine manufacturer's manuals and/or service bulletins.

H. Evaluate the Procedures for Reporting and Correcting Mechanical Irregularities. The program must include detailed instructions, procedures, and the necessary forms and documents for the recording and

repair of mechanical irregularities. These instructions, procedures, and forms may appear elsewhere in the company manual, but their location(s) must be referenced in the maintenance manual and AIP.

NOTE: Within its manual, the operator/applicant should establish procedures to address continued operation of an aircraft with interim repairs and Structural Repair Manual (SRM) allowable damage. These procedures should also include provisions for a continuous feedback loop of timely information between the operator, FAA's principal maintenance inspector (PMI), principal avionics inspector (PAI), Aircraft Certification Office (ACO), Designated Engineering Representative (DER), and the manufacturer.

NOTE: Manufacturers' service documents, i.e., maintenance manuals, service bulletins, service letters, etc., communicate useful information on alterations, repair inspections, etc. It is the operator's ultimate responsibility to ensure that FAA approval is obtained if required before implementing manufacturers' advice, recommendations, alterations, repairs, etc., prescribed in service documents. In conclusion, although the manufacturer may provide service documents to the operator upon request that include statements that the data is "DER approvable" or that the manufacturer has no "technical objection" with the operator's request, it is the air carrier's responsibility to ensure that technical data approved by the Administrator is obtained, if required, before implementing the information in these service documents.

NOTE: It is recommended that PMIs and PAIs with certificate management responsibilities ensure that this information is brought to their operator's attention. Any conflict should be resolved regarding what constitutes FAA-approved data and when that data is required, regardless of what a manufacturer's service document may say.

I. Evaluate the Instructions for Using the AIP. Make sure the AIP includes instructions on its use.

J. Analyze the Findings. Evaluate findings to determine if program changes are required. Coordinate with other specialties before debriefing operator.

K. Conduct Debriefings.

(1) Before meeting with the operator/applicant, discuss initial findings with appropriate FAA personnel to determine content of the briefing. Depending on the findings, it may be necessary to coordinate with the certification team, principal ASIs, regional specialists, or other FAA personnel.

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

7. TASK OUTCOMES.

A. Complete PTRS.

B. Approve or Reject the AIP/Revision.

(1) Approval. If the program or revision meets all regulatory requirements, proceed as follows:

(a) Ensure that the AIP or revision has been fully coordinated between maintenance and avionics and any other appropriate personnel.

(b) Indicate "Approved" by the amended OpSpecs. See FAA Order 8300.10, Airworthiness Inspector's Handbook, vol. 2, ch. 107, Evaluate Part 125 Operations Specifications.

NOTE: The date the AIP and engine maintenance program are approved must be the same as the date the OpSpecs are approved.

(c) Initial and date each page of the AIP or revision unless another approval control is used.

(d) Send the approved AIP/revision and the original and one copy of the OpSpecs to the operator, as appropriate. Request that the operator retain the original and acknowledge receipt of the OpSpecs by signing and dating the copy and returning the copy to the district office.

(e) Update the district office file with copies of the acceptance letter, the signed and dated AIP/revision, and the receipted OpSpecs.

(2) Rejection. If the AIP/revision is not acceptable, advise the operator/applicant by letter that the program is rejected. Return it to the operator/applicant along with the reasons for the rejection. Ensure that the letter accomplishes the following:

- Confirms all agreements made during the debriefing
- Identifies the date the AIP/revision was submitted

- Shows the revision number and date
- Identifies and describes all deficiencies by chapter, section, page, etc.
- Refers each deficiency to the appropriate regulation
- Returns the original AIP
- Reminds the operator not to implement the revision until it is approved

NOTE: If this review is performed as part of a certification, inform the applicant in the letter that issuance of the certificate will be withheld until deficiencies are corrected. If necessary, advise the applicant to revise the Schedule of Events.

9. FUTURE ACTIVITIES.

A. Schedule of Events. In the case of original certification, review the Schedule of Events to determine if a revised schedule is necessary.

B. Policies and Procedures Manual. Ensure that the policies and procedures manual includes the approved AIP/revision.

CHAPTER 109. APPROVE FAR PART 125 MINIMUM EQUIPMENT LIST/REVISION

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CHAPTER 126. EVALUATE/APPROVE A MAINTENANCE PROGRAM AND A MINIMUM EQUIPMENT LIST FOR U.S.-REGISTERED AIRCRAFT UNDER PART 129

SECTION 1. BACKGROUND

1. PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

A. Maintenance: 3302, 3303, 3312, 3313

B. Avionics: 5302, 5303, 5312, 5313

3. OBJECTIVE. This chapter provides information and guidance to be used by the assigned aviation safety inspector (ASI) in evaluating and approving a maintenance program and a Minimum Equipment List (MEL) for U.S.-registered aircraft under Title 14 of the Code of Federal Regulations (14 CFR) part 129.14.

5. GENERAL.

A. Definitions.

(1) Assigned ASI. The Federal Aviation Administration (FAA) inspector assigned compliance responsibility for maintenance programs approved under part 129, § 129.14.

(2) Expository Manual. A manual (existing or new) or a chapter, section, or appendix of an existing manual that describes the maintenance program under part 129 and the individual aircraft maintenance program. This description documents the programs to show compliance with the regulations and to show the scope of the FAA approval.

B. Applicable Operations. Operations of U.S.-registered aircraft operated in common carriage by a foreign air carrier or foreign person within the United States or solely outside the United States is subject to the MEL and maintenance program requirements found in § 129.14. This includes arrangements in which a manufacturer supplies an interim delivery U.S.-registered aircraft.

7. MAINTENANCE PROGRAM REQUIREMENTS. The operator, using an FAA-approved maintenance program will ensure U.S.-registered aircraft will be maintained in an airworthy condition. Refer to Advisory Circular (AC) 129-4, Maintenance Programs for U.S.-Registered Aircraft Under FAR Part 129, for guidance on what an acceptable maintenance program consists of, and for a complete discussion of how the requirements of International Civil Aviation Organization (ICAO) Annex 6 apply to U.S.-registered aircraft operating under part 129. The ICAO standards are adopted as the basis for the FAA-approved maintenance programs. This applies to all operators, including those operators who may not be ICAO members. The maintenance program must also meet the minimum requirements of the regulations.

A. Identifying the Relevant Section. Section 129.14(a) establishes the requirements for approved maintenance and administration functions, while 14 CFR part 43 provides the performance standards for the maintenance function.

B. Approving the Maintenance Program. The evaluation of the aircraft maintenance programs, when practicable, should be a joint maintenance and avionics effort.

(1) The operator's manual system may consist of two parts that will require specific approval. The first part describes the maintenance program that falls under part 129 and that meets the standards specified by ICAO Annex 6 concerning the operator's maintenance organization, administration, and control procedures as they apply to maintenance of U.S.-registered aircraft. The second part describes the aircraft program for each make and model of U.S.-registered aircraft operated by a part 129 operator.

(2) Those parts of the operator's manual system that prescribe the maintenance programs must be identified in order to support the approval document. This is one of the most complex areas in the maintenance program approval process. The ASI's literature may vary greatly according to the size of the operator. Therefore, choice of what material must be included or referenced as the

approved program will have to be resolved on a case-by-case basis for each operator.

(a) If the operator's manuals are written or arranged in such a manner that the pertinent parts cannot be readily separated, the operator's entire manual system may be referenced in the approval document. In other cases, the operator may have a single manual, sometimes approved by the Foreign Civil Aviation Authority (FCAA), that identifies all of the essential elements, but references other supportive manuals; or the operator's manual system may be arranged in such a way that specific chapters may be extracted and identified individually.

(b) The ASI should require the operator to develop additional procedures to support the ICAO standards or to meet unique regulation requirements if these are missing from the operator's existing program. Therefore, the "expository manual" must be determined at the assigned ASI's discretion based on the circumstances that are found. This determination must also take into consideration the method of revision control that will be employed to keep the approved programs current.

(3) The operator's mechanism for adjustment of aircraft maintenance programs will require thorough analysis. Its application to U.S.-registered aircraft must be well defined in the operator's program. AC 129-4 does not require a separate approved reliability document. If the operator uses reliability control to adjust its maintenance program, the system should be described in its manual with pertinent pages identified as part of the approved program. It is imperative that the approved program ensures FAA access to reliability (and/or analytical) data to facilitate FAA surveillance.

(4) The operator's expository manual may reference other approved documents that address specific tasks (e.g., an engine manufacturer's manual). The expository manual and significant referenced material that make up the approved program (under part 129) must be written in the English language. Secondary material can be in the local language if interpretation is available.

C. Revision Control.

(1) The assigned ASI and the foreign operator must agree on a system of revision control. This system of revision control must be part of the maintenance program document.

(2) Any operator changes to the approved maintenance program must be approved. However, if the revisions are approved by the operator's FCAA, which abides by the rules of ICAO, and the revisions are not contrary to the regulations, then the assigned ASI may choose to accept the maintenance program revision on that approval basis.

(3) Some changes will require prior FAA approval regardless of whether the FCAA approves them. Since this is an area of ASI's judgment, there cannot be a list of rules.

(a) Items that need prior FAA approval must be decided on a case-by-case basis. The following are some examples:

i. AC 129-4 provides that "A," "B," "C," and "D" check intervals as well as any changes to their content should require prior approval.

ii. The assigned ASI may determine that other significant or basic elements of the operator's aircraft maintenance program cannot be revised without prior approval.

iii. Prior approval may also be required for changes to basic elements within the part 129 maintenance administration program.

iv. Some operators may have a reliability program that permits adjustment to their aircraft maintenance program without further approval from their FCAA. Any revision to the operator's manual that changes the administrative procedures controlling this type of program should require prior approval. Conversely, if the FCAA directly approves each change to the operator's aircraft maintenance program that is generated by the operator's reliability program, changes to the administrative procedures don't require prior FAA approval.

(b) There may be several similar examples; in any event, the ASI should coordinate with the FCAA.

(4) The maintenance program should establish a timeframe within which to notify the FAA of any revision to the approved program. A copy of the revision must be sent to the FAA office responsible for maintaining the maintenance program.

D. Standards for Recordkeeping.

(1) Maintenance records requirements are governed by ICAO Annex 6, Part 1, and should be included in the maintenance program under part 129. The maintenance records requirements of 14 CFR part 91, §§ 91.417 and 91.419 were negated by Amendment 91-201, and ICAO standard 8.4 now governs the part 129 operator's records requirements.

(2) To meet the requirements of 14 CFR part 43 and § 129.14, maintenance logbook entries and corrective actions must be made in the English language.

E. Aircraft Maintenance. The aircraft must be maintained by persons authorized under 14 CFR part 43, § 43.3.

NOTE Section 43.13 is amended to accept the methods, procedures, and practices prescribed by a maintenance program approved under part 129. This allows for the Maintenance Release certification stated in ICAO Annex 6 standard 8.8.

F. Program Adoption. A previously approved aircraft maintenance program adoption follows the guidelines found in AC 129-4, as applicable.

9. OBTAINING MEL APPROVAL. Each foreign air carrier may obtain approval for an MEL under § 129.14. MELs are approved by Operations Specifications (OpSpecs).

A. Each foreign operator may develop its own MEL based on the Master Minimum Equipment List (MMEL) approved by the FAA for the specific aircraft type.

B. In seeking approval of an MEL, the foreign operator must show that the procedures in its maintenance program are adequate to support the use of its MEL.

C. A foreign operator leasing a U.S.-registered aircraft from a U.S. air carrier may opt to use an approved MEL in accordance with the U.S. air carrier's approved MEL, subject to FAA approval of each arrangement.

11. MAINTENANCE PROGRAM AND MEL APPROVALS.

A. The responsibility for approving maintenance programs and MELs for U.S.-registered aircraft is delegated to certain regions and specific offices. Any office, other than the assigned International Field Office (IFO), receiving an application from a foreign air carrier must forward it to the appropriate regional office.

B. The operator's FCAA should be encouraged to participate in the maintenance program approval process. A written concurrence with the FAA approval should be requested to ensure the FCAA understands and does not object to the maintenance program as approved by the FAA.

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SECTION 2. PROCEDURES

1. PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites:

- Knowledge of the regulatory requirements of 14 CFR parts 43, 65, and 129
- Successful completion of the Airworthiness Inspector Indoctrination course(s) or equivalent

B. Coordination. This task requires coordination between Airworthiness and Operations ASIs and may require coordination with the regional office and/or the appropriate FCAA and U.S. Embassy, as required.

3. REFERENCES, FORMS, AND JOB AIDS.

A. References:

- 14 CFR parts 21, 91, and 145
- AC 129-4, Maintenance Programs for U.S.-Registered Aircraft Under FAR Part 129
- Order 8300.10, Airworthiness Inspector's Handbook, vol. 2, ch. 125 and 163
- ICAO, Annex 6, Part 1

B. Forms. None.

C. Job Aids.

- JTAs: 3.3.99, 3.3.100

5. PROCEDURES.

A. Receive the Application Letter. Applications for foreign air carrier OpSpecs must be made in letter form. Ensure the application includes the following documents for each leased U.S.-registered aircraft operated by the applicant:

- Registration markings as required by part 45
- The lease agreement or a written memorandum of the terms thereof signed by both parties, if applicable
- A proposed MEL tailored to the applicant's operations and based on the FAA-approved MMEL, if applicable
- A maintenance program that satisfies the requirements of § 129.14
- Application for special purpose flight airman certificates, if applicable
- Letter of compliance to ICAO Annex 6, Part 1, Chapters 8 and 11 for transport aircraft and ICAO Annex 6, Part 3, Chapters 6 and 9 for helicopters

B. Verify the Approval of OpSpecs. Ensure that the OpSpecs have been approved by an Operations ASI before proceeding with approval of the maintenance program for foreign air carriers with operations to the United States. For foreign air carriers (or persons) that do not operate to the United States, obtain evidence that the applicant has been issued an Air Operator Certificate (AOC) by the State of the operator or is in the process of obtaining an AOC.

C. Evaluate the Maintenance Program.

(1) Determine which of the operator's manuals or portions of them (pages, sections, and chapters) require specific FAA approval.

(2) Ensure that all applicable items found in AC 129-4, paragraphs 7 through 16, are included in the operator's maintenance program.

(3) Ensure that the requirement of ICAO Annex 6, Part 1, Chapters 8 and 11 are included in the operator's maintenance program for transport aircraft operations, or ICAO Annex 6, Part 3, Chapters 6 and 9 for helicopter operations.

(4) Ensure that the operator has incorporated any applicable and current FAA Handbook Bulletin requirements.

D. Evaluate the MEL. If an operator applies for an MEL, ensure that an MMEL exists for that aircraft.

(1) Ensure that the operator's MEL is not less restrictive than the MMEL.

(2) Ensure that the operator has included a MEL management program in the MEL or maintenance program.

E. Evaluate a U.S. Operator's Aircraft Maintenance Program and MEL for Use by a Foreign Operator. For leased aircraft maintained

under an adopted maintenance program and an adopted MEL, ensure the following:

- The foreign operator is capable of meeting the requirements of the lessor's adopted maintenance program
- The foreign operator is capable of meeting the maintenance and operational requirements of the lessor's MEL

F. Inform the Operator of Notification Requirements. Instruct the operator to send notification of any changes or revisions to its maintenance program to the FAA office with responsibility for the maintenance program.

G. Evaluate Revisions to an Approved Maintenance Program. Evaluate revisions to the maintenance program as in the original approval. All revisions will be approved in accordance with procedures provided in the maintenance program.

7. TASK OUTCOMES.

A. Complete PTRS.

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

(1) Approval of the Application. If the applicant meets the operating and maintenance requirements of parts 43, 91, and 129, accomplish the following, as applicable:

(a) Issue OpSpecs for maintenance program approval.

(b) Coordinate with the principal operations inspector to confirm issuance of MEL OpSpecs.

(2) Disapproval of the Application. Accomplish the following:

(a) Inform the applicant in writing of any deficiencies or omissions requiring corrective actions.

(b) If deficiencies cannot be satisfactorily resolved, terminate the application process and return the application and associated data to the applicant with a letter describing the reasons for the termination.

(3) Document Task. File any supporting paperwork in the operator's office file.

9. FUTURE ACTIVITIES. Normal surveillance.

CHAPTER 162. PROCEDURES FOR CERTIFICATING PART 145 REPAIR STATIONS/SATELLITES LOCATED WITHIN THE UNITED STATES AND ITS TERRITORIES

SECTION 1. BACKGROUND

1. PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

A. Maintenance: 3230

B. Avionics: 5230

3. OBJECTIVE. This chapter provides guidance for evaluating an applicant for certification of Title 14 of the Code of Federal Regulations (14 CFR) part 145 repair stations/satellites.

5. THE CERTIFICATION PROCESS. This process provides for interaction between the applicant and the Federal Aviation Administration (FAA) from initial inquiry to certificate issuance or denial of repair station within the territories of the United States. It ensures that programs, systems, and intended methods of compliance are thoroughly reviewed, evaluated, and tested. The certification process consists of five phases:

- Preapplication Phase
- Formal Application Phase
- Document Compliance Phase
- Demonstration and Inspection Phase
- Certification Phase

A. Preapplication Phase.

(1) Preapplication Meeting. The preapplication meeting should be held in the Flight Standards District Office (FSDO). This will allow the applicant to become familiar with the assigned FAA personnel. This meeting should also provide the FAA with a point of contact with the applicant. Open discussion on the applicant's intent should take place, and the FAA should help answer any questions the applicant has regarding the application process. During the preapplication meeting, the following items should be discussed:

(a) Preapplication Statement of Intent (PASI), FAA Form 8400-6.

i. An applicant should conduct a thorough review of the appropriate regulations and advisory material to provide guidance for personnel, facility, equipment, and documentation requirements.

ii. The PASI will be used by the manager of the FSDO or his or her designee to evaluate the complexity of the proposed operation. This allows the establishment of the certification team to be based on the complexity of the certification. A certification project manager (CPM) will be designated as the principal spokesperson for the FAA during certification.

