

6/30/04

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 Repair Station chapters were originally coordinated as CHG 16 but were not signed for final approval. The bulletin was developed to guide aviation safety inspectors in implementing part 145 during the transitional period before the rules October 3, 2003 effective date and thereafter. Before the final rule effective date of January 31, 2004, the chapters were published in HBAW 03-04, Introduction to Revised Chapters 161, 162, 163, 164, and 165: Implementation of 14 CFR Part 145 Repair Station Procedures, dated July 23, 2003; then amended in HBAW 03-04A, same title, dated January 7, 2004. This Change includes the 5 chapters listed below including editorial updates and FAR references changed to 14 CFR. This Change also cancels HBAW 03-04A.
 - a. Volume 2, Chapter 161,** Introduction to Part 145 Repair Stations;
 - b. Volume 2, Chapter 162,** Procedures for Certificating Part 145 Repair Stations/Satellites Located Within the United States and its Territories;
 - c. Volume 2, Chapter 163,** International Field Office Procedures for Certificating/Renewing/Amending a Part 145 Repair Station Located Outside the United States and its Territories;
 - d. Volume 2, Chapter 164,** Evaluate a Part 145 Repair Station and Quality Control Manual or Revision; and
 - e. Volume 2, Chapter 165,** Evaluate Part 145 Repair Station Facilities and Equipment.
- 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 DISPOSITION OF TRANSMITTAL.** Retain and file this transmittal in the back of this handbook until it is superseded by a revision to this order.

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FOR

David E. Cann, Manager
Aircraft Maintenance Division

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CHAPTER 161. INTRODUCTION TO PART 145 REPAIR STATIONS

SECTION 1. BACKGROUND

1. PURPOSE. This chapter defines relevant terms for Title 14 of the Code of Federal Regulations (14 CFR) part 145, Repair Stations. It also explains the policies and procedures applicable to repair stations, regardless of their geographic location.

3. GENERAL.

A. Definitions.

(1) *Air Agency Certificate.* Federal Aviation Administration (FAA) Form 8000-4, Air Agency Certificate, is the authority granted by the FAA for a repair station to conduct business. The certificate states the following information:

- (a) Repair station number.
- (b) What the repair station's ratings are to include:
 - Class ratings
 - Limited ratings
 - Limited specialized service ratings
- (c) The location and name of the repair station.
- (d) The expiration date, as applicable.

(2) *Accountable Manager.* The person designated by the certificated repair station as responsible for and with authority over all repair station operations that are conducted under part 145. This person's duties include ensuring that repair station personnel follow the regulations and serving as the primary contact with the FAA.

NOTE: The FAA Accountable Manager definition may differ from the Joint Aviation Authorities (JAA) Accountable Manager; however, one person may serve both positions. The operations specifications (OpSpecs) and Vital Information System (VIS) have been revised to include both.

(3) *Article.* An aircraft, airframe, aircraft engine, propeller, appliance, or component part.

(4) *Class Ratings.* Ratings issued if the repair station can prove the capability to maintain a representative number of products under this rating. A class rating should not be issued and then restricted to a specific product. For such a case, a limited rating should be issued.

(5) *Contracting.* Entering into an agreement between two or more persons for the performance of maintenance functions on an article.

(6) *Correction.* An action taken to eliminate a detected nonconformity as it relates to the articles or maintenance processes.

(7) *Corrective Action.* An action taken to eliminate the cause of a detected nonconformity or other undesirable condition to prevent its recurrence.

(8) *Directly in Charge.* Responsible for the work of a certificated repair station that performs maintenance, preventive maintenance, alterations, or other functions affecting aircraft airworthiness. A person directly in charge doesn't need to physically observe and direct each worker constantly, but must be available for consultation on matters requiring instruction or decision from a higher authority.

(9) *Domestic Repair Station.* A term used in the automated OpSpecs to describe an FAA-certificated facility located within the United States that performs maintenance, preventive maintenance, or alterations on articles.

(10) *Foreign Repair Station.* A term used in the automated OpSpecs to describe an FAA-certificated facility located outside of the United States that performs maintenance, preventive maintenance, or alterations on articles.