NOTE: Submittal of the PASI by the applicant shows an intent to initiate the certification process.

(b) How to complete FAA Form 8310-3, Application for Repair Station Certificate and/or Rating.

(c) Formal application attachments, including:

i. Repair station manual. This manual will establish how a certificated repair station will conduct business on a daily basis and comply with §§ 145.207 and 145.209.

ii. Quality control manual. This manual will ensure that any article(s) repaired or maintained by a repair station or its contractors will meet the airworthiness criteria established in § 145.211.

iii. Letter of compliance. The letter of compliance will ensure that all applicable part 145 regulatory requirements are addressed during the certification process. This is accomplished by listing, in sequence, each section of part 145. After each section, there must be a brief narrative or specific reference to a manual/document that describes how the applicant will comply with that regulation. The letter of compliance must be reviewed to ensure that the applicant has a clear understanding of the regulation

and that the proposed method of compliance meets the intent of the regulation.

(d) Repair Station and Quality Control Manual Advisory Circular (AC). Encourage the applicant to use AC 145-9, Guide for Developing and Evaluating Repair Station and Quality Control Manuals, for guidance in developing the manuals. The manual should allow the user to understand its content without further explanation and must not contradict any regulatory requirements.

NOTE: It is the applicant's responsibility to develop manuals and procedures that ensure safe operating practices and compliance with the rules. The team can offer suggestions for improvement but must not "write" the material.

(2) Personnel Requirements (§ 145.151).

(a) Each repair station must have the management personnel necessary for the scope and complexity of its organization. The regulation requires an accountable manager, supervisory personnel, inspection personnel, and certificated personnel to approve the articles it maintains for return to service. It may be necessary for the repair station to have other management or supervisory personnel that are not regulatory.

(b) For non-certificated employees performing maintenance functions, abilities are determined based on their training, knowledge, experience, or practical testing.

(c) Qualifications for supervisory and inspection personnel, and those personnel authorized to approve an article for return to service, must meet the requirements of part 65 and §§145.153, 145.155, and 145.157. These personnel must be able to read, write, and understand English.

(d) Inspection personnel who are not authorized to approve articles for return to service need only read, write, and understand English. (Ref. part 145, § 145.155.)

B. Formal Application Phase. To begin the formal application phase, the team will receive the application and attachments. As a rule, the team will meet with the applicant after receiving the formal application package. All questions about the proposed operation, formal application, and attachments should be resolved at this time. The meeting should consist of the certification team members and all key management personnel from the applicant's organization.

NOTE: The legal name and address of the owner should be determined at this point.

C. Document Compliance Phase. In this phase, the application is thoroughly reviewed for approval or disapproval, and the manual and related attachments are reviewed for acceptance or rejection. This review ensures conformity to the applicable regulations and safe operating practices. This phase is done in the FSDO by the certification team.

D. Demonstration and Inspection Phase. In this phase, the certification team ensures that the applicant's proposed procedures are effective and that facilities and equipment meet regulatory requirements. The CPM must decide if demonstrations will be required.

E. Certification Phase.

(1) Issuance. Once the applicant meets the regulatory requirements of part 145, the certification team will issue the repair station certificate and operations specifications (OpSpecs) with the appropriate ratings.

(2) Duration. A certificated repair station located in the United States has no expiration date.

7. SATELLITE REPAIR STATIONS.

A. Satellite Repair Stations. A certificated repair station under the managerial control of another certificated repair station may operate as a satellite repair station if it meets all the requirements of § 145.107.

NOTE: A satellite repair station may not be located in a country other than the domicile country of the certificated repair station with managerial control.

(1) The precertification number of a satellite facility coincides with the parent's repair station number. Advise the Aviation Data Systems Branch (AFS-620) that a satellite repair station number is required.

(2) Each satellite repair station is to be considered as a stand-alone operation and is required to meet all the requirements of § 145.107.

B. A repair station may interchange personnel anywhere in its system, as long as:

(1) Personnel are identified on the station roster;

(2) The repairman's certificate shows the certificate number of the certificated repair station with managerial control; and

(3) Inspection personnel are designated and available at the satellite station any time a determination of airworthiness or return to service is made.

NOTE: Many corporations with multiple repair stations and satellite repair stations are consolidating their operations, quality control systems, manuals, and recordkeeping systems. It is essential that principal inspectors (PI) coordinate their efforts when notified that the certificated repair station with managerial control and its satellite facilities desire standardized systems.

9. AMENDMENT TO OR TRANSFER OF CERTIFICATE. Section 145.57 specifically requires a repair station to submit a new application in the following situations:

A. The holder of a repair station certificate must apply for a change to its certificate if the certificate holder changes the location of the repair station or requests to add or amend a rating. The FAA must be notified in advance and may prescribe conditions that the repair station must follow while moving to the new address/location.

B. If the holder of the repair station certificate sells or transfers its assets, the new owner must apply for an amended certificate in accordance with § 145.51. There are occasions when repair station ownership changes without changing the facilities and personnel.

NOTE: The inspector should recommend a new certificate number due to Freedom of Information Act (FOIA) and liability issues. Aviation safety inspectors (ASI) should inform prospective owners that they may be held liable for the work performed under previous management if they keep the same certificate number. New owners must stipulate in writing that they clearly understand the potential of release of information under FOIA before being allowed to retain the old certificate number.

NOTE: ASIs should contact their regional general counsel office when faced with questions concerning whether limited liability corporations (LLC) or changes in stockholder ownership constitute a transfer of repair station assets.

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SECTION 2. PROCEDURES

1. PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites:

- Knowledge of the regulatory requirements of 14 CFR part 145
- Successful completion of the Airworthiness Inspector Indoctrination course(s) or equivalent
- Successful completion of the Airworthiness Inspection/Surveillance of Foreign/Domestic Repair Stations Course and the on-the-job training (OJT) program related to part 145

B. Coordination. This task requires coordination among the ASIs (airworthiness). Multiple regional coordination may be required.

3. REFERENCES, FORMS, AND JOB AIDS.

A. References:

- 14 CFR parts 29, 39, 43, 45, 65, 91, 121, 125, and 135
- AC 145-9, Guide for Developing and Evaluating Repair Station and Quality Control Manuals
- FAA Order 8300.10, Airworthiness Inspector's Handbook; vol. 2, ch. 161, 164, and 165

B. Forms:

- FAA automated repair station OpSpecs
- FAA Form 8000-4, Air Agency Certificate
- FAA Form 8060-4, Temporary Airman Certificate
- FAA Form 8310-3, Application for Repair Station Certificate and/or Rating
- FAA Form 8400-6, Preapplication Statement of Intent
- FAA Form 8610-2, Airman Certificate and/or Rating Application, if applicable

C. Job Aids. None.

5. PREAPPLICATION PHASE.

A. Respond to an initial inquiry for a repair station certificate or satellites.

B. Discuss with the applicant the following subjects, to include:

(1) The necessary technical expertise required by the applicant's proposed organization, to include the following:

- Aviation-related experience
- Proposed organizational structure
- Knowledge of the specific maintenance functions to be performed

(2) The rating required for the type of work to be accomplished.

(3) The requirements for sufficient personnel to meet the demands of the proposed repair station. This includes at least one certificated person with appropriate ratings that coincide with the ratings sought.

NOTE: For repair stations located within the United States, the supervisor and the person authorized to return an article to service must be certificated under 14 CFR part 65. In a small organization, the certificated person could perform both functions.

(4) Facility requirements for the ratings sought, to include:

- The need for ventilation, lighting, and control of temperature, humidity, and other climatic conditions to ensure personnel can perform maintenance as required by this part
- The size of the facility
- Manufacturers' recommended or equivalent test equipment
- Special tools, etc.

(5) The requirements for current technical data appropriate for the work to be performed. The following are considered to be technical data:

- Airworthiness Directives (AD)
- Instructions for Continued Airworthiness
- Maintenance Manuals

- Overhaul Manuals
- Standard Practices Manuals
- Service Bulletins
- Other applicable data acceptable to or approved by the FAA

NOTE: Appliance manufacturers' maintenance manuals or instructions, though not specifically approved by the FAA, are considered to be in compliance with part 43, § 43.7; part 65, § 65.95; part 121, § 121.379(b); part 135, § 135.437(b); and part 145, § 145.201.

(6) The requirement to provide the FAA with a point of contact.

C. The FSDO will furnish FAA Form 8400-6 (PASI) to the applicant with instructions for completion. The applicant will be advised to submit the completed PASI to the FSDO. The applicant will be informed that the certification process cannot continue until the PASI is reviewed and accepted.

(1) The FAA should advise the applicant of the complexity of the process and provide the applicant with an estimated time frame for the completion of the project. (This is a recommendation only; the time frame allows the applicant the ability to make the appropriate business decisions and is also dependent on the applicant's ability to comply with the requirements.)

(2) The applicant should be advised to develop a time line so that all involved are aware of their commitments and obligations.

NOTE: The ASI should advise the applicant that there are time restrictions for processing applications due to FAA resource availability. An application for certification must not remain dormant. A lack of applicant activity for 90 days during the certification process will result in termination of the application.

D. Initiate the Certification Process.

(1) The FSDO will review the PASI for acceptance and completeness. If the PASI is acceptable, the FSDO will notify the regional office of the pending application.

(2) The inspector will obtain the precertification number from AFS-620.

(3) The inspector will check the "Information only" block and enter the date the PASI was received and reviewed by the office.

(4) In the "Remarks" section, enter "Proceeding with formal certification" and show the precertification number. Normally the precertification number will be the final certification number with a letter added that identifies the number as a precertification. This is done to allow the applicant the ability to develop draft documents they may be required to include in the repair station manual (i.e., return to service tags).

(5) The FSDO manager or designee will assign an inspector or a team of inspectors (depending on the complexity of the application) to the certification process. The manager will also designate an inspector as the CPM.

(6) Satellite Repair Stations.

(a) Application for a satellite repair station certification requires coordination between the office with geographic responsibility and the certificate-holding district office (CHDO) of the certificated repair station that has managerial control, if located outside the applicant's FSDO.

NOTE: Any differences of opinion and/or position relating to sharing of personnel, equipment, and manuals between the parent and satellite repair station must be resolved by negotiation between the responsible FSDOs.

(b) The FAA may, under certain circumstances, assign the CHDO for the repair station with managerial control to also hold any satellite repair station certificates. This action will normally be initiated at the request of the certificate holder to take advantage of single manual or quality systems. In this situation, the CHDO for the repair station with managerial control will coordinate the request with the region/Washington headquarters. After obtaining regional/headquarters concurrence, the CHDO for the repair station with managerial control may certificate, add ratings, and perform surveillance for the entire organization.

(7) A certificate management office (CMO) with oversight responsibilities for 14 CFR part 121 air carriers that also owns a part 145 repair station(s), will be assigned certification and surveillance responsibilities for its part 145 repair station(s) and satellite(s), if applicable. The CMO must also provide

adequate personnel to oversee the part 145 repair station(s) and its satellite(s) work activities appropriate to their size and complexity.

(8) The CPM will contact the applicant to arrange a preapplication meeting.

E. Conduct a Preapplication Meeting. Meet with the applicant to discuss questions concerning the certification process, regulatory requirements, the formal application and attachments, etc. Accomplish the following during the meeting(s):

(1) Discuss the regulations applicable to the proposed maintenance operation.

(2) Provide the applicant with the following material:

(a) A copy of AC 145-9;

(b) A copy of FAA Form 8310-3; and

(c) Copies of FAA Form 8610-2, if applicable.

(3) Inform the applicant that a formal application package for a repair station certificate within the United States and its territories must contain the following material:

(a) A completed FAA Form 8310-3;

(b) A copy of the repair station manual and quality control manual in a format acceptable to the FAA. If the manual or manuals submitted are in electronic media format, they must be compatible with FAA electronic capabilities and free of any programs that would adversely affect that capability.

NOTE: Electronic media must be compatible with the CHDO's system. If an applicant's media is not compatible then it cannot be considered acceptable by the FAA. The current version of AC 120-78, Acceptance and Use of Electronic Signatures, Electronic Recordkeeping Systems, and Electronic Manuals, provides guidance for the use of electronic media.

(c) A letter requesting the application be processed and indicating when facilities, equipment, material, and data will be ready for formal inspection;

(d) A letter of compliance;

(e) An application for repairman certificate and letter of recommendation, if applicable;

(f) When a limited rating is requested, the make and model of the particular item(s) to be maintained and the nature of the work to be performed;

(g) When approval of a Class 2 Propeller Rating is being sought, a list by make of the propeller; and

(h) When a request is made for a limited specialized services rating, and the specification is one developed by the applicant, advise the applicant that the specification must be reviewed by the FSDO and the aircraft certification office, which may cause some delay in the repair station certification process.

(4) The FAA inspector/team will evaluate the results of the preapplication meeting; if found acceptable, continue to next phase.

7. FORMAL APPLICATION PHASE.

A. Receive the Formal Application. Ensure that all documents have been submitted and are complete.

B. Evaluate the Application Package. Based on the initial survey of the application package, a decision must be made whether or not to continue with the certification process.

C. Conduct an Application Meeting. Any open questions concerning the package must be answered before proceeding to the next phase. This should be done in the most effective way possible, e.g., meetings or correspondence.

9. DOCUMENT COMPLIANCE PHASE.

A. Review the Application Package. Review the content of each submitted document for regulatory compliance. The documents to be reviewed include:

(1) A completed FAA Form 8310-3;

(2) Repair station manual;

(3) Quality control manual;

(4) Training manual;

(5) The letter of compliance;

(6) Application for repairman certificate and letter of recommendation, if applicable;

(7) The list of makes and models of the particular item(s) to be maintained and the nature of the work to be performed for any limited ratings;

NOTE: Normally the FAA will not issue a class rating on an initial certification. All new applications should be issued a limited rating until such time as the repair station performs enough work to establish a representative number of make and models that would qualify the repair station for a class rating. The PI should exercise discretion when using the term "representative number," as this will vary with the type of application and the depth and complexity of the work performed. An Airframe Class 4 rating would normally be issued when the applicant demonstrates the ability to maintain one of each make in that class (i.e., Boeing 747, Airbus A300, or MD-11). An Accessory, Radio, Instrument, etc., class rating would differ from the airframe rating because of the various makes/models of valves, radios, instruments, and other articles that are very similar in design and function. The issuance of a class rating would be at the discretion of the applicant and agreeable to the ASI when the applicant has demonstrated the capability to maintain several different articles.

(8) The list by make of the propeller for a Class 2 Propeller Rating;

(9) A copy of the approved specification for the work to be performed for a Specialized Service Rating, when applicable; and

(10) A copy of a capability list if appropriate (§ 145.215).

B. Document any Deficiencies. If deficiencies are found in any document, return it to the applicant with a letter outlining the deficient areas. Inform the applicant that the certification process will not continue until all deficiencies are resolved.

11. DEMONSTRATION AND INSPECTION PHASE.

A. Coordinate and Schedule Inspection. Coordination is required between the CPM, team members, and the applicant.

(1) During the inspection phase the team should verify that the repair station manual and the quality control manual are followed.

(2) The team should also use the repair station letter of compliance to confirm that the facility meets all the requirements of the regulations.

B. Perform a Housing and Facility Inspection. During the Demonstration and Inspection Phase, inspect the repair station facilities to ensure that the work being done is protected from weather elements, dust, and heat. Ensure that the control of temperature, humidity, and other climatic conditions allow personnel to perform maintenance functions to the standards required by this part (refer to vol. 2, ch. 165). In addition, inspect the following:

NOTE: All tools and equipment must be in place at the time of initial certification or rating approval by the FAA (§ 145.51(b)).

(1) The inspection system (vol. 2, ch. 164) to ensure:

(a) Employees are familiar with and are capable of performing their assigned duties;

(b) Facilities are adequate to perform the functions as defined in the repair station and quality control manuals; and

(c) The repair station has in place a quality control system which ensures the articles upon which the repair station or any of its contractors perform a maintenance function are airworthy.

(2) Maintenance recordkeeping system to ensure compliance with part 43 and § 145.219.

(3) The system for reporting serious defects or unairworthy conditions to ensure compliance with § 145.221.

(4) Tooling and equipment are properly stored and maintained in good working order. Inspect for the following:

(a) Calibration is performed at established intervals and meets requirements of § 145.109; and

(b) If special equipment and tools are obtained as needed in accordance with § 145.109, verify that a contract is available for review to ensure that the tools and equipment will be made available upon the repair station's request.

(5) Material. Ensure that all materials needed for the rating are located on the premises and under the repair station's control when work is being done.

(a) Ensure that the repair station has the proper controls for stored material and a recordkeeping system that has document traceability back to the place of purchase.

(b) Traceability of all materials in the supply room must have documentation to show the material qualification (i.e., invoice, process specifications, supplier qualifications).

(c) If necessary, a repair station surveillance program of its suppliers to meet the above will meet these requirements.

(6) Calibration Standards.

(a) The calibration standards of all test and measuring equipment manufactured in the United States are required to meet the equipment manufacturer's calibration standards.