NOTE: The part 145 rule has removed the "foreign" and "domestic" terms; however, these terms are still valid when revising OpSpecs due to the current repair station certificate numbering system.

(11) *Geographic Authorization.* An authorization that is issued to a certificated repair station located outside the United States to maintain U.S.-registered aircraft at a location where an appropriately rated repair station is not available. This provision is limited to repair stations located solely outside the United States that hold an airframe rating for an aircraft of the same make and model for which the repair station is rated.

(12) *Limited Ratings.* Ratings issued to repair stations for the performance of maintenance on particular makes and models of airframes, powerplants, propellers, radios, instruments, accessories, and/or parts.

(13) *Limited Specialized Service Ratings.* Ratings issued for a special maintenance function when the function is performed in accordance with a specification or data acceptable to the FAA. The OpSpecs must include the specifications or data used by the repair station to perform that service in accordance with part 145, § 145.61(c).

(14) *Line Station Maintenance.* Unscheduled maintenance resulting from unforeseen events, or scheduled checks that contain servicing and/or inspections that do not require specialized training, equipment, or facilities.

(15) *Maintenance Function.* A step or series of steps in the process of performing maintenance, preventive maintenance, or alterations, which may result in approving an article for return to service. Only persons authorized under part 145, §§ 145.157(a) and 145.213(d) may approve an article for return to service, perform a final inspection, or sign a maintenance release.

NOTE: When repair station personnel are used as repairmen and their job duties include supervision of work performed, return to service, final inspection, or maintenance release of an aviation article, their repairman certificates must indicate those duties to satisfy the requirements of §§ 145.153(b)(1), 145.157(a), and 145.213(d). For example, the certificate might show: Certificate privileges of 14 CFR part 65, § 65.103 valid for “return to service,” “final inspection,” or “maintenance release,” while employed by repair station name, City, State and certificate number.

NOTE: Current repairman certificates do not need to be reissued to comply with

§§ 145.157(a) and 145.213(d) if these employees are otherwise qualified and listed on the repair station’s required roster(s). However, when these certificates are revised, the additional language for approval for return to service, final inspection, or maintenance release should be added to the limitations block of the certificate.

(16) *Operations Specifications.* OpSpecs are issued by the FAA to indicate the authorizations and limitations to ratings as specified on the air agency certificate.

(17) *Quality Control Manual.* A manual that describes the inspection and quality control procedures used by the repair station.

(18) *Repair Station Manual.* A manual that describes the procedures and policies of a repair station’s operations.

(19) *Satellite Repair Station.* An additional certificated facility or location under the managerial control of another certificated repair station.

B. Capability List. A certificated repair station with a limited rating may perform maintenance, preventive maintenance, or alterations on an article if it is listed on a current capability list acceptable to the FAA or on the repair station’s OpSpecs.

(1) If the repair station chooses to use a capability list, the repair station manual must:

- Contain procedures for revising the list and notifying the certificate-holding district office (CHDO)
- Include how often the CHDO will be notified of revisions
- Contain procedures for the self-evaluation required under part 145, § 145.215(c) for revising the capability list
- Describe the methods and frequency of such evaluations
- Contain procedures for reporting the results to the appropriate manager for review and action

(2) The capability list itself may be included as part of the repair station manual or as a separate document; however, the procedures for revising the list and for performing the self-evaluation must be in the manual.

(3) If the repair station elects to maintain a separate capability list, it must perform a self-evaluation before adding an article to the capability list. The individual(s) performing the self-evaluation should be qualified to perform an audit to determine compliance with part 145. The self-evaluation procedures in the repair station manual should ensure that the repair station has the appropriate limited rating; adequate housing and facilities; the recommended tools, equipment, and materials; current technical data; and sufficient qualified personnel.

(4) The results of the self-evaluation must be reported to the appropriate repair station manager for review. If the self-evaluation was satisfactory, the capability list may be revised. The revised list and any other necessary technical data can be submitted with a transmittal document to the principal inspector (PI) at the CHDO.

NOTE: Transmittal documents include cover letters, memos, e-mails, faxes, or any other media acceptable to the Flight Standards District Office (FSDO).