(b) Foreign manufactured measuring and test equipment must meet the calibration standards of the manufacturer.

NOTE: The part 145 rule states that tooling is calibrated to a standard acceptable to the Administrator. Those standards may be derived from the National Institute of Standards and Technology (NIST), or to a standard provided by the equipment manufacturer. International Agreements may also be accepted as a means of compliance. A list of International Agreements referred to as Memorandum of Understanding (MOU) or Mutual Recognition Agreement (MRA) may be accessed from the NIST Web site (http://www.nist.gov/). Also, the National Voluntary Laboratory Accreditation Program (NVLAP) provides third-party accreditation to testing and calibration laboratories. NVLAP's accreditation programs are established in response to Congressional mandates, administrative actions by the Federal Government, or from requests by private-sector organizations. NVLAP is in full conformance with the standards of the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC), including ISO/IEC 17025 and Guide 58. NVLAP identifies its accredited laboratories in a published directory, NIST Special Publication 810, which is published on the NIST Web site. Additionally, for foreign equipment, the standard of the country of manufacture may be used if approved by the Administrator. An Exemption Authorization is required if a repair station uses equipment of a foreign manufacturer and the method of calibration it will use is not addressed through a MOU or MRA, or the FAA inspector cannot obtain the validity of the Calibration Laboratory. Exemption authorizations are granted through the issuance of an exemption per 14 CFR part 11 guidance. Currently, exemptions of this type are issued for a 2-year period and can be renewed if requested by the repair station.

(c) Test and measuring equipment (equivalent) manufactured by a repair station must meet the calibration standards recommended by the manufacturer of the article being measured or tested. This type of test equipment calibration would be expected to be traceable to a standard acceptable to the FAA.

NOTE: Designated Engineering Representatives (DER) <u>may not</u> approve or determine equivalency of tooling and test equipment. Furthermore, neither the FAA nor a DER may approve equipment and/or test apparatus. The FAA and DERs may only make an acceptance of functional *equivalency* for special equipment or test apparatus. It is important to emphasize that the burden of demonstrating *equivalency* is borne by the repair station—not the FAA.

C. Evaluate Maintenance Organization. Ensure the following:

(1) There is a sufficient number of personnel to satisfy the volume and type of work to be performed, as required by part 145, subpart D:

(a) Ensure an employee is designated as the Accountable Manager;

(b) Ensure qualified personnel are provided to plan, supervise, perform, and approve for return to service the work for which it is rated;

(c) Ensure it has a sufficient number of employees with training or knowledge and experience in accomplishing the work being performed; and

(d) Determine the abilities of its non-certificated employees performing maintenance functions based on training, knowledge, experience, or practical tests.

(2) A personnel roster(s) is available that includes management, supervisory, and inspection personnel responsible for the repair station operations, oversight of maintenance functions, and personnel authorized to sign a maintenance release for approving an article for return to service (refer to part 145, § 145.161); and,

(3) Management, supervisory, and inspection personnel employment summaries for those persons listed in paragraph 11C(2) are available (refer to § 145.161).

D. Analyze Deficiencies.

(1) If deficiencies are noted, notify the applicant in writing. If appropriate, meet with the applicant to review deficiencies in detail.

(2) Corrective action must be taken and the CPM notified in writing by the applicant in order for the certification process to continue. Each deficiency and corrective action must be fully documented and recorded in the certification file.

13. CERTIFICATION PHASE.

A. Prepare Certificates. When the applicant has met all regulatory requirements, the CPM will accomplish the following:

(1) Complete blocks 6-10 of FAA Form 8310-3, to show:

- Findings and recommendations
- Any remark or discrepancy noted during inspection
- Date of inspection
- Office and signature of the CPM

(2) Prepare FAA Form 8000-4, which must be signed by the FSDO manager.

(3) Prepare FAA automated OpSpecs. The OpSpecs, showing the limitations to be issued, will be signed by the appropriate Airworthiness ASI. These limitations may be listed on separate OpSpecs pages.

(4) If applicable, issue FAA OpSpecs with appropriate ratings.

NOTE: Air Agency Certificates and OpSpecs are legal documents. Language should clearly specify the authorizations, ratings, and/or limitations being approved. When filling out these forms, there must not be any erasures, strikeovers, or typographical errors on the completed document.

B. Prepare Air Agency Certificates. The certificate will include the following information:

(1) After "Number," insert the certificate number assigned to the facility. This will be in accordance with the current air agency numbering system.

(2) Under "This certificate is issued to," insert the official name of applicant's business. This must be the same as shown on the application form.

(3) Under "whose business address is," insert the address/location of the applicant's business. This must be the same as shown on the application form.

(4) After "to operate an approved," insert the words "repair station."

(5) Under "with the following ratings:" insert the ratings issued. The ratings must be listed by the general category, such as airframe, powerplant, radio, etc.

(6) If a repair station is issued a limited rating, then it must be listed as such on the certificate (e.g., limited radio).

(7) When ratings are added or amended, show the date of each issuance in parentheses, following the added or amended rating.

(8) After "shall continue in effect," for repair stations located in the United States, insert the word "indefinitely."

(9) Under "Date issued:" insert the issuance date of the certificate. This will be the date of original certification.

(10) Under "By direction of the Administrator," insert the signature of the office manager and office identifier.

C. Prepare OpSpecs.

(1) Following "The rating(s) set forth on Air Agency Certificate Number," insert the air agency certificate number from the respective certificate.

(2) Following "is/are limited to the following," insert, as applicable:

(a) Class ratings.

(b) Limited ratings, to include makes, models, or parts.

(c) Limited rating for specialized services, to include the specification used.

(d) Line Maintenance authorization (the repair station must meet the requirements of § 145.205(d)).

(e) Following "Delegated authorities," insert "none."

(f) Under "Date issued or revised," insert the date the inspection was satisfactorily completed.

(g) Under "For the Administrator," insert the signature block of the assigned inspector.

D. Prepare Certification Report. Ensure that a certification report is prepared. The report must include the name and title of each ASI on the certification team. The report is signed by the CPM and contains at least the following:

- A copy of the PASI
- FAA Form 8310-3, completed
- A letter of compliance
- A copy of the Air Agency Certificate issued
- A copy of the issued OpSpecs
- A copy of any Temporary Airman Certificate issued
- A summary of all discrepancies encountered during the inspection

15. TASK OUTCOMES.

A. Complete PTRS.

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

- Issuance of a certificate and OpSpecs
- A letter to the applicant indicating that the certificate is denied
- A letter to the applicant confirming termination of the certification process

C. Distribute Certification Report. Distribute the completed report as follows:

- Retain the original certification report in the FSDO.
- Forward one copy of the certification report to all involved district and regional offices.

D. Document Task. File all supporting paperwork in the certificate holder/applicant's office file and update the Vital Information System (VIS).

17. FUTURE ACTIVITIES. The FSDO must ensure that there is an orderly transition from the certification process to certificate management. Perform follow-up and surveillance inspections as required.

CHAPTER 221. CONDUCT EVALUATION OF OPERATOR/APPLICANT'S MAINTENANCE FACILITY

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CHAPTER 20. SURVEILLANCE OF LIGHT-SPORT REPAIRMAN TRAINING FACILITIES

SECTION 1. BACKGROUND

1. PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

- *Maintenance:* 3670

3. OBJECTIVE. This chapter provides guidance for the surveillance of light-sport repairman training facilities.

5. GENERAL.

A. Under the repairman (light-sport aircraft) certificate, the two ratings that are issued are inspection and maintenance.

(1) The inspection rating allows the holder to perform only the annual condition inspection on the experimental, operating light-sport aircraft that he or she owns. The requirement for this rating is for the owner/applicant to complete a 16-hour Federal Aviation Administration (FAA)-accepted course on the class of light-sport aircraft applicable to the aircraft that he or she owns.

(2) The maintenance rating allows the holder to perform maintenance and inspections on both the experimental, operating light-sport aircraft and special light-sport category aircraft.

B. To be eligible for a light-sport maintenance rating, the applicant must complete the required number of hours of FAA-accepted training identified in vol. 2, ch. 8 of this handbook for the applicable class of light-sport aircraft. The required accepted training ranges from 80 hours for balloons and gliders to 120 hours for airplanes. The training must be conducted at facilities that have been issued a letter of acceptance for the training from the Light-Sport Aviation Branch, AFS-610.

7. SURVEILLANCE PROCEDURES. One requirement to earn the letter of acceptance is that the applicant facility must agree to allow the FAA free and open access to the training facility. This includes allowing the review of the course materials, student critiques, and training aids. The Flight Standards District Office (FSDO) should inspect each training facility within its geographic responsibility and make the appropriate PTRS entry. If the FSDO is denied access to any training facility, or it is found that the FAA's letter of acceptance is no longer valid, then that inspector should notify AFS-610 of the situation within 1 business day. AFS-610 will take appropriate action. In addition, AFS-610 will monitor all of the training facility student critiques that are required to be sent to AFS-610 after each course and any other complaints from industry. If AFS-610 determines from student critiques and industry complaints that a training facility is performing below acceptable limits, that office will notify the nearest FSDO and request that an audit be performed on the facility. A written report of the audit will be sent to AFS-610 via e-mail. AFS-610 will determine the appropriate course of action to be taken.

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SECTION 2. PROCEDURES

1. PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites:

- Knowledge of Title 14 of the Code of Federal Regulations (14 CFR) parts 43 and 65

B. Coordination. This task may require coordination with AFS-610. For unusual conditions or situations outside the normal, contact AFS-305, Washington, DC.

3. REFERENCES, FORMS, AND JOB AIDS.

A. References:

- Part 65, § 65.107
- FAA Order 8300.10, Airworthiness Inspector's Handbook, vol. 2, ch. 8
- FAA Order 8000.84, Procedures to Accept Industry-Developed Training for Light-Sport Repairmen

B. Forms:

- Letter of acceptance of training, signed by AFS-610

C. Job Aids. None.

5. PROCEDURES. When auditing a light-sport aircraft training facility, the inspector should:

A. Review the training syllabus to determine applicability to the class of light-sport aircraft being taught and note the date of the latest course revision and ensure that the name of the instructor who is teaching the course is the same as the instructor's name on the certificate of completion/graduation.

B. Examine the training facility and note if it is adequate for the number of students being trained. Note that the total number of students allowed is 16.

C. Examine the training aids, workbooks, make and model of aircraft used for hands-on training, and a copy of the applicable sections of the CFRs.

D. Determine if student critiques are available, whether the students have been briefed on the critique process, and which student is the course proctor and that he or she is aware of the responsibility for sending the student critiques to AFS-610.

E. If the audit is unsatisfactory, the inspector will send an audit report to AFS-610 advising them of the discrepancies. AFS-610 will contact the course provider and request additional information or clarification. If the course provider response is unsatisfactory, AFS-610 will revoke the letter of acceptance and any repairman certificate, if applicable.

7. TASK OUTCOMES.

A. Complete PTRS.

B. Inform AFS-610 of Unsatisfactory Audits. If the audit is unsatisfactory, then in addition to the PTRS entry, send an e-mail report of the audit findings to AFS-610 so that office can take appropriate action.

9. FUTURE ACTIVITIES. Surveillance.

[CHAPTERS 21 THROUGH 24 RESERVED]

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CHAPTER 131. INSPECT OPERATOR'S MAINTENANCE FACILITY

SECTION 1. BACKGROUND

1. PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

A. Maintenance: 3619, 3640

B. Avionics: 5619, 5640

3. OBJECTIVE. This chapter provides guidance for inspecting an operator's maintenance facility for regulatory compliance with Title 14 of the Code of Federal Regulations (14 CFR) parts 121 and 135.

5. GENERAL. The maintenance inspection is performed to ensure that adequate housing, equipment, spare parts, technical data, and qualified personnel are being used to satisfactorily complete all maintenance functions.

7. PREPARING FOR THE INSPECTION.

A. Equipment Identification. Inspectors should be aware of the type of aircraft being operated. The operations specifications (OpSpecs) will identify the type of aircraft authorized for use.

B. Facilities. Operators may have numerous maintenance facilities spread out geographically to support their operation. Typically, an operator will have a main maintenance base, submaintenance base(s), and line maintenance facilities. Each maintenance facility must be evaluated for its related work activities and inspected accordingly. The performance of assigned tasks must fall within the limitations and capabilities of the facility. All operator maintenance facilities are required to perform maintenance in accordance with (IAW) the operator's maintenance manuals. The inspector should use these documents to determine what special equipment, housing, and environmental conditions are necessary to perform the work.

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SECTION 2. PROCEDURES

1. PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites:

- Knowledge of the regulatory requirements of 14 CFR parts 121 and 135, as applicable
- Successful completion of the Airworthiness Inspector Indoctrination course(s) or equivalent
- Familiarity with the type of operation being inspected

B. Coordination.

(1) This task requires coordination between the assigned principal maintenance and avionics inspectors.

(2) If a line station facility is being inspected by the office with geographic responsibility, coordinate with the certificate-holding district office's (CHDO) principal inspector (PI).

3. REFERENCES, FORMS, AND JOB AIDS.

A. References:

- 14 CFR parts 43, 65, 119, 121, and 135
- SFAR 36
- Title 49 of the Code of Federal Regulations (49 CFR) part 173
- Operator's maintenance manual
- Applicable OpSpecs
- Advisory Circular (AC) 120-78, Acceptance and Use of Electronic Signatures, Electronic Recordkeeping Systems, and Electronic Manuals
- Air Transportation Oversight System (ATOS) Elements: 1.3.3 and 5.1.1

B. Forms. None.

C. Job Aids:

- JTAs: 2.3.5, 2.3.6, 2.3.21, 2.3.86, and 2.3.87

5. PROCEDURES.

A. Review the Operator's Data. Review the following:

(1) The district office files to determine if any chronic or open items exist, status of Enforcement Investigation Reports (EIR), exemptions, previous inspection reports, correspondence, and other documents, to determine if any areas identified require special attention.

(2) The operator's maintenance manuals to determine the level of maintenance accomplished and the complexity of operation at the maintenance facility.

(3) The operator's OpSpecs to determine the maintenance and inspection program content and complexity.

B. Inspect the Maintenance Organization. Ensure the following:

(1) Staffing meets maintenance needs based on the complexity of the operation. One method to determine adequate staffing is to sample the operator's deferred maintenance programs to determine if there are excessive deferral amounts and extensions, which could lead to inadequate staffing. Another method is to review the operator's out-of-hangar performance (Mechanical Interruption Summary) to determine if low staffing results in aircraft maintenance not being accomplished in the time allotted.

(2) Responsibilities are separated between inspection and maintenance sections.

C. Inspect the Inspection Department. Ensure the following:

(1) Designated staffing is adequate for the complexity of the operation.

(2) Delegated staffing (Required Inspection Items) is at a reasonable level.

D. Inspect the Operator's Maintenance Facilities. Using the operator's manual as a reference, inspect the following:

(1) Parts and storage areas, to ensure that:

(a) Parts personnel are adequately trained in the procedures pertaining to their job duties and responsibilities.

(b) Adequate spare parts are available to support the complexity of the operation.

(c) Receiving inspections are accomplished IAW the operator's manual.

(d) Shelf life limits are established for operator-designated items, and that these items are controlled IAW the operator's manual or the manufacturer's recommendations.

(e) Components and hardware are properly identified, protected, stored, and classified as to serviceability.

(f) The operator can provide traceability of hardware, parts, and components subject to installation on type-certificated products.

(g) Segregation of serviceable and unserviceable components and hardware is maintained.

(h) The operator has a hazardous materials program covering areas such as recognition, packing segregation, storage, and shipping. Refer to AC 121-21, Information Guide for Training Programs and Manual Requirements in the Air Transportation of Hazardous Materials, current edition.

(2) Special tools and test equipment, to ensure that:

(a) Serviceability and calibration is accomplished IAW the operator's manual.

(b) All required items are serviceable and within calibration criteria, to include traceability to one of the following:

- The National Institute of Standards and Technology
- Standards established by the item's manufacturer
- If foreign-manufactured, the standards of the country where manufactured, if approved by the Administrator

(c) Appropriate types and quantities are available.

(d) Proper storage and protection is used.

(3) Fuel/oil storage and dispensing facilities, if operated and maintained by operator. (See Federal Aviation Administration (FAA) Order 8300.10, Airworthiness Inspector's Handbook, vol. 3, ch. 135.)

(4) Deicing chemical storage and dispensing equipment, if applicable, to ensure:

(a) Appropriate chemical storage and dispensing.

(b) Serviceability of equipment.

(c) Acceptable general condition and safety of storage areas.

(d) Appropriate identification of deicing/anti-icing fluid storage tanks, dispensing equipment, and transfer pumps and hoses.

(e) Training of personnel in operator's deicing procedures.

NOTE: If deicing services are provided on a contract basis, ensure that the contractor meets the above requirements.

(5) Support shops (avionics, sheet metal, engine, etc.), if applicable, to ensure:

(a) All required technical data is current and available.

(b) Staffing reflects complexity of the shop.

(c) Personnel are properly trained, qualified, and authorized. Training files may or may not be located at submaintenance facilities or line stations. When sampling training records, coordination with the facility that houses the training records may be warranted.

(d) Procedures for shift turnover are in place and properly used.

(e) All required special tooling and equipment is available, serviceable, and within calibration criteria.

(f) Maintenance tasks and inspection functions are being accomplished IAW the operator's maintenance manual.

(g) Safety equipment is available and serviceable.

(h) Individual shop storage areas are maintained to the same standards as the main storage area.

(i) Work areas do not conflict with each other, e.g., lathe is not next to avionics repair area.

(j) Lighting, ventilation, and general housekeeping are adequate.

NOTE: When applying this section to line maintenance facilities, the inspector must determine which items apply based on the complexity of the facility. Some line stations may not necessarily have a dedicated hangar.

(6) Hangar facilities, to ensure that:

(a) Facilities are adequate for the work being performed.

(b) Staffing reflects the complexity of work being performed.

(c) Personnel are properly trained, qualified, and authorized.

(d) Procedures for shift turnover are in place and properly used.

(e) Special equipment and tooling is available, serviceable, and calibrated, if applicable.

(f) Safety procedures are established and adhered to.

(g) Procedures direct the flow and control of all maintenance and inspection records.

(h) Lighting, ventilation, and general housekeeping are adequate.

(7) Hangar ground support equipment, to ensure the equipment is serviceable and appropriate for the work being performed.

E. Inspect the Operator's Technical Library. Ensure that all required technical data is available and current. If data is on microfiche, ensure that readers are available and serviceable. If the operator uses electronic publications, ensure that adequate procedures and controls exist for their generation and use (ref. AC 120-78). The data must include the following, as applicable:

- OpSpecs
- Operator's General Maintenance Manual
- Aircraft manufacturers' manuals
- Propeller, appliance, engine, and emergency equipment manufacturer's manuals
- Manufacturer's and vendor's service bulletins/letters
- Applicable federal aviation regulations
- Applicable Airworthiness Directives
- Applicable type certificate data sheets/Supplemental Type Certificates
- Aircraft flight manual (AFM)

F. Inspect the Aircraft Maintenance Record System. See Order 8300.10, vol. 3, ch. 42. Different operators maintenance facilities may or may not retain maintenance records at their location. Ensure the carrier has an adequate process for the transferring of maintenance records from submaintenance/line stations to facilities where records will be retained. If possible, sample the transfer process to ensure proper adherence to those procedures.

NOTE: Randomly sample a representative number of open and completed work packages to ensure the effectiveness of the system.

G. Inspect Aircraft. Inspect any available aircraft to determine the quality of maintenance being performed. (Refer to Order 8300.10 vol. 3, ch. 1, 2, and 3.)

H. Analyze Findings. Upon completion of inspection, record all deficiencies noted and determine the appropriate corrective action(s) to be taken.

7. TASK OUTCOMES.

A. Complete PTRS.

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

- Letter to the operator confirming results of the inspection
- EIRs, as necessary

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

9. FUTURE ACTIVITIES. If deficiencies are noted during surveillance, schedule a followup inspection.

[CHAPTER 132 RESERVED]

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CHAPTER 133. EVALUATE/INSPECT PART 121/129/135 AND 125 OPERATOR'S OUTSOURCE MAINTENANCE ORGANIZATION FACILITY

SECTION 1. BACKGROUND

1. PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) ACTIVITY CODES.

A. Maintenance: 3338, 3640, 3624

B. Avionics: 5378, 5640, 5624

C. Air Transportation Oversight System (ATOS) Elements: 1.3.7 Outsource Organization.

D. Special PTRS Activity: Codes 3617 and 5617 are for recording the accomplishment of a 3640 /5640 using the Safety Attribute Inspection (SAI) 1.3.7 by non-ATOS part 121 inspectors.

3. OBJECTIVE. This chapter provides guidance for evaluating and inspecting Title 14 of the Code of Federal Regulations (14 CFR) part 121, 129, and 135 air carriers and 14 CFR part 125 operator's outsource maintenance organization/facility (OSMF) for compliance with the air carrier's manual procedure system and with regulatory requirements.

NOTE: This chapter is not intended to provide guidance for evaluating a certified repair station for compliance with 14 CFR part 145.

5. GENERAL.

A. The maintenance facility evaluation is performed to determine whether adequate housing, equipment, spare parts, technical data, and qualified personnel are available to satisfactorily complete all maintenance functions. A maintenance facility evaluation should be accomplished:

- Prior to certificating a new operator
- When an existing operator introduces a new make and model to an operation

B. Some outsource maintenance organization/facility inspections are conducted outside the geographic boundaries of the certificate-holding district office (CHDO). In such cases, the aviation safety inspector (ASI) will coordinate with and request assistance as necessary from the Flight Standards office responsible for the certificate management of a repair station or the management of the non-certificated entity that is to be inspected.

7. INITIATIONS AND PLANNING.

A. Pre-Inspection Responsibilities. Before inspecting an outsource organization maintenance facility, the inspecting ASI should:

(1) If you are the principal maintenance inspector (PMI) or principal avionics inspector (PAI), this is a good time to review the Safety Performance Analysis System (SPAS) repair station analytical model (RSAM). This tool will provide the inspecting ASI with analysis and information that will be useful before and during the inspection.

(2) After reviewing the RSAM, a meeting should be scheduled with the air carrier's management to discuss the arrangements made with this outsourcing maintenance provider. It is also a good time to discuss the plans and provisions that will be in place during this visit/inspection.

(3) Contact agreements change routinely. Ensure the agreements stated in the contact are in accordance with the procedures in the air carrier's manual.

(4) If you are a geographical inspector conducting the inspection on behalf of the Certificate Management Office (CMO)/CHDO, you should contact one of the air carrier's principal inspectors (PI) to discuss the scope of the inspection.

(5) If you are a PMI or PAI, consider reviewing the contract between the air carrier and the outsource provider.

B. Obtain List of Management Personnel. Prior to the inspection, the ASI should request a listing (including telephone numbers) of management personnel at the outsource facility. If the facility is a certificated repair station, the ASI may attain a listing of management personnel from SPAS (see profile).

C. Coordination. If the outsource maintenance provider is the holder of a part 145 repair station certificate, the air carrier inspector should make every effort to contact the PI assigned to the repair station and advise the PI of the planned inspection.

D. Inspections Outside the United States. During the early planning phase of the trip, the inspecting ASI should contact the U.S. Department of State. The Department of State web site is http://www.travel.state.gov. The ASI may review any travel advisories that may exist for the country that will be visited. Restrictions must be addressed and visas must be attained prior to departure. A minimum of 30 days is recommended. ASIs should process their travel plans in accordance with their region's polices, normally through the regional Ops center.

NOTE: Travel to any foreign country requires a security briefing per the guidance found in FAA Order 1600.61, Foreign Travel Briefing & Contact Reporting Requirements For FAA and Contractor Employees.

E. Outsource Maintenance Facility Located Outside the United States with a Bilateral Aviation Safety Agreement (BASA)-Maintenance Implementation Procedure (MIP) Approval. During the planning phase of your visit to a repair station/outsource maintenance provider that is located in a country that has a BASA with an associated MIP with the United States, it is most important that before your visit, contact is made with the International Field Office (IFO)/CHDO and the repair station's PI. The inspecting ASI and the repair station PI should discuss the scope and intent of the inspection.

F. Outsource Maintenance Facility Located Outside the United States that Does Not Have a BASA-MIP Approval. Before your visit, it is most important that contact is made with the IFO/CHDO and the repair station's PI, so the inspecting ASI and the repair station PI can discuss the scope and intent of the inspection.

G. Canadian Approved Maintenance Organization (AMO) Visit. It is most important that during the planning phase of the inspection, the inspecting ASI notify the Seattle Flight Standards District Office (FSDO) International Field Unit Liaison PI of the pending visit. The Federal Aviation Administration (FAA) liaison will coordinate the visit with Transport Canada and the AMO management. An invitation may be extended to FAA liaison and the National Aviation Authority (NAA) (in this case it would be Transport Canada) to accompany the inspecting ASI or inspecting team during the visit.

9. PERFORMING THE TASK.

A. The inspecting ASI must determine whether the outsource provider has an adequate organization, equipment, and facilities. All maintenance personnel should be appropriately certificated (when necessary), trained, and authorized to perform the work. The inspecting ASI must keep in mind that the outsourcing provider's maintenance facility is an extension of the air carrier's overall maintenance organization; therefore, maintenance performed by the provider must be in accordance with the air carrier's approved maintenance program (reference part 145, §145.205).

B. Prior to visiting the outsourcing facility, the inspecting ASI should review PTRS data and any other information available. The SPAS program is an outstanding source for gathering supportive data.

NOTE: The majority of air carriers are non-ATOS adherent. Most outsource maintenance facility inspections will be performed by non-ATOS ASIs. We encourage all ASIs to utilize the ATOS SAI 1X tool 1.3.7 as a surveillance plan and inspection guide. A copy of the SAI as well as all other SAI or Element Performance Inspection (EPI) may be attained on the web at http://www.faa.gov/avr/afs/atos/, click on Data Collection Tools (DCT).

C. If the SAI is to be used by the inspecting ASI, the inspection information should be recorded under PTRS activity code 3617 or 5617. Information that supports a conclusion (positive or

negative) should be entered in the PTRS "comments" section 4. Comments associated with a "no" answer to the DCT question should include the question number at the beginning of the comment narrative. This is a good time to validate the essential elements of the air carrier's system. Collection and recording of objective evidence will assist in determining whether the system is properly designed and well-managed.

NOTE: An alternate surveillance plan has been added to this chapter; its intended use is a transition DCT. The inspection information contained in the comment section is based on the information in this order. It is provided as a sample surveillance plan only! It should not to be considered mandatory. (See Figure 133-2, Sample of a Basic Surveillance Plan.)

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SECTION 2. PROCEDURES

1. PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites:

- Knowledge of the regulatory requirements of 14 CFR parts 43, 121, 135, and 145, as applicable
- Successful completion of the Airworthiness Inspector Indoctrination course(s) or equivalent
- For ATOS ASIs only: successful completion of the ATOS Inspector Course

3. REFERENCES, FORMS, AND JOB AIDS.

A. References:

- 14 CFR parts 43, 119, 121, 135, and 145
- Title 49 of the Code of Federal Regulations (49 CFR) part 180
- Air carrier's maintenance manual and manual system
- Applicable advisory circulars (AC)
- ATOS elements: ATOS air carriers are to accomplish elements SAI 1.3.7 and EPI outsource organization

B. Forms. None.

C. Job Task Analysis:

- JTA: 2.3.25

5. PROCEDURES. If the contractor is a certificated repair station, the inspecting ASI should determine the maintenance provider's qualifications. Ensure that the outsource maintenance facility is properly certificated and rated for the work being performed. If the repair station is authorized to work at a place other than the repair station fixed location, it is recommended that operation specifications (OpSpecs) D100 be reviewed. This OpSpec lists the authorized work to be accomplished away from the fixed base and the manual location in which the procedures are listed.

A. Inspect the Outsource Provider's Organization. Ensure that the outsource provider's organization is adequate to support the air carrier's maintenance program.

B. Inspect the Technical Library. Ensure that the maintenance facility's library is available for use by the facility personnel and includes the following:

- Repair Station Manual (RSM) (if applicable)
- Quality Control Manual (QCM) (if applicable)
- The air carrier's general maintenance manual or applicable portions and any other required portions of the continuous airworthiness maintenance program (CAMP) necessary to properly maintain the aircraft
- Aircraft, engine, propeller, appliance, and emergency equipment manual(s)
- Manufacturer's maintenance and component repair manual(s)
- Task cards, engineering orders, etc.

C. Review the Work Process. If there is an aircraft or engine in the facility undergoing maintenance, review the entire outsourcing process at work. A good starting place is the planning department, (it is recommended that the air carrier's manual be verified for completeness as you follow the process). The air carrier's work package usually comes to this section first. Review the inspection package provided by the air carrier. The first page is usually called a work scope. It will list all of the Airworthiness Directives (AD), and non-routine maintenance to be accomplished, list all of the phase or check work cards to be accomplished at the maintenance visit, and it will also list any components that have schedule removal requirements.

(1) Be aware that every air carrier's system is different, the information herein is provided as a tool, and is not to be used verbatim. The inspecting ASI must

always use the air carrier's manual procedure as the guide to be followed.

(2) By sampling the records, ensure that the work is accomplished and documented in accordance with the air carrier's manual.

(3) Ensure that required inspections items (RII) notations and accomplishment are in accordance with the air carrier's manuals.

(4) Ensure the airworthiness release is being signed in accordance with the air carrier's manuals.

D. Personnel Training Records. Review the maintenance provider's records to ensure that personnel are trained to perform the work for which they have been contracted. Inspect the Quality System (QC and QA). Ensure that the facility personnel have been trained to the air carriers program and procedures. Ensure the following:

NOTE: The asterisk (*) items come under the purview of the part 145 repair station PI. It is most important that the inspecting ASI coordinate all findings with the repair station PI.

(1) *Responsibilities for maintenance and inspection functions are separated.

(2) *Staffing reflects the complexity of the operation.

(3) Personnel are appropriately certificated, qualified, and trained to perform inspections.

(4) Personnel performing RII functions are properly trained and authorized by the air carrier.

(5) Lists of authorized inspectors and RII personnel are maintained, including the type of equipment and limitations authorized.

(6) All inspection personnel's training records are maintained and kept current.

(7) The air carrier's system for controlling accountability and documentation of all work being accomplished is specified in the air carrier's maintenance manual.

(8) The air carrier complies with the suspected unapproved parts (SUPs) program.

(9) Incoming parts and supplies are inspected and tagged in accordance with air carrier's maintenance manual.

(10) Receiving inspection personnel are properly trained and authorized by the air carrier in accordance with the air carrier's manual.

(11) *Ask to see the parts warranty, or return listing; areas that have a high rate of return should be reviewed for shortfalls.

E. Inspect the Maintenance Department. Ensure the following (this applies to all types of facilities):

(1) Personnel are trained for the complexity of the work performed.

(2) *The facilities are adequate for the type of work performed. Space, lighting, and ventilation reflect the requirements of the work being performed. (This does not apply to certificated repair station with line station rating only.)

(3) *Equipment is available to support the work being performed. Special tools and test equipment are calibrated within specified time intervals.

(4) Shift turnover procedures are in place and being used.

(5) *Flammable and hazardous materials are properly segregated and stored.

(6) *Serviceable and unserviceable parts are identified and segregated.

(7) *Shelf-life limits are controlled.

(8) Request a copy of the audit form if the operator's internal audit system incorporates an "in-process audit." Ask the operator whether you can use the form to observe that it accomplishes its intended task.

(9) *Maintenance personnel duty time limitations are in accordance with part 121, §121.377.

(10) Parts scrapping procedure in accordance with the air carrier's procedures.

(11) Discuss the Service Difficulty Report (SDR)/malfunction, or defects program requirement.

Part 145, §145.221 has changed the reporting requirements.

F. Analyze Findings. Upon completion of the inspection, record all deficiencies; determine the appropriate corrective action(s).

G. Debrief the Outsource Facility's Management Team. (This should be done before leaving the facility.) At the debrief, discuss the discrepancies and leave a courtesy copy of the inspection with the facility's/contactor's management. Ensure it is clear that this is a preliminary listing.

H. Determine Whether Any of the Findings Pertain to an Apparent Non-Compliance Issue. Common courtesy dictates that the inspecting ASI contacts the repair stations CHDO and PI. The inspecting ASI and the OSMF management should discuss the conditions and nature of the alleged discrepancy to ensure that all parties are aware of the condition.

I. Complete Appropriate Forms. When the inspecting ASI returns to his/her base of operations (home office or other place of work), the inspector must complete the appropriate forms and enter the inspection into the appropriate database.

J. Communicate Findings to CHDO and PIs. If the inspection was performed by the FSDO with geographic responsibility, it is incumbent upon that FSDO to coordinate all findings with the CHDO and the assigned PIs.

7. TASK OUTCOMES. Complete PTRS.

A. Evaluation of a maintenance provider's operations or facility should be recorded under PTRS activity codes 3338 or 5378.

B. The recording requirements for surveillance activities in PTRS for OpSpec D091 outsource maintenance provider/facilities have been revised. Additional PTRS activities have been added to describe the initial evaluation of a D091 outsource maintenance facility, an on-site inspection of that facility, an evaluation of the contractual agreement between the air carrier and the maintenance facility, and a method to record a review of any revisions to that agreement.

C. Figure 133-1, Description and Definitions for New PTRS Activity Numbers, provides the description and definitions for the new PTRS activity numbers that are associated with the evaluation of the OpSpec D091 contractor maintenance facility inspection plan.

(1) Parts 125, 129, and 135 operators do not have a D091 OpSpec. PTRS activity codes 3624 (maintenance) and 5624 (avionics) were developed to track inspection observations at an outsource maintenance provider/facility that does not perform substantial maintenance for the operator.

(2) Part 121 inspecting ASIs would use activity codes 3624 and 5624 to track inspection observations for an on-site inspection performed at a non-substantial maintenance provider's facility.

(3) Definitions for PTRS activity codes 3640 and 5640 (formerly contractor maintenance facility) have been revised. These inspection activities are designed to track the inspection observations for an on-site inspection performed at a part 121 air carrier's OpSpec D091 substantial maintenance provider's facility.

NOTE: Remember that Canadian AMOs are not part 145 certificated repair stations.

(4) AMOs do not have PTRS designators. When entering the results of the inspection into the PTRS database, place the AMO name and operating number as it appears on the Transport Canada operating certificate in section 1 of the FAA Form 8000-36, Program Tracking and Reporting Subsystem (PTRS) Data Sheet, blocks titled "Non-Cert Activity Name/Company."

(5) ASIs will use the "Affiliated Designator" field, as appropriate, when completing PTRS transmittals, or list the name of the maintenance provider in the "Non-Cert Activity Name/Company" block if a PTRS designator does not exist.