(5) If the capabilities are maintained on the OpSpecs, each article will be listed by make, model, or manufacturer's name under each limited rating. If the repair station maintains a separate capability list, the OpSpecs will indicate that the certificate holder is authorized to use a capability list as revised.

(6) If the repair station does not maintain the necessary tools, equipment, housing, facilities, and trained personnel to perform the required maintenance on the article(s) listed on the capability list, the article(s) should be deleted from the capability list.

NOTE: The repair station must maintain, or provide written evidence that they can obtain, the tools and equipment required to maintain the articles on the capability list.

C. Additional Fixed Locations. A repair station may have additional fixed locations (facilities) without certificating each facility as a stand-alone or satellite repair station. This authorization may be granted if all of the facilities are localized and within a defined area, such as several buildings or hangars, which may be on or near the same airport or at or near the address stated on the repair station certificate. All locations will be operated under the authority of a single repair station certificate.

(1) Additional locations are *not* separate facilities and must collectively be considered one repair station. A geographic authorization or other repair station certificate is not required. However, the repair station must have procedures in its manual to describe how it will operate in this manner and remain in compliance with its manual and with the requirements of part 145. This situation is not considered work away from the station.

NOTE: The aviation safety inspector (ASI) and repair station accountable manager must collaborate when making a determination that additional locations are required for repair station operations. A primary concern to the FAA is that all the facilities be localized and within a defined area of operation. ASIs must be assured reasonable access to all locations and not be inconvenienced by extended travel distances. It is expected that extended travel between facilities may have an adverse impact on FAA oversight and surveillance capabilities.

(2) Multiple locations may be particularly useful when other federal laws or local ordinances require a repair station to use remote sites when performing some maintenance actions, such as functional testing of turbine engines. Local laws and noise abatement programs may force a repair station to another work site. The FAA may find that the additional locations do not have a significant impact on the maintenance performed, provided the manual has sufficient procedures to ensure the airworthiness of articles being maintained.

(3) All additional locations must be under the full control of the primary facility. It is not necessary that each location be completely equipped since tools, equipment, parts, etc., can be transported between facilities.

(4) The repair station must apply for the use of additional locations and have that request approved before exercising the privileges of its certificate and ratings at these facilities. The application must list each facility and the physical address of the facilities. The repair station must submit a revision to its manuals detailing the procedures it will follow when transporting equipment or parts, how it will ensure adequate and appropriate personnel are available at each site when needed, and how it will continue to meet the requirements of part 145.

NOTE: Under normal circumstances, additional fixed locations should not be authorized across FSDO or regional boundaries since ASIs are responsible to oversee the entire operation. Consideration of additional fixed locations outside the FSDO's area of responsibility must be coordinated with the Aircraft Maintenance Division, AFS-300, via the Flight Standards regional office.

D. Maintenance Functions.

(1) Maintenance functions must be approved by the FAA prior to a certificated repair station contracting out the performance of maintenance, preventative maintenance, or alterations of an article. Maintenance functions requiring approval are those items for which a repair station is rated to maintain but chooses to outsource as referenced in part 145, § 145.201(a) to a non-certificated maintenance provider.

(2) Maintenance function approval is not required for the following contract providers:

(a) Certificated repair stations listed on the repair station's contract maintenance list.

(b) Certificated or non-certificated facilities performing maintenance on an article for which the repair station is not rated.

NOTE: The repair station rule already prohibits a repair station from maintaining any article for which it is not rated. Outsourcing of these maintenance functions will not require approval since the repair station cannot approve the article for return to service.

E. Contract Maintenance. A repair station must have the material and equipment necessary to perform the functions appropriate to its rating. However, it need not have the tools and equipment for functions it is authorized to contract out pursuant to its FAA-approved list of maintenance functions. The repair station must request approval before it can contract a maintenance function to a non-certificated provider. If the FAA approves the contracted maintenance function, the repair station can determine who will perform the maintenance.

NOTE: A repair station may contract maintenance functions to both FAA-certificated and non-FAA certificated facilities. The FAA only approves the maintenance

functions contracted to a non-certificated facility that are within the scope of its ratings.

(1) If a repair station contracts a maintenance function to another FAA-certificated repair station, the repair station performing the maintenance function is responsible for providing the approval for return to service of maintenance performed on each article. The originating repair station must determine that the contracted repair station is properly rated to perform the maintenance. The contracted repair station performing the maintenance must approve the article for return to service for the work they perform. Articles received from a certificated facility must be properly processed through the repair station's receiving inspection procedures before further maintenance is performed.

(2) If the repair station contracts to non-FAA certificated facilities, the repair station must include provisions that allow the FAA to inspect and observe the work performed on those articles at the non-certificated facilities. The individual in charge of the contract maintenance program may be required to accompany the FAA during these inspections. These inspections may determine if the repair station is able to continue to contract the maintenance functions to this source and ensures that:

- The non-FAA certificated facility follows a quality control program equivalent to the FAA-certificated repair station's system with respect to the work being performed for the certificated repair station
- The work performed on the article is verified by testing and/or inspection
- The article is airworthy with respect to the work performed by the non-certificated source
- The repair station manual should include a procedure ensuring that contracts contain a provision for FAA inspections

(3) The repair station is responsible for approving for return to service any article on which work has been performed and for ensuring the article's airworthiness. Inspection procedures within the manual must enable the repair station to determine the airworthiness of the work performed on each article received. If the repair station cannot determine the quality of the contracted work by inspection or test, the work can be contracted only to an FAA-certificated

facility that is able to inspect the work performed for compliance with part 43.

NOTE: It is not enough for the contracting repair station to give its quality control manual to the non-certificated contractor and assume the proper procedures will be followed. The certificated repair station must provide adequate surveillance to ensure its quality control procedures are followed.

(4) *Contracting to Canadian Approved Maintenance Organizations.* Part 43, § 43.17(c) authorizes an approved maintenance organization (AMO) whose system of quality control has been approved by Transport Canada to perform maintenance on U.S. aeronautical products. Section 43.17(d) requires that this maintenance be performed in accordance with part 43, §§ 43.13, 43.15, and 43.16.

(a) These are the same regulations that must be followed by a U.S.-certificated repair station. Section 43.17(e)(1) requires the AMO to approve the article for return to service after performing maintenance. Section 43.17(d) states that the work must be performed and recorded in accordance with part 43. The Canadian form, TCCA Form 24-0078, Authorized Release Form, is similar to our FAA Form 8130-3, Airworthiness Approval Tag, and meets the recording requirements when filled out properly.

(b) Since their quality control system is approved by Transport Canada, the organization is viewed as similar to the U.S.-certificated repair station system. We do not have any U.S. foreign repair stations in Canada because we have a bilateral maintenance agreement with Canada.

(c) Although not FAA-certificated repair stations, Canadian AMOs performing work per § 43.17 comply with the same requirements that U.S. repair stations must when performing maintenance, preventive maintenance, or alterations. Because of the similarities, an on-site inspection would not be required.

(5) *Contracting to a Certificated Mechanic.* Part 43 authorizes a certificated mechanic to provide approval for return to service after performing maintenance, preventive maintenance, or alterations. This person is also held to the same performance requirements as the repair station. The mechanic approves the article for return to service by providing documentation that complies with part 43, § 43.9. The

repair station would not be required to conduct an on-site inspection of the mechanic's facilities.

NOTE: This situation may be used by repair stations to contract maintenance functions that are outside the scope of their ratings. For example, an avionics facility without a limited airframe rating installing a Supplemental Type Certificate (STC) may contract the airframe portion to a certificated person.

F. Work Performed at Another Location. A repair station may perform work away from its fixed location for a one-time special circumstance or on a recurring basis.

(1) A repair station may perform work away from its fixed location for a one-time special circumstance, such as an aircraft on the ground or in preparation for a ferry flight.