NOTE: All other information is the same.

9. FUTURE ACTIVITIES. If deficiencies were noted during the surveillance, a follow-up inspection may be required.

FIGURE 133-1. DESCRIPTION AND DEFINITIONS FOR NEW PTRS ACTIVITY NUMBERS

APPLICABLE CFRs	PTRS ACTIVITY NUMBER	SURVEILLANCE	AFFILIATED DESIGNATOR
121	3640/5640 Revised	On-site inspection. Surveillance of a part 121 air carrier's substantial maintenance provider (OpSpec D091) outsource maintenance provider/facility). PTRS description: SURVL/INSP SUBSTANTIAL/MX/ PROVD	Required
119, 121, 125, 129, 135	3624/5624 New	On-site inspection. Surveillance of any outsource maintenance provider / facility not covered under the substantial maintenance provider OpSpec D091). PTRS description:/ SURVL/INSP NON-SUBST/MX/PROVD	Required
119, 121, 145	3617/5617 New	Special PTRS activity codes for recording the accomplishment of a 3640 / 5640 using the SAI 1.3.7 by a non-ATOS part 121 inspector. PTRS description: SURVL/OPER/INSP OUTSOURCE ORG	Required

FIGURE 133-2. SAMPLE OF A BASIC SURVEILLANCE PLAN

PROGRAM TRACKING AND REPORTING SUBSYSTEM DATA SHEET		
SECTION I – Transmittal		
Inspector Name Code:		
Record ID:	Activity Number:	FAR:
Start Date:	Status	Call up Date:
Designator:	Results	Closed Date:
Affiliated designator **(See FSAW 01-17)**	Location:	****
SECTION II– AS REQUIRED		
SECTION III – AS REQUIRED		
SECTION IV – COMMENTS (UNLIMITED)		

Primary Area	Key Word	Opinion Code I, U, P	OUTSOURCE MAINTENANCE FACILITY INSPECTION (3640/5640/3624/5624) EVALUATION (3338/5378)
			1.0 OPERATOR'S CONTRACTOR
			1.1. Review the outsource maintenance provider's certificate and OpSpecs if it is a certificated repair station or air carrier.
			1.2 Review the air carrier's work scope and instructions to the contact maintenance provider (outsourcing).
			2.0 TECHNICAL LIBRARY
			2.1 Inspect the library. 1) Ensure that the outsource maintenance facility's library is available for use by all facility personnel. Contents should include; a) The contract agency's Repair Station Manual, quality control manual; b) The operator's maintenance manual. c) Current applicable advisory circulars, airworthiness directives, and type data sheets; d) Aircraft, engine propeller, appliance, and emergency equipment manufacturer's manuals; e) Task cards, engineering orders, etc. 2) Are the contractors published procedures consistent through out their manual system?
			3.0 AIRCRAFT RECORDS
			3.1 Inspect the records. Maintenance records (aircraft, powerplant, propeller, component, appliances, etc.) Sample the utilized records to ensure that the work is accomplished and documented in accordance with the operator's manual.
			4.0 TRAINING RECORDS
			4.1 Personnel training records (if applicable). 1) Review the contractor maintenance provider's records to ensure that personnel are trained for the work being performed in accordance with the operator's program. 2) Are the outsource maintenance facility inspection personnel training records maintained and kept current?

FIGURE 133-2. SAMPLE OF A BASIC SURVEILLANCE PLAN—CONTINUED

			5.0 INSPECTION DEPARTMENT
			5.1 Inspect the quality control system. 1) Responsibilities for maintenance and inspection functions are separated. 2) Staffing reflects the complexity of the operation. 3) Personnel are appropriately certificated, qualified, and trained to perform inspections under the operators program.
			5.2 Personnel performing Required Inspection Item (RII). (If applicable) 1) Is there a list of authorized inspection and required item personnel maintained and up-to-date, including the type of equipment and limitations authorized? 2) Is the number of authorized RII inspectors at a level that would support the air carrier's contract requirements?
			6.0 OUTSOURCE MAINTENANCE FACILITIES SYSTEM
			6.1 Procedures for controlling accountability and documentation. 1) Is the contracted work being accomplished as specified in the operator's procedures? 2) Are procedures in place that direct flow and control of all maintenance and inspection records?

FIGURE 133-2. SAMPLE OF A BASIC SURVEILLANCE PLAN—CONTINUED

			6.2 Are incoming parts and supplies inspected and tagged in accordance with the operator's maintenance manual?
			g 6.3 Are needs based on the complexity of the operation? 1) Are personnel trained for the complexity of work performed?
			7.0 HANGAR FACILITIES
			7.1 Are the facilities adequate for the work performed? 1) Do space, lighting, and ventilation reflect the requirements of the work being performed? 2) Are safety procedures established and adhered to? 3) Procedures – Direct the flow and control of all maintenance and inspection records.
			7.2 Parts and storage areas. 1) Available for the operator's equipment? 2) Adequate spare parts are available to support complexity of operation?
			7.3 Are receiving inspections accomplished in accordance with the operator's manuals/procedures?
			7.4 Components and hardware. Are they properly identified, protected, and classified as to serviceability?
			7.5 Shift turnover. Are procedures in place and being utilized?
			7.6 Special tools and test equipment. 1) Calibrated within the specified time intervals and in accordance with the operator's manual? 2) Are all required items serviceable and within calibration criteria? 3) Is traceability back to one of the National Institute of Standards and Technology? a) Does the item's manufacturer establish standards? b) If foreign manufactured, are they to the standards of the country where they were manufactured? Does the Administrator approve the standards? c) Are there appropriate types and quantities available? 4) Is proper storage and protection utilized?
			7.7 Flammable and hazardous materials are properly segregated and stored.
			7.8 Are serviceable and unserviceable parts and hardware identified and segregated?
			7.9 Ground support equipment (GSE). 1) Ensure the GSE is maintained in accordance with (IAW) the manufactures component and maintenance manuals. 2) Review maintenance inspection records. 3) Review filter change schedules and records. 4) Verify condition of equipment. 5) Review the air carrier's manual to see if there are special requirements and or instructions for GSE.
			8.0 SHELF-LIFE
			8.1 Shelf-life limits: Are they controlled in accordance with the operator's manual or manufacturer's recommendations?
			9.0 ENGINEERING DEPARTMENT
			9.1 Inspect the engineering department: (If applicable). 1) Is the staffing adequate for complexity of assigned duties? 2) Are the personnel qualified?
			9.2 Is all required technical data current and available? (Ref AC120-77, Maintenance and Alteration Data).
			9.3 Are engineering orders accomplished and recorded in accordance with the operator's and outsource maintenance facility manuals?

FIGURE 133-2. SAMPLE OF A BASIC SURVEILLANCE PLAN—CONTINUED

			9.4 Major repairs and alterations. 1) Accomplished in accordance with Federal Aviation Administration (FAA)-approved data (see vol. 2 chapter 1 of Order 8300.10)? 2) Are major repair reports retained and available? 3) Are major alterations reported per Title 14 of the Code of Federal Regulations (14 CFR) part 121.707(b)?
			10.0 MAINTENANCE PRODUCTION/PLANNING CONTROL INSPECTION
			10.1 Is there evidence that the planning system is effective? 1) Review inspection / overhaul scheduling. 2) Facility scheduling. 3) Parts forecast. 4) Personnel requirements, and communication with other departments?
			10.2 Service Difficulty Report (SDR) reporting requirements are in coordination with the air carrier's procedures, and the requirements of 14 CFR parts 145.221.
			11.0 REPAIR STATION WITH LINE RATING (OPSPECS D107)
			NOTES:
Date:		**Originator:** (If required)	**Office:**
Inspector Signature: (If required)		**Supervisor:** (If required)	
Initials: (If required)			

[CHAPTER 134 RESERVED]

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CHAPTER 5. ACCESS TO PUBLIC AND PRIVATE AIRPORTS, LANDING STRIPS, AND OTHER AREAS USED FOR OPERATION OF AIRCRAFT

1. BACKGROUND. Aviation safety inspectors (ASI) are issued credentials allowing them access to areas used for the operation of aircraft. The credential is Federal Aviation Administration (FAA) Form 110A, Aviation Safety Inspector's Credential, which entitles an ASI to uninterrupted access to any U.S.-registered aircraft pilot compartment (refer to Title 14 of the Code of Federal Regulations (14 CFR) part 121, § 121.548 and part 135, § 135.75). During inspections exceeding 24 hours, ASIs outside their assigned area will coordinate with the affected airport for the issuance of a local ID card, where applicable. FAA Order 8000.38, Aviation Safety Inspector Credential Program, current edition, provides policy and guidance on this subject.

3. DEFINITIONS.

A. Private Airport. Any private property used for the operation of aircraft by the owner or other persons at the invitation or cognizance of the owner.

B. Public Airport. Any airport in which the management offers to the public any type of aircraft sales and/or services for compensation.

5. ACCESS TO PRIVATE AIRPORTS, LANDING STRIPS, AND OTHER AREAS. ASIs must advise the owner or agent of a private facility of their desire to enter the premises and the purpose of the visit. An ASI has no authority to enter private property without the owner's permission. As a courtesy, the owner or agent should be invited to accompany the ASI, as this gesture may encourage further cooperation. If the owner or agent is unable to accompany the ASI, the ASI should request permission for access to aircraft for the stated purposes. However, FAA Form 110A authorizes ASIs to be in a restricted area without escort while conducting official FAA inspections.

7. ACCESS TO PUBLIC AIRPORTS. The ASI should give airport management/security sufficient notice of the visit. If the occasion warrants, airport management may be invited to accompany the ASI.

9. DENIAL OF ACCESS. ASIs must consider that entry onto the property of another without authority or permission may be construed as trespassing, regardless of intent. It is rare that an ASI is denied access for the purpose of conducting official duties; however, such a case should be referred to the appropriate supervisory authority.

CHAPTER 6. AVIATION SAFETY ACTION PROGRAM

1. PURPOSE. The objective of the Aviation Safety Action Program (ASAP) is to prevent accidents and incidents by encouraging employees of certain certificate holders to voluntarily report safety issues and events. The program further provides for education of appropriate parties and the analysis and correction of safety concerns that are identified in the program. ASAPs are intended to create a nonthreatening environment to encourage the employee to voluntarily report safety issues, even though these issues may involve violations of Title 49 of the United States Code (49 U.S.C.), Subtitle VII, or of Title 14 of the Code of Federal Regulations (14 CFR). ASAP is based on a safety partnership between the Federal Aviation Administration (FAA) and the certificate holder and may include any third party such as an employee labor organization. These programs are intended to generate safety information that may not otherwise be obtainable.

A. Information obtained from these programs will permit ASAP participants to identify actual or potential risks throughout their operations. Once risks are identified, the parties to an ASAP can implement corrective actions to reduce the potential for accidents, incidents, and other safety-related events. To gain the greatest possible positive benefit from ASAP, it may be necessary for certificate holders to develop programs with compatible data collection, analysis, storage, and retrieval systems. The information and data, which are collected and analyzed, can be used as a measure of aviation system safety.

B. An ASAP provides a vehicle whereby employees of participating air carriers and domestic repair station certificate holders can identify and report safety issues to management and to the FAA for resolution. An ASAP can be used without fear that the FAA will use reports accepted under the program to take legal enforcement action, or that companies will use such information to take disciplinary action. These programs are designed to encourage participation from various employee groups, such as flight crewmembers, mechanics, flight attendants, and dispatchers.

NOTE: The FAA reserves its discretion to use ASAP reports for legal enforcement purposes where such reports disclose events that appear to involve possible criminal activity, substance abuse, controlled substances, alcohol, or intentional falsification.

C. The elements of ASAP are set forth in a Memorandum of Understanding (MOU) between FAA, certificate holder management, and an appropriate third party, such as an employee labor organization or other employee representative.

3. BACKGROUND. The FAA's safety mission requires it to take action to reduce or eliminate the possibility of or recurrence of accidents in air transportation. Over the past several years, the FAA and the air transportation industry have sought innovative means for addressing safety problems and identifying potential safety hazards. To this end, the FAA, in cooperation with industry, established several demonstration ASAPs in an effort to increase the flow of safety information to both the air carrier and FAA, and issued Advisory Circular (AC) 120-66, Aviation Safety Action Program (ASAP), in 1997. Among these programs were the USAir Altitude Awareness Program, the American Airlines Safety Action Partnership, and the Alaska Airlines Altitude Awareness Program. These programs included incentives to encourage employees of air carriers participating in the programs to disclose information which may include possible violations of 14 CFR without fear of punitive enforcement sanctions or company disciplinary action. Events reported under a program that involved an apparent violation of the regulations by the air carriers were handled under the Voluntary Disclosure Reporting Program, provided that the elements of the policy were satisfied. In view of the positive safety results from those programs, the FAA issued a revised AC 120-66 in 2000 (AC 120-66A), which established industry-wide guidelines for participation. The FAA revised AC 120-66 again in 2002 (AC 120-66B), incorporating the lessons learned from over two dozen programs that have been established. This chapter contains revised guidance to facilitate achievement of ASAP's safety goals, as well as to encourage wider participation in the program. ASAP includes incentives to encourage participating employees to disclose safety information that may include possible violations of 14 CFR.

5. KEY TERMS. The following key terms and phrases are defined for the purposes of ASAP to ensure a standard interpretation of the guidance.

A. Administrative Action. Under paragraph 205 of FAA Order 2150.3, Compliance and Enforcement Program, as amended, administrative action is a means for disposing of violations or alleged violations that do not warrant the use of enforcement sanctions. The two types of administrative action are a warning notice and a letter of correction.

B. Air Carrier. A person who undertakes directly by lease, or other arrangement, to engage in air transportation.

C. Certificate Holder. Under ASAP, refers to a person authorized to operate under 14 CFR part 121, or who holds a certificate issued under 14 CFR part 145.

D. Certificate-Holding District Office (CHDO). The Flight Standards District Office (FSDO) or Certificate Management Office (CMO) having overall responsibility for all FAA reporting requirements, technical administration requirements, and regulatory oversight of a certificate holder.

E. Consensus of the Event Review Committee (ERC). Under ASAP, consensus of the ERC means the voluntary agreement of all representatives of the ERC to each decision required by the MOU.

F. Corrective Action. For the purposes of ASAP, corrective action refers to any safety-related action determined necessary by the ERC based upon a review and analysis of the reports submitted under an ASAP. Corrective action may involve joint or individual action by the parties to the ASAP MOU.

G. Covered Under the Program/Qualified for Inclusion/Included in ASAP. For the purposes of ASAP, these terms all have the same meaning. They mean that the enforcement-related incentives and other provisions of the ASAP apply to the employee who submitted the report.

H. Enforcement-Related Incentive. Refers to an assurance that lesser enforcement action will be used to address certain alleged violations of the regulations, to encourage participation by the employees of a certificate holder.

I. Event Review Committee (ERC). A group comprised of a representative from each party to an ASAP MOU. The group reviews and analyzes reports submitted under an ASAP. The ERC may share and exchange information and identify actual or potential safety problems from the information contained in the reports. The ERC is usually comprised of a management representative from the certificate holder, a representative from the employee labor association (if applicable), and a specifically qualified FAA inspector from the CHDO.

J. Intentional Falsification. For the purposes of ASAP, intentional falsification means a false statement in reference to a material fact made with knowledge of its falsity. It does not include mistakes or inadvertent omissions or errors.

K. Major Domestic Repair Station. Refers to a part 145 certificated repair station located in the United States that is certificated to perform airframe and/or engine maintenance for certificate holders operating under part 121.

L. Memorandum of Understanding (MOU). Refers to the written agreement between two or more parties setting forth the purposes for, and terms of, an ASAP.

M. Party/Parties. Refers to the certificate holder, the FAA, and any other person or entity (e.g., labor union or other industry or government entity) that is a signatory to the MOU.

N. Person. A person refers to an individual, firm, partnership, corporation, company, association, joint-stock association, or government entity. It includes a trustee, receiver, assignee, or similar representative of any of them.

O. Safety-Related Report. Refers to a written account of an event that involves an operational or maintenance issue related to aviation safety reported through an ASAP.

P. Sole-Source Report. For the purposes of ASAP, the ERC shall consider a report to be sole-source when all evidence of the event available to the FAA outside of ASAP is discovered by or otherwise predicated on the ASAP report. It is possible to have more than one sole-source report for the same event.

Q. Sufficient Evidence. Sufficient evidence means evidence gathered by an investigation not caused by, or otherwise predicated on, the individual's safety-related report. There must be sufficient evidence to prove the violation, other than the individual's safety-related report. To be considered sufficient evidence under ASAP, the ERC must determine

through consensus that the evidence (other than the individual's safety-related report) would likely have resulted in the processing of an FAA enforcement action had the individual's safety-related report not been accepted under ASAP. Accepted ASAP reports for which there is sufficient evidence will be closed with administrative action.

R. Voluntary Disclosure Reporting Program. A policy under which regulated entities may voluntarily report apparent violations of the regulations and develop corrective action satisfactory to the FAA to prevent their recurrence. Certificate holders that satisfy the elements of the Voluntary Disclosure Reporting Program receive a letter of correction in lieu of civil penalty action. Voluntary disclosure reporting procedures are outlined in AC 00-58, Voluntary Disclosure Reporting Program.

7. APPLICABILITY. ASAPs are intended for air carriers that operate under part 121. They are also intended for major domestic repair stations certificated under part 145. ASAPs are entered into voluntarily by the FAA, a certificate holder, and if appropriate, other parties.

9. ASAP DEVELOPMENT. Certificate holders may develop programs and submit them to the FAA for review and acceptance in accordance with the guidance provided. Ordinarily, programs are developed for specific employee groups, such as flight crewmembers, flight attendants, mechanics, or dispatchers. The FAA will determine whether a program is accepted. The FAA may suggest, but may not require, that a certificate holder develop an ASAP to resolve an identified safety problem.

A. ASAP Development and Implementation. The development and implementation of an ASAP is a multifaceted task.

(1) The certificate holder, employee group, and the FAA must first develop a relationship that will promote the ASAP concept. The reluctance of one or more parties to commit to the program is detrimental to the process.

(2) The process for report review must be outlined in detail.

(3) Safety data collection, analysis, and retention processes must be developed and agreed upon.

(4) Event investigation tasks must be assigned.

(5) Prior to the implementation of the ASAP, a comprehensive company employee and management education program must be undertaken.

(6) The ASAP process may require cultural changes for all parties involved.

(7) Continuity of ERC representation personnel during the early stages of program implementation will promote the desired partnership relationship between program members.

B. Demonstration Programs. Certificate holders initially must develop a separate demonstration program for each employee group sought to be covered by an ASAP. The objective of a demonstration program is to measure its effectiveness and ensure that it meets the safety objectives of the specific ASAP.

(1) The initial demonstration program, which shall be limited to the period of time needed to achieve the desired goals and benefits articulated in the program, should have a duration of no longer than 18 months.

(2) At the conclusion of the initial demonstration program, all parties will review the program. Demonstration programs that require modification may be extended for an additional time, not to exceed 12 months, to effectively measure any change(s) made to the original program to address a deficiency identified by any of the parties to the MOU.

C. Continuing Programs. After a demonstration program is reviewed and determined to be successful by the parties to the agreement, it may be accepted as a continuing program, subject to review and renewal every 2 years by the FAA.

D. Withdrawal. Regardless of the duration of a program, any party to the ASAP MOU may withdraw from the program at any time.

11. ASAP RESOURCES. An ASAP can result in a significant commitment of both human and fiscal resources by the parties to the program. During the development of a program, it is important that each party is willing to commit the necessary personnel, time, and monetary resources to support the program.

13. ASAP CONCEPTS. The specific provisions of an ASAP are described by an MOU that is primarily developed by the certificate holder, FAA CHDO, and in some cases a third party such as an employee labor union. A sample MOU is provided in AC 120-66. An

automated MOU template is also available through the Flight Standards Service (AFS) Web page at http://www.faa.gov/avr/afs/afs200/afs230/asap/. The guidance material contained in this chapter and AC 120-66 provide structure and guidance in preparing a program acceptable for FAA participation. Several workable concepts have emerged from the ASAP demonstration programs. These concepts should be addressed in the MOU, and are explained below:

A. Event Review Committee (ERC). The determination of whether reports qualify for inclusion in the ASAP will be made by a consensus of the ERC.

(1) The ERC is composed of one designated representative and an alternate from each of the following: the FAA, the certificate holder, and any third party (e.g., the employee's union or representative organization).

(2) The ERC will:

- Review and analyze reports submitted under the ASAP
- Determine whether such reports qualify for inclusion
- Identify actual or potential problems from the information contained in the reports
- Propose solutions for those problems

(3) For official meeting purposes, a quorum exists when all designated ERC representatives or their alternates are present. Some reported events may involve matters that are complex or sensitive, or that require the expertise of other FAA or industry persons. The ERC representatives are encouraged to consult with such persons as needed during the ASAP process.

B. Consensus of the ERC. The success of ASAP is built on the ability of the ERC to achieve consensus on each event that is reported. Consensus of the ERC means the voluntary agreement of all representatives of the ERC.

(1) The ERC must reach a consensus when deciding whether a report is accepted into the program and when deciding on corrective action recommendations arising from the event, including any FAA administrative action. It does not require that all members believe that a particular decision or recommendation is the most desirable solution, but that the result falls within each member's range of acceptable solutions for that event in the best interest of safety. For this concept to work effectively, the ERC representative must be empowered to make decisions within the context of the ERC discussions on a given report. Senior management and supervisors should not preempt their respective ERC representative's decision-making discretion for an event reported under ASAP. If the parties to an ASAP MOU do not permit their respective ERC representatives to exercise this discretion, the capacity of the ERC to achieve consensus will be undermined, and the program will ultimately fail.

(2) Recognizing that the FAA holds statutory authority to enforce the necessary rules and regulations, it is understood that the FAA retains all legal rights and responsibilities contained in 49 U.S.C. and Order 2150.3. If consensus of the ERC is not reached on decisions concerning a report involving an apparent violation(s), a qualification issue, or medical certification, the FAA ERC representative will decide how the report should be handled. The FAA will not use the content of an ASAP report in any subsequent enforcement action except as described in paragraph 17B(1).

(3) When the ERC becomes aware of an issue involving the medical qualification or medical certification of an airman, the ERC must immediately advise the appropriate regional flight surgeon about the issue. The ERC will work with the regional flight surgeon and the certificate holder's medical department or medical consultants to resolve any medical certification or medical qualification issues or concerns revealed in an ASAP report, or through the processing of that report. The FAA ERC member must follow the direction(s) of the regional flight surgeon with respect to any medical certification or qualification issue(s) revealed in an ASAP report.

NOTE: The program may be terminated at any time by any party.

C. Sole-Source Reporting. Often, the only information available concerning a safety event will be the individual's ASAP report. Under ASAP this is referred to as a "sole-source" report. Therefore, an ASAP report is considered sole-source when all evidence of the event is discovered by or otherwise predicated on the report.

(1) The ERC will close the report and provide feedback to the reporting employee in a form and manner acceptable to the ERC, if:

(a) The event involves a possible violation of an FAA regulation;

(b) The report is sole-source;

(c) The report meets the criteria for acceptance; and

(d) The individual involved complies with the corrective actions recommended by the ERC.

(2) It is possible to have more than one sole-source report for the same event.

(3) After the investigation is complete and the only source of evidence obtained is from the reporting individual, or is caused by or predicated upon an accepted sole-source report, *no* FAA enforcement action or correspondence outside of the ERC is required.

(4) Accepted sole-source reports should *not* be closed with an FAA letter of no action, a letter of correction, or a warning notice.

D. Sufficient Evidence. Sufficient evidence means evidence gathered by an investigation not caused by, or otherwise predicated on, an individual's safety-related report (see paragraph 5 for the complete definition). Reports that are accepted into the program and supported by sufficient evidence are referred to as non-sole-source reports.

(1) For accepted reports, the inspector should only open an Enforcement Investigative Report (EIR) at such time during the investigation that it is determined that sufficient evidence of an apparent violation exists:

(a) For reports that are accepted under an ASAP, neither administrative action nor punitive legal enforcement action will be taken against an individual for an apparent violation unless there is sufficient evidence of the violation, other than the individual's safety-related report.

(b) For non-sole-source reports that are accepted under ASAP, an FAA warning letter or letter of correction, in addition to an appropriate ERC reply to the reporter, would be used to close an ERC investigation when the evidence provided for the non-sole-source report is sufficient to prove a violation.

(c) For non-sole-source reports that are accepted under ASAP, an FAA letter of no action, in addition to an appropriate ERC reply to the reporter, would be used to close an ERC investigation when there is not sufficient evidence.

(2) Under ASAP, except for reports that appear to involve criminal activity, substance abuse, controlled substances, alcohol, or intentional falsification, the content of any individual's ASAP report will not be used as evidence by FAA for any purpose in an FAA enforcement action.

E. Enforcement-Related Incentive. An enforcement-related incentive is the minimum FAA enforcement action that is needed to achieve the desired goal(s) and results of the program when alleged infractions of 14 CFR are involved.

(1) Apparent violations of the regulations by employees of a certificate holder disclosed through safety-related reports will be addressed with administrative action if:

(a) Sufficient evidence exists; and

(b) The apparent violation(s) is inadvertent and does not involve an intentional disregard for safety.

(2) Violations that are not inadvertent or that involve an intentional disregard for safety are specifically excluded from the program, and any enforcement-related incentive will not apply to these violations.

(3) Reports that appear to involve criminal activity, substance abuse, controlled substances, alcohol, or intentional falsification are automatically excluded from the program and are turned over to the proper authorities for further investigation.

(4) Conduct that raises a question of a lack of airman or medical certification or qualification matters may be addressed by ASAP; however, the employee must successfully complete all of the recommendations in a manner satisfactory to all members of the ERC to be covered by the program, and the ERC must comply with paragraph 13B(3).

(5) Reports initially accepted under an ASAP will be excluded from the program if the employee fails to complete the recommended corrective action in a manner satisfactory to all members of the ERC. Failure of a certificate holder to follow through with corrective action acceptable to all members of the ERC to resolve any safety deficiencies will ordinarily result in termination of the program. In addition, failure of any individual to complete corrective action for an apparent violation, a qualification issue, or medical certification issue in a manner acceptable to all members of the ERC may result in the reopening of

the case and referral of the matter for appropriate action.

15. GUIDELINES FOR ACCEPTANCE AND EXCLUSION OF REPORTS UNDER ASAP. Participation in ASAP is limited to certificate holder employees and to events occurring while acting in that capacity. Each employee participating in ASAP must individually submit a report to receive the enforcement-related incentives and benefits of the ASAP policy. However, in cases where an event may be reported by more than one person, each individual who seeks coverage under ASAP must either sign the same report or submit separate signed reports.

A. Criteria for Acceptance. The following criteria must be met in order for a report involving a possible violation to be covered under ASAP:

(1) The employee must submit a report in a timely manner. In order to be considered timely, a report must be submitted in accordance with either of the following two criteria:

(a) Within a time period following the event that is defined in the MOU, such as within 24 hours of the end of the duty day in which the event occurred. If the ERC reaches consensus that this criterion has been met, a report would not be rejected for timeliness, even if the FAA was already aware of the possible non-compliance with the regulations, and may have brought it to the attention of the employee;

(b) Within 24 hours of having become aware of possible non-compliance with 14 CFR in accordance with the following criteria:

i. If a report is submitted later than the time period after the occurrence of an event stated in the MOU, the ERC will review all available information to determine whether the employee knew or should have known about the possible non-compliance with 14 CFR within that time period.

ii. If the employee did not know or could not have known about the apparent non-compliance with 14 CFR within that time period, then the report would be included in ASAP, provided the report is submitted within 24 hours of having become aware of possible non-compliance with 14 CFR, and provided all other ASAP acceptance criteria have been met.

iii. If the employee knew or should have known about the apparent non-compliance with 14 CFR, then the report will not be included in ASAP, unless it is a sole-source report that meets all other ASAP acceptance criteria.

(2) The alleged regulatory violation must be inadvertent, and must not appear to involve an intentional disregard for safety. As stated in Order 2150.3, inadvertent apparent violations are generally the result of simple failure to exercise reasonable care.

(3) The reported event must not appear to involve criminal activity, substance abuse, controlled substances, alcohol, or intentional falsification.

(4) Sole-source reports that meet all of the above acceptance criteria, except timely submission, will be accepted under ASAP.

(5) Reports involving the same or similar possible noncompliance with 14 CFR that were previously addressed with administrative action under ASAP will be accepted into the program, provided they otherwise satisfy the acceptance criteria under paragraph 15A. The ERC will consider on a case-by-case basis the corrective action that is appropriate for such reports.

B. Non-Reporting Employees. Non-reporting employees are employees of the certificate holder that have been identified in an ASAP report as possibly having been involved in an alleged violation and have neither signed that report nor submitted a separate report. For the purposes of ASAP, there are two types of non-reporting employees—those employees of the group covered by an ASAP MOU and those employees that are not covered by an ASAP MOU.

(1) If an ASAP report identifies another covered employee of the certificate holder in a possible violation, and that employee has neither signed that report nor submitted a separate report, the ERC will determine on a case-by-case basis whether that employee knew or reasonably should have known about the possible violation. If the ERC determines that the employee did not know or could not have known about the apparent violation(s), and the original report otherwise qualifies for inclusion under ASAP, the ERC will offer the non-reporting employee the opportunity to submit his/her own ASAP report.

(a) If the non-reporting employee submits his/her own report within 24 hours of notification from the ERC, that report will be afforded the same consideration under ASAP as that accorded the report

from the original reporting employee, provided all other ASAP acceptance criteria are met.

(b) If the non-reporting employee fails to submit his/her own report within 24 hours of notification by the ERC, the possible violation by that employee will be referred to an appropriate office within the FAA for additional investigation, reexamination, and/or enforcement action, as appropriate, and for referral to law enforcement authorities, if warranted.

(2) If an ASAP report identifies another employee of the certificate holder who is not covered under an ASAP MOU, and the report indicates that employee may have been involved in a possible violation, the ERC will determine on a case-by-case basis whether it would be appropriate to offer that employee the opportunity to submit an ASAP report. If the ERC determines that it is appropriate, the ERC will provide that employee with information about ASAP and invite the employee to submit an ASAP report.

(a) If the employee submits an ASAP report within 24 hours of notification by the ERC, that report will be covered under ASAP.

(b) If the employee fails to submit an ASAP report within 24 hours of notification by the ERC, the possible violation by that employee will be referred to an appropriate office within the FAA for additional investigation, reexamination, and/or enforcement action, as appropriate, and for referral to law enforcement agencies, if warranted.

C. Excluding Reports from ASAP. The following types of reports are excluded under an ASAP:

(1) Reports involving an apparent violation that is not inadvertent or that appears to involve an intentional disregard for safety. For example, a pilot misreading an item on a checklist usually would be considered inadvertent. Failure to use the checklist, however, would *not* be considered inadvertent.

(2) Reports that appear to involve possible criminal activity, substance abuse, controlled substances, alcohol, or intentional falsification.

(3) Untimely reports excluded under paragraph 15A(1) or reports for which a consensus on acceptance under paragraph 15 is not reached by the ERC.

(4) Reports of events that occurred when NOT acting as an employee of the certificate holder.

(5) Cases where the employee fails to complete the recommended corrective action in a manner satisfactory to all members of the ERC, even though the report was initially included in an ASAP. In those cases, failure of any individual to complete corrective action for an apparent violation or a qualification or medical certification issue in a manner acceptable to all members of the ERC may result in the reopening of the case and referral of the matter for appropriate action. Failure of a certificate holder to follow through with corrective action acceptable to all members of the ERC to resolve any safety deficiencies will ordinarily result in termination of the program.

17. ENFORCEMENT POLICY. The content of the ASAP report will not be used to initiate or support any company disciplinary action, or as evidence for any purpose in an FAA enforcement action, except as provided in paragraph 17B(1) below. The following enforcement policy shall apply to reports submitted under ASAP:

A. Reports Accepted Under ASAP. Reports that are accepted into ASAP will be addressed using the following enforcement policy:

(1) Those non-sole-source reports included in ASAP with sufficient evidence (see paragraph 5Q) to support a violation of 14 CFR will be closed with administrative action. Those non-sole-source reports without sufficient evidence to support a violation of 14 CFR will be closed with an FAA letter of no action.

(2) Those sole-source reports that are included in ASAP will be closed with no action.

(3) Those reports included in ASAP that demonstrate or raise a question of a lack of qualification will be addressed with appropriate corrective action recommended by the ERC, provided the employee completes the corrective action in a manner satisfactory to all members of the ERC.

B. Reports Excluded from ASAP. Reported events that are excluded from ASAP will be referred to the FAA for possible enforcement action and/or reexamination under 49 U.S.C., Subtitle VII, and as prescribed in FAA Order 2150.3.

(1) Reports of events that appear to involve possible criminal activity, substance abuse, controlled substances, alcohol, or intentional falsification will be referred to an appropriate FAA office for further handling. The FAA may use such reports for any enforcement purposes, and will refer such reports to

law enforcement agencies, if appropriate. If upon completion of subsequent investigation the FAA determines that the event did not involve any of the aforementioned activities, then the report will be referred back to the ERC for a determination of acceptability under ASAP. Such reports will be accepted under ASAP provided they otherwise meet the acceptance criteria in paragraph 15A.

(2) Neither the written ASAP report nor the content of the written ASAP report will be used to initiate or support company discipline or as evidence for any purpose in an FAA enforcement action except as provided for in paragraph 17B(1). The FAA may conduct an independent investigation of an event disclosed in a report.

C. Reopening Reports Based on New Evidence. All safety-related reports should be fully evaluated and, to the extent appropriate, investigated by the FAA. A closed ASAP case, including any related EIR, involving a violation addressed with administrative action or for which no action has been taken, may be reopened and appropriate enforcement action taken if evidence later is discovered that establishes that the violation should have been excluded from the program.

D. Violations of Certificate Holders. Apparent violations of certificate holders disclosed through a safety-related report under an ASAP may be handled under the Voluntary Disclosure Reporting Program, provided the certificate holder voluntarily reports the apparent violations to the FAA and the other elements of that policy are met. (See AC 00-58 and Order 2150.3, Appendix 1: Compliance/Enforcement Bulletin No. 90-6.) The FAA shall use the knowledge of the event to conduct such independent investigation of the operator's apparent violation(s) as is deemed appropriate, including opening an EIR, and shall close such events with administrative action.

E. Enforcement Investigation Coordination. The CHDO is the focal point of all enforcement-related investigations resulting from events reported through the ASAP.

(1) If an event occurs within the jurisdiction of a FSDO other than the CHDO of the certificate holder involved, the FSDO will contact the CHDO of the certificate holder to coordinate appropriate action. The FSDO should delay opening an EIR until establishing contact with the appropriate CHDO. The FSDO should determine whether the certificate holder has an ASAP for the applicable employee group by accessing the AFS ASAP Web page at http://www.faa.gov/avr/afs/afs200/afs230/asap/.

(2) The CHDO, upon learning of an ASAP event that may involve a violation of the regulations, will contact the investigating FSDO which has jurisdiction over the geographical area where the event occurred. If the alleged violator has submitted an ASAP report that has been accepted into the certificate holder's ASAP, that FSDO shall transfer the investigation, including any open EIR, to the CHDO for further investigation and disposition. Other related reports, such as an incident report or preliminary pilot deviation report submitted under FAA Order 8020.11, Aircraft Accident and Incident Notification, Investigation, and Reporting, as amended, normally remain with the FSDO. However, the CHDO may request the transfer of these other reports related to the event. If the CHDO requests the transfer of those related reports, that CHDO is responsible for assuring that they are completed in accordance with existing FAA procedures. If the ASAP report was not accepted into the program, the investigation and EIR remain at the FSDO where the ASAP-reported event occurred, unless the regional headquarters agrees to transfer the case in accordance with paragraph 208(e) of Order 2150.3.

19. MEMORANDUM OF UNDERSTANDING (MOU). The elements of an ASAP are set forth in an MOU between the FAA, certificate holder management, and an appropriate third party, such as an employee labor organization or their representatives. A program will be implemented in accordance with the provisions of its MOU. Each MOU will be based on the parties' different needs and purposes for an ASAP. Required elements of an MOU are identified in the ASAP MOU checklist job aid (see Figure 6-1).

A. Parties to the MOU. For the purpose of this chapter, the term "party/parties" refers to the certificate holder, FAA, and any other person or entity that is a signatory to the MOU and would be a major contributor to the success of the respective ASAP. This could include labor unions or other industry or government entities. It should be noted that FAA only regulates certificate holders and other persons subject to 14 CFR. However, all signatories are expected to conform to the provisions of the MOU.

B. Development Theme. The MOU should be written with the theme of open communication and trust between the parties to the agreement.

C. MOU Elements. Each MOU will be based on the parties' different needs and purposes for an ASAP. The MOU shall set forth the elements of the ASAP.

(1) An automated AFS ASAP MOU template is available for downloading at http://www.faa.gov/avr/afs/afs200/afs230/asap/. While use of this template is not required, it is recommended for use by certificate holders in developing their ASAP MOU. Benefits of using this template include expedited review and acceptance processes of the MOU.

(2) Certificate holders may develop their own MOU that does not use the template referenced in the preceding paragraph. In these cases, the checklist provided in Figure 6-1 shall be used by the FAA when the MOU is being reviewed. Certificate holders should use this checklist during development of their MOU. This checklist provides the minimum elements necessary for an ASAP MOU to be accepted by the FAA. The checklist should be completed in its entirety and forwarded with the MOU for processing, if the MOU does not use the automated template referenced above. The CHDO should verify accurate completion of the checklist by the certificate holder.

D. MOU Signatories. The MOU must be signed by an authorized representative of each party. The MOU will be signed by the CHDO office manager on behalf of the FAA following receipt of an authorization from the Director, Flight Standards Service, AFS-1.

21. ASAP PROGRAM ACCEPTANCE, EXTENSION, RENEWAL, AND AMENDMENT PROCEDURES. When a certificate holder submits an MOU, assigned inspectors should review the key terms and concepts in AC 120-66 and this chapter. The checklist job aid (Figure 6-1) should then be completed, if applicable, to ensure that the MOU complies with FAA policy.

A. Initial Review by CHDO. The certificate holder should initially develop and present the program to the CHDO for review.

(1) The CHDO and the certificate holder will review the program to ensure that it satisfies the guidance in AC 120-66 and this chapter. Prior to acceptance, the program should be reviewed to ensure that FAA resources are available to administer the program effectively. Program proposals that require excessive agency resources either should be modified or not accepted.

(2) When the CHDO is satisfied that the program is acceptable under the guidance of ASAP, the CHDO manager forwards an electronic copy of the proposed MOU and the CHDO's recommendation for acceptance to the respective Flight Standards Division regional office and to the headquarters ASAP program office (Voluntary Safety Programs Branch, AFS-230). If the proposed MOU does not employ the AFS ASAP MOU automated template referenced in paragraph 19C(1), a completed ASAP checklist (Figure 6-1) shall accompany the proposed MOU for processing.

(a) The program office shall review and, if required, forward a copy of the MOU to the Office of the Chief Counsel, Enforcement Division, AGC-300, for appropriate legal review. MOUs that use the template do not require AGC review.

(b) All programs, except for renewals of continuing programs, shall receive authorization on final acceptance from AFS-1. AFS-1 will indicate authorization for acceptance of the MOU by FAA memorandum to the CHDO manager through the regional division manager. The ASAP program office will be responsible for preparing the memorandum for AFS-1's signature and submitting it with the ASAP package to AFS-1.

(c) Following authorization by AFS-1, the CHDO manager shall sign the MOU on behalf of the FAA. The certificate holder should allow a minimum of 60 days for the FAA acceptance process to be completed once its ASAP program is received at FAA headquarters for review.

B. Extensions and Continuing Program Initial Acceptance. Extension of a demonstration program and the initial acceptance of a continuing program are processed in the same manner as described in paragraph 21A(2) above.

C. Renewal of a Continuing Program. The renewal of a continuing program is accomplished every 2 years after a review by the parties to the MOU to ensure the particular ASAP program is meeting its objectives. The renewal may be accomplished at the local CHDO level by the CHDO manager signing the MOU on behalf of FAA. The CHDO manager shall notify the ASAP program office (AFS-230) in writing 60 days in advance of renewing a continuing ASAP program.

D. FAA ASAP Policy Updates. As the FAA and industry gain experience with ASAP, one can expect

that FAA ASAP policy will evolve to reflect lessons learned. The AFS Web page http://www.faa.gov/avr/afs/afs200/afs230/asap/ will provide the most current information on ASAP policy updates. If the FAA makes changes to ASAP policy, those changes will appear on the ASAP Web page prior to publication elsewhere. The Web page also contains an automated template to facilitate the generation of an ASAP MOU by airlines and major domestic repair stations interested in starting new programs. Although not required, use of the automated template is strongly encouraged, because MOUs that use the standard language from that program can be quickly accepted. The template will always reflect the most current FAA policy on ASAP. If the certificate holder and, where applicable, its associated labor association elect to revise an accepted MOU to incorporate updates to FAA ASAP policy, the following acceptance procedures will apply:

(1) The AFS ASAP Web page will serve as the reference source for updates to FAA ASAP policy. Until revised, guidance to industry provided in AC 120-66 will continue to apply, except as noted on the ASAP Web page. The ASAP Web page will contain the exact language that describes policy updates to these documents.

(2) The CHDO manager will accept revisions to accepted ASAP MOUs that are revised to incorporate updates to FAA ASAP policy when such revisions employ the exact policy language that appears in the MOU template on the AFS ASAP Web page. The FAA does not require coordination and review of such revisions above the level of the CHDO manager. However, an information copy of the revised MOU shall be provided to the Manager, AFS-230, P.O. Box 20027, Washington, DC 20041, following acceptance.

(3) Following CHDO review, revisions to accepted ASAP MOUs that do not incorporate the exact policy language that appears in the MOU template on the AFS ASAP Web page must be forwarded for further review through FAA regional headquarters to AFS-230. The CHDO must provide, by cover letter, its recommendations regarding acceptance of such revisions.

E. Revision Control. It is recommended that the certificate holder employ standard revision control methodology with respect to amendments to the MOU. The original and subsequent revisions should include:

(1) For each revision to an original MOU, a change control page identifying the revision number, summarizing each change to the original document, and specifying which pages are to be removed and replaced.

(2) A list of effective pages.

(3) A table of contents.

(4) On each page of the MOU, a calendar date for when that page was prepared or revised.

(5) For all revisions to an original MOU, a revision number on each page that is revised.

(6) Sequential page numbers on all pages of the MOU (except the cover page, if applicable, which shall be understood to constitute page (i)).

F. Recordkeeping. The parties should maintain those records necessary for a program's administration and evaluation. Records submitted to the FAA for review relating to an ASAP are protected to the extent allowed by law under applicable exemptions of the Freedom of Information Act (FOIA). All records and documents relating to an ASAP must be appropriately kept in a manner that ensures compliance with 14 CFR and all applicable laws, including the Pilots Records Improvement Act.

G. ASI Training. ASIs should be adequately prepared to perform ASAP-related duties as outlined below:

(1) ASIs who will review an ASAP MOU for recommended acceptance or will participate in an ERC should attend training as prescribed by the Flight Standards Training Division, AFS-500.

(2) ASIs who will serve as ERC representatives should meet the following minimum qualifications:

(a) Three years of AFS experience (Series 1825).

(b) One year of part 121 certificate management experience.

(c) ASAP initial/continuing training.

(d) Except for new ASAP programs, attendance at three ERC meetings. For a new ASAP program, inspector attendance, if feasible, at another certificate holder's ERC is recommended for training purposes prior to the inspector's participation in the new program.

23. PROGRAM TRACKING AND REPORTING SUBSYSTEM (PTRS) INPUT. For activity associated with participation in the ASAP review committee, operations and cabin safety inspectors should enter the PTRS code 1391 for each set of such reports reviewed; maintenance inspectors should use PTRS code 3395, and avionics inspectors should use PTRS code 5395 for these reviews. Enter the designator code appropriate to the air carrier or major domestic repair station whose ASAP program was associated with the reports. Use the numeric-miscellaneous field to record the number of reports reviewed. Comments regarding the report content or conduct of the ASAP program may be entered as necessary.

A. If an enforcement investigation associated with an ASAP report is initiated, the inspector shall enter the code ASAP in the National Use block of the PTRS initiated to track aspects of ASAP. This entry is in addition to the PTRS code appropriate for the specific activity (e.g., 1735/33, 3731/33, 5731/33). It is also important to complete the Designator Block with the appropriate air carrier or major domestic repair station designator code, even when completing a PTRS activity involving an employee of the certificate holder.

B. General comments regarding the report content or conduct of the ASAP program may be entered as necessary.

NOTE: For sole-source reports regarding actions of individual employees, the inspector should not enter the employees' names.

25. QUARTERLY REPORTS ON SAFETY ENHANCEMENTS. The fundamental purpose of ASAP is to enhance safety. It is therefore important to maintain an audit trail of the extent to which the program is achieving that objective. Office managers shall prepare a summary report of safety enhancements achieved each quarter by each certificate holder's ASAP program(s) for which they have oversight responsibility. Quarterly reports shall be sent by electronic mail to the respective regional headquarters AFS division office and to the Manager, AFS-230, using the report format provided in the example in Figure 6-2.

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FIGURE 6-1. AVIATION SAFETY ACTION PROGRAM (ASAP) CHECKLIST

If the certificate holder chooses not to use the ASAP Memorandum of Understanding (MOU) template (available on the Web at: http://www.faa.gov/avr/afs/afs200/afs230/asap/) when developing an MOU, it should use the following checklist to ensure that the MOU adequately addresses all necessary elements. FAA personnel shall use this checklist when reviewing an MOU developed without the aid of the template. An MOU may contain additional information not included in the checklist that is necessary for the operation of the program.

This checklist shall be submitted to the FAA certificate-holding district office (CHDO) along with the completed MOU at the time of submission for FAA acceptance. The CHDO shall review this checklist to ensure that all provisions of the ASAP have been met in accordance with the guidance material and that the certificate holder has accurately completed the checklist. The CHDO shall include the completed checklist along with other applicable items discussed in this chapter for regional and headquarters review. The Response column should be answered for each question. The response should be YES, NO, or NA (not applicable). All NO or NA responses should include a brief explanation as to why that item was marked NO or NA.

The Reference column should also be completed by identifying the location of the particular item's response in the certificate holder's MOU (e.g., MOU, page 2, paragraph 3a).

FIGURE 6-1. (Continued)

ASAP MOU Checklist

NO.	ITEM	RESPONSE (CIRCLE YES, NO, OR NA)	MOU PARAGRAPH REFERENCE
1	Does this program involve a part 121 Air Carrier or part 145 Major Domestic Repair Station?	Yes No NA	
2	Is this ASAP:		
a	Specific to an employee group(s)?	Yes No NA	
b	A Demonstration program?	Yes No NA	
c	An Extension of a Demonstration program?	Yes No NA	
d	A Continuing program?	Yes No NA	
e	A renewal of a Continuing program?	Yes No NA	
3	Is the duration of the program limited to the period of time needed to achieve the desired goals and benefits articulated in the program? Demonstration programs initially should have a duration of no longer than 18 months and should be reviewed prior to extension. Demonstration programs that undergo changes after their initial review may be extended for no longer than 12 months. Programs that are classified as Continuing must be reviewed and renewed every 2 years.	Yes No NA	
4	Have all parties to the ASAP entered into this agreement voluntarily?	Yes No NA	
5	Is there a description of the objective(s) of the program which includes:		
a	The essential safety information that is reasonably expected to be obtained through the program?	Yes No NA	
b	Any specific safety issues that are of a concern to any of the parties?	Yes No NA	
c	The benefits to be gained through the use of the program?	Yes No NA	

FIGURE 6-1. (Continued)

ASAP MOU Checklist

NO.	ITEM	RESPONSE (CIRCLE YES, NO, OR NA)	MOU PARAGRAPH REFERENCE
6	Is there a description of any enforcement-related incentive that is needed to achieve the desired goal and results of the program?	Yes No NA	
7	Is there a statement that all safety-related reports shall be fully evaluated and, to the extent appropriate, investigated by the ERC?	Yes No NA	
8	Is there a description of the manner in which records and documents relating to an ASAP shall be kept that ensures compliance with 14 CFR, the Pilot Records Improvement Act (PRIA), and any other applicable laws?	Yes No NA	
9	Is there a description of the process for timely reporting to the ERC of all events disclosed under the program?	Yes No NA	
10	Is there a description of the procedures that provide for:		
a	The resolution of safety-related events?	Yes No NA	
b	Continuous tracking of those events?	Yes No NA	
c	The analysis of safety-related events?	Yes No NA	
11	Is there a statement of ASAP report acceptance and exclusion criteria?	Yes No NA	
12	Is there a description of the frequency of periodic reviews by the parties to determine whether the program is achieving the desired results? (These reviews are in addition to any other review conducted by the FAA or any other party individually).	Yes No NA	

FIGURE 6-1. (Continued)

ASAP MOU Checklist

NO.	ITEM	RESPONSE (CIRCLE YES, NO, OR NA)	MOU PARAGRAPH REFERENCE
13	Is there a statement that the ERC shall be comprised of one representative from each party to the MOU, and a description of the duties of the ASAP manager? (The ASAP manager may either be the same individual assigned as the company management representative to the ERC, or it may be another individual from company management who will not serve as a voting member of the ERC.)	Yes No NA	
14	Is there a description of the process for training and distributing information about the program to certificate holder management and employees and procedures for providing feedback to individuals who make safety-related reports under the program?	Yes No NA	
15	Is there a statement that modifications to the MOU must be accepted by all parties?	Yes No NA	
16	Is there a statement that termination or modification of a program will not adversely affect anyone who acted in reliance on the terms of a program in effect at the time of that action (e.g., when a program is terminated, all reports and investigations that were in progress will be handled under the provisions of the program until they are completed)?	Yes No NA	
17	Is there a statement that the program can be terminated at any time, by any party?	Yes No NA	
18	Is there a statement that failure of any party to follow the terms of the agreement ordinarily will result in termination of the program?	Yes No NA	

FIGURE 6-1. (Continued)

ASAP MOU Checklist

NO.	ITEM	RESPONSE (CIRCLE YES, NO, OR NA)	MOU PARAGRAPH REFERENCE
19	Is there a statement that failure of a certificate holder to follow through with corrective action acceptable to FAA, to resolve any safety deficiencies, will ordinarily result in termination of the program?	Yes No NA	
20	Is there a detailed description of the following concepts if they are included in the program and, if appropriate, how they will be used:		
a	Event Review Committee?	Yes No NA	
b	Consensus of the ERC?	Yes No NA	
c	Sole-source reporting?	Yes No NA	
d	Sufficient evidence?	Yes No NA	
e	Enforcement-related incentive?	Yes No NA	
21	Is there a statement that repeated instances involving the same or similar possible non-compliance with 14 CFR that were previously addressed with Administrative Action under the ASAP will be accepted into the program, provided that they otherwise meet the acceptance criteria of ASAP? (The ERC will consider on a case-by-case basis the corrective action that is appropriate for such reports.)	Yes No NA	
22	Does the ASAP include an MOU procedure to identify the date, time, location or fix, altitude, flight number, and ATC frequency at the time the event occurred? (This applies to ASAP MOUs that contain provisions for ATC events.)	Yes No NA	

FIGURE 6-1. (Continued)

ASAP MOU Checklist

NO.	ITEM	RESPONSE (CIRCLE YES, NO, OR NA)	MOU PARAGRAPH REFERENCE
23	Is there a statement that employees initially covered under an ASAP will be excluded from the program and not entitled to the enforcement-related incentive if they fail to complete the recommended corrective action in a manner satisfactory to all members of the ERC? (These cases may result in the reopening of the case and referral of the matter for appropriate action.)	Yes No NA	
24	Is there a statement that any safety-related ASAP event that concerns an apparent violation(s) that is EXCLUDED from ASAP will be referred by the FAA ERC representative to an appropriate office within the FAA for any additional investigation and reexamination and/or enforcement action, as appropriate?	Yes No NA	
25	Is there a statement that a closed ASAP case, including a related EIR, that involves a violation addressed with Administrative Action or for which no action has been taken, may be reopened if evidence is later discovered that establishes the event should have been excluded from the program?	Yes No NA	
26	Is there a statement that when the ERC becomes aware of an issue involving the medical qualification or medical certification of an airman, the ERC must immediately advise the appropriate Regional Flight Surgeon about the issue? (The ERC will work with the Regional Flight Surgeon and the certificate holder's medical department or medical consultants to resolve any medical certification or qualification issues or concerns revealed in an ASAP report, or through the processing.	Yes No NA	

FIGURE 6-1. (Continued)

ASAP MOU Checklist

NO.	ITEM	RESPONSE (CIRCLE YES, NO, OR NA)	MOU PARAGRAPH REFERENCE
	of that report. The FAA ERC member must follow the direction(s) of the Regional Flight Surgeon with respect to any medical certification or medical qualification issue(s) revealed in an ASAP report.)		
27	Is there a statement that reports that appear to involve possible criminal activity, substance abuse, controlled substances, alcohol, or intentional falsification will be referred to an appropriate FAA office for further handling? The FAA may use such reports for any enforcement purposes and will refer such reports to law enforcement agencies, as appropriate.	Yes No NA	
28	Is there a statement that the ASAP manager will maintain an electronic database that tracks each event through and including closure of that event by the ERC and enables trend analysis?	Yes No NA	

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FIGURE 6-2. ASAP ENHANCEMENT E-MAIL REPORT EXAMPLE

CHDO: ABC FSDO/CMO

REGION: EA

FISCAL YEAR: 2003

QUARTER: 1st

ASAP MOU HOLDER: ABC Airlines

ASAP MOU EMPLOYEE CATEGORIES: Pilot, Maintenance Technician

ASAP MOU HOLDER DESIGNATOR: ABCA

ASAP ERC MEMBERS AND CONTACT INFORMATION (Name, Telephone Number, E-mail Address):

FAA Member: John Smith, (123) 456-7890, john.smith@faa.gov

Company Member: Fred Smith, (234) 567-8901, fsmith@abcair.com

Labor Member: Joe Dunn, (234) 123-4567, jdunn@labor.org

DESCRIPTION OF SAFETY ENHANCEMENTS:

Pilot's ASAP:

1. Identified and corrected B-737 navigation database errors effecting V-speeds and flap speeds.

2. Identified crew coordination deficiency when accepting newly assigned altitude clearances. Corrected through development of enhanced crew coordination procedures that specifically address this matter.

Maintenance Technician's ASAP:

Identified a problem with maintenance and flightcrews failing to identify improperly secured inspection and access panels prior to operation of aircraft. Several inspection and access panels are not visible during aircraft maintenance pre-taxi and flightcrew preflight inspections. Revised maintenance work cards and procedures to include new procedures that will ensure non-ground visible panel security prior to an aircraft's return to service.

JOHN DOE,
CHDO MANAGER

COPY TO:

ASAP Program Office, AFS-230

APPENDIX 1. ACRONYMS AND ABBREVIATIONS

This appendix contains many acronyms and abbreviations for both old as well as new Airworthiness terms that are used throughout this Handbook. Inspectors can refer to the following alphabetical listing of frequently used acronyms and abbreviations and their meanings when using this Handbook.

14 CFR	Title 14 of the Code of Federal Regulations
49 CFR	Title 49 of the Code of Federal Regulations
49 U.S.C.	Title 49 of the United States Code
A/FD	Airport/Facility Directory
A&P	Airframe and Powerplant
AAD	Automatic Activation Device
AAIP	Approved Aircraft Inspection Program
AC	Advisory Circular
ACARS	Aircraft Communication Addressing and Reporting System
ACAT	Air Carrier Assessment Tool
ACCSS	air carrier cabin safety specialists
ACE	aerobatic competency evaluator
ACO	Aircraft Certification Office
ACR	airman certification representative
AD	Airworthiness Directives
ADA	Airline Deregulation Act
ADF	automatic direction finding
AEE	Office of Environment and Energy
AEG	Aircraft Evaluation Groups
AEM	Area Equivalent Method
AES	Automated Exemption System
AFM	Aircraft Flight Manual Airplane Flight Manual
AFSC	Air Force Specialty Codes
AFSS	automated flight service station
AFTN	aeronautical fix telecommunication network
AH	alert height
AGL	above ground level
AIDS	Accident Incident Data Subsystem
Air Oper VIS	Air Operator Vital Information Subsystem
AIP	Airplane Inspection Program
ALS	Advance Life Support
AMA	Aviation Mechanic Airframe
AMC	acceptable means of compliance
AME	Aviation Medical Examiner
AMG	Aviation Mechanic General
AMM	Aircraft Maintenance Manual
AMO	Approved Maintenance Organization
AMP	Aviation Mechanic Powerplant
AMT	Aviation Maintenance Technician
AMTS	Aviation Maintenance Technician School
ANM	Seattle Aircraft Evaluation Group

AOA	Airport Operations Area
AOC	Air Operator Certificate
AOD	Automatic Opening Device
AOG	Aircraft on the Ground
APP	Accident Prevention Program
APPM	Accident Prevention Program Manager
APU	Auxiliary Power Unit
AR	Authorized Representative
ARA	Airborne Radar Approach
ARFF	Aircraft Rescue and Fire Fighting Equipment
ARINC	Aeronautical Radio, Inc.
ASAP	Aviation Safety Action Program
ASAS	Aviation Safety Analysis System
ASI	aviation safety inspector
ASR	Airport Surveillance Radar
AST	aviation safety technician
ASTM	American Society for Testing and Materials
ASW	Southwest Aircraft Evaluation
ATCS	Alternate Testing Center Supervisor
AT	Air Traffic
ATA	Air Transport Association
ATC	air traffic control
ATE	Automatic Test Equipment
ATOS	Air Transportation Oversight System
ATP	airline transport pilot
ATPE	airline transport pilot examiner
AVGAS	Aviation Gasoline
BA	Bilateral Agreement
BASA	Bilateral Aviation Safety Agreement
BFA	Balloon Federation of America
BITE	Built-In Test Equipment
BLS	Basic Life Support
BOW	basic operating weight
CAA	Civil Airworthiness Authority
CAB	Civil Aviation Board
CAIS	Comprehensive Airmen Information Subsystem
CAM	Civil Aeronautics Manual
CAMI	Civil Aero Medical Institute
CAMP	Continuous Airworthiness Maintenance Program
CAN	Center Area NOTAM
CAR	Civil Air Regulations
CASE	Coordinating Agencies for Supplier's Evaluation
CASFO	Civil Aviation Security Field Office
CASP	Continuous Analysis and Surveillance Program
CASS	Continuing Analysis and Surveillance System
CATS	Computer Assisted Testing Services
CBI	computer-based instruction
CDL	Configuration Deviation List
CE	commercial pilot examiner
CFI	certificated flight instructor
CFR	Code of Federal Regulations

CFRS	certificated foreign repair station
CG	center of gravity
CHDO	certificate-holding district office
CIRE	commercial and instrument rating examiner
CL	capabilities list
CM	Condition Monitoring
CMO	Certificate Management Office
CMP	Configuration Maintenance Procedures
CMR	Certification Maintenance Requirements
CMT	Certificate Management Team
COA	certificate of authority
COB	close of business
COMAT	company material
ConDOR	Constructed Dynamic Observation Reports
Conus	continental United States
CPCP	Corrosion Prevention and Control Programs
CPL	commercial pilot license
CPM	certification project manager
CRW	canopy relative work
CSP	Comprehensive Surveillance Plan
CTA	control areas
CTC	computer testing center
CTD	computer testing designee
CTM	Computer Testing Manager
CVR	cockpit voice recorder
DAR	Designated Airworthiness Representative
DAS	Designated Alteration Station
DBA	Other Business Names
d.b.a.	doing business as
DCT	Data Collection Tool
DDG	Dispatch Deviation Guide
DER	Designated Engineering Representative
DFDAU	digital flight data acquisition unit
DH	decision height
DME	Designated Mechanic Examiners
DME	distance measuring equipment
DNL	Decibel Noise Level
DOD	Department of Defense
DOT	Department of Transportation
DPE	designated pilot examiner
DPRE	Designated Parachute Rigger Examiners
DS	discard
EA	Environmental Assessment
EA/EO	Engineering Change Authorization/ Order
EAA	Experimental Aircraft Association
EFIS	electronic flight instrument systems
EIR	Enforcement Investigation Report
EIS	Enforcement Information Subsystem
EIS	Environmental Impact Statement
ELSA	Experimental Light-Sport Aircraft
ELT	Emergency Locator Transmitter

EMI	electromagnetic interference
EP	Evaluation Panel
EPI	Element Performance Inspections
ERC	Event Review Committed
ETOPS	Extended-Range Operation With Two-Engine Airplanes
EWCG	empty-weight center of gravity
EVAS	Emergency Vision Assurance Systems
FAA	Federal Aviation Administration
FA Act	Federal Aviation Act of 1958
FADEC	Full Authority Digital Engine Control
FAR	Federal Aviation Regulations
FCAA	Foreign Civil Aviation Authority
FCC	Federal Communications Commission
FD	flight director
FDC	flight data center
FDR	Flight Data Recorder
FIE	flight instructor examiner
FIR	flight information regions
FIRC	flight instructor refresher clinic
FL	flight level
FLIR	Forward Looking Infrared
FM	flight manual
FMCS	flight management computer systems
FMS	flight management system
FOEB	Flight Operation Evaluation Board
FOI	fundamentals of instructing
FOIA	Freedom of Information Act
FONSI	finding of no significant impact
FOPB	Flight Operation Policy Board
FSAIC	Flight Standards Safety Analysis Information Center
FSAS	Flight Standards Automation System
FSB	Flight Standardization Board
FSDO	Flight Standards District Office
FSS	flight service station
FTD	flight training device
GM	General Manuals
GOM	General Operations Manual
GPS	global positioning system
GPWS	ground proximity warning systems
GSE	ground support equipment
GSGC	Ground School Graduation Certificate
GTD	ground training device
HAZMAT	hazardous material
HEL	helicopter
HEMES	Helicopter Hospital Emergency Medical Evacuation
HF	high frequency
HIRF	High Intensity Radiated Fields
HT	Hard-Time
HUD	heads-up display
HUMS	Health Usage Monitoring Systems
IA	Inspection Authorization
IACRA	Integrated Airman Certification and/or Rating Application
IAP	instrument approach procedures

IAW	in accordance with
ICA	instructions for continued airworthiness
ICAO	International Civil Aviation Organization
ICAS	International Council of Air Shows
ICS	Intercom Systems
IEC	International Electrotechnical Commission
IEM	Interpretive Explanatory Material
IFO	International Field Office
IFP	Instrument Foreign Pilot
IFR	instrument flight rules
IFSD	in-flight shut down
IG	Interim Guidance
IGA	international general aviation
IIC	inspector-in-charge
ILS	instrument landing system
IMC	instrument meteorological conditions
IN/FC	Inspection/Functional check
INM	Integrated Noise Model
INS	inertial navigation system
IP	implementation procedures
IPM	Inspection Procedures Manual
IRA	Instrument Rating Airplane
IRS	inertial reference systems
ISC	Industry Steering Committee
ISIS	Integrated Safety Information Subsystem
ISO	International Standards Organization
ISS	inertial sensor system
JAA	Joint Aviation Authorities
JAD	Job Aid Disc
JAR	Joint Aviation Requirement
JTA	Job Task Analysis
LAHSO	land-and-hold-short operations
LIBRA	Logical Information Based on Reliability
LLC	limited liability corporation
LLM	lower landing minimums
LOA	letter of authorization
LOI	Letter of Investigation
LORAN	long-range navigation
LOX	liquid oxygen
LRN	long-range navigation
LRNS	long-range navigation system
LRU	Line Replaceable Units
LU/SV	Lubrication/Servicing
MAST	Maintenance Airworthiness Standardization Team
MC/FPE	military competency/foreign pilot examiner
MEL	minimum equipment list
MEL	Multiengine Land
MES	Multiengine Sea
MIDO	Manufacturing Inspection District Offices
MIP	maintenance implementation procedures
MIS	Mechanical Interruption Summary Reports

MISR Mechanical Interruption Summary Reports

MIST Maintenance International Standardization Team

MLS microwave landing system

MME maintenance management exposition

MMEL Master Minimum Equipment List

MMF Manufacturer Maintenance Facility

MNPS Minimum Navigation Performance Specification

MOE maintenance organization exposition

MOS Military Occupational Specialty

MOU memorandum of understanding

MRA Mutual Recognition Agreement

MRB Maintenance Review Board

MRB Material Review Board

MRR Mechanical Reliability Reports

MSG Maintenance Steering Group

MSL mean sea level

MTBF mean time between failure

MWE Model Work Environment

NAA National Aviation Authority

NAO Noise Abatement Officer

NARIS National Aircraft Registry Information Subsystem

NAS National Airspace System

NASIP National Aviation Safety Inspection Program

NAT North Atlantic

NAT/MNPS North Atlantic Minimum Navigation Performance Specifications

NAVAID Navigational Aid

NEPA National Environmental Policy Act of 1969

NDB nondirectional beacon

NDI Non-destructive Inspection

NDT Nondestructive Testing

NDPER National Designated Pilot Examiner Registry

NEB National Examiner Board

NFDC National Flight Data Center

NFPA National Fire Protection Association

NIST National Institute of Standards and Technology

NM nautical miles

NOPAC North Pacific

NOTAM Notice to Airmen

NPG National Work Program Guidelines

NTSB National Transportation Safety Board

NVLAP National Voluntary Laboratory Accreditation Program

OC On-Condition

OCA oceanic control areas

ODAR Organizational Designated Airworthiness Representative

OEM Original Equipment Manufacturer

OJT on-the-job training

OMT Organization Management Team

OpSpecs operations specifications

OPSS	Operations Specifications Subsystem
OP/VC	Operational/Visual check
ORA	Operations Research Analyst
OSMF	Outsource maintenance organization/ facility
OST	Office of the Secretary of Transportation
OTAC	Outside-the-Aircraft Check
PAI	principal avionics inspector
PAR	Precision Approach Radar
PASI	Preapplication Statement of Intent
PC	Production Certificate
PCA	Positive Control Area
PCA	primary category aircraft
PE	private pilot examiner
PI	principal inspector
PIC	pilot-in-command
PMA	Parts Manufacturer Approval
PMI	principal maintenance inspector
POH	pilot's operating handbook
POI	principal operations inspector
PPE	proficiency pilot examiner
PPH	Policy Procedures Handbook
PPM	PTRS Procedures Manual
PSRAB	Propulsion System Reliability Assessment Board
PTRS	Program Tracking and Reporting Subsystem
PTS	practical test standards
QCM	Quality Control Manual
QMS	Quality Monitoring System
RAIM	receiver autonomous integrity monitoring
RFM	Rotorcraft Flight Manual
RFSD	Regional Flight Standards Division
RII	Required Inspection Items
RNAV	Area Navigation
ROC	Regional Operations Center
rpm	revolutions per minute
RS	restoration
RSAM	repair station analytical model
RSM	Repair Station Manual
RT	remedial training
RTCA	Radio Technical Commission of Aeronautics
RVR	runway visual range
RVSM	Reduced Vertical Separation Minimum
RWBC	Regional Whistleblower Coordinators
SA	selective availability
SAE	Society of Automotive Engineers
SAI	Safety Attribute Inspections
SAT	System Analysis Team
SB	Service Bulletin
SDR	Service Difficulty Report
SEAT	Surveillance and Evaluation Assessment Tool
SEL	Single-Engine Land
SEP	Surveillance and Evaluation Program

SES	Single-Engine Sea
SFAR	Special Federal Aviation Regulations
SIC	second-in-command
SIDA	Security Identification Display Area
SIGMET/ AIRMET	Significant Meteorological Information Airmen's Meteorological Information
SIP	simulator implementation procedures
SL	Service Letter
SLSA	Special Light-Sport Category Aircraft
SODA	Statement of Demonstrated Ability
SOIR	simultaneous operations on intersecting runways (replaced by LAHSO)
SPAS	Safety Performance Analysis System
SPG	Special Planning Group
SRM	Structural Repair Manuals
SSID	Supplemental Structural Inspection Document
STC	Supplemental Type Certificate
SUP	suspected unapproved parts
TAF	terminal weather forecasts
TALTAR	Tactical Landing Approach Radar
TAWS	Terrain Awareness and Warning Systems
TBO	time between overhauls
TC	type certificate
TCA	Appliance Type Approval
TCAS	Traffic Alert and Collision Avoidance Systems
TCDS	type certificate data sheet
TCS	Testing Center Supervisor
TCE	training center evaluator
TCO	training course outline
TGL	temporary guidance leaflet
TRSB	Time Reference Scanning Beam
TSA	Transportation Security Administration
TSO	Technical Standard Order
TSOA	Technical Standard Order Authorization
UHF	ultrahigh frequency
ULD	unit load device
USNOF	United States NOTAM Office
USPA	United States Parachute Association
VFR	visual flight rules
VHF	very high frequency
VIS	Vital Information Subsystem
VLF	very low frequency
V_{MC}	minimum controllable airspeed
VMC	visual meteorological conditions
VOR	VHF omni-directional radio range
V_{REF}	approach speed
WBPP	Whistleblower Protection Program
WINDOWS	Segmented Inspections and Built-In Inspection Tolerances

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