- The rule further states that the FAA determines these special circumstances
- The repair station manual does not need to include a specific procedure, since the FAA must approve the request to work at another location before the repair station engaging in this type of maintenance
- The CHDO will review the request and inform the repair station of any parameters that must be followed to perform the work

(2) A repair station may perform work away from its fixed location on a recurring basis when necessary, such as to perform mobile field services. This will allow work away from the repair station's fixed location as a part of everyday business rather than under special circumstances only.

- If the repair station intends to perform maintenance at places other than its fixed location, the manual must include procedures for accomplishing the maintenance, preventive maintenance, alterations, or specialized services
- The procedures must address issues related to transportation, tools, equipment, personnel, technical data, and records
- These procedures should ensure the repair station at the remote location remains in compliance with part 145 and its manual, just as if the work was performed at the repair station's fixed location

(3) A repair station may perform work away from its fixed location for extended periods of time if it meets certain criteria. This type of operation may not necessarily meet the intent of § 145.203 or the line maintenance authorization because the contracted work may require several months to complete. Additionally, this type of operation does not constitute the establishment of another repair station or a satellite repair station because it is temporary in nature. After the contracted maintenance is completed, the repair station must transport its tools, equipment, and personnel back to its fixed location. This type of operation must be requested by the certificate holder, and requests will be evaluated on a case-by-case basis. The repair station must meet the following criteria to work away from its fixed location for extended periods of time:

- The contracted maintenance must be for at least 60 days but must not exceed 1 year
- The repair station must furnish its own tools and equipment, unless it has procedures for leasing or contracting tools and equipment that comply with the regulations and with the procedures in the repair station manual
- The request to the CHDO must include the aircraft (make/model/series), the project to be accomplished, the duration of the work, the location of the work, and a statement that the temporary facilities are suitable for the repair station's work

NOTE: Housing that is suitable for one repair station's use may not automatically be suitable for the purposes and scope of work for another repair station's ratings, privileges, or limitations. The repair station requesting to work away from its fixed location for extended periods of time must evaluate the housing and facilities where the maintenance will take place to ensure the location meets the requirements of the rule.

- If additional time is needed, the repair station must submit another request updating the original information and providing any new details on the contracted maintenance

NOTE: This type of operation must not be allowed to become a permanent operation. After the specific project or contract is

completed, the repair station must return to performing maintenance at its fixed location. If maintenance must occur at this location on a continuing basis, the repair station must apply for a repair station or a satellite repair station certificate.

G. Taking Corrective Actions on Deficiencies. Part 145, § 145.211(c)(1)(ix) states that the quality control manual must include procedures used for taking corrective action on deficiencies. A corrective action is taken to remedy an undesirable situation. The correction of deficiencies is normally an integral part of a repair station's improvement process, and could include revisions to procedures that were not working properly. (Refer to AC 145-9, Guide for Developing and Evaluating Repair Station and Quality Control Manuals, for additional guidance.)

NOTE: The repair station is not required at this time to have an internal evaluation program, quality assurance program, or a continuous improvement program.

(1) Corrective action requires that a fact-based investigation determine the root cause or causes in order to eliminate them. Corrective action would be applicable in two situations: before the article is approved for return to service and after the article has been approved for return to service.

(2) If a deficiency is found before the article is approved for return to service, the repair station should follow their procedures describing how the corrective work will be accomplished. If the deficiency is noted after the article is approved for return to service, the repair station should follow their procedures to notify the CHDO and the owner/operator of any potential problems and recall any unairworthy product. The objective of the investigation into the cause of the deficiency and the corrective actions taken is to prevent a recurrence of the same or similar problems.

(3) The procedures in the quality control manual should include a system for documenting any deficiencies and the corrective actions taken to prevent a recurrence. The system should provide the ability to track any open corrective action requests and the date the corrective action is due. The program should also include audits of the corrective action(s) taken to ensure it was effective. These audits should also be tracked to ensure they are completed in a timely fashion.

SECTION 2. PROCEDURES

1. PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites:

- Knowledge of the regulatory requirements of 14 CFR part 145
- Successful completion of 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
- Successful completion of the Operations Specifications Subsystem course

B. Coordination. These tasks require coordination among the ASIs (maintenance and avionics). Regional coordination may be required.

C. Electronic Media. Air Agencies that elect to use electronic media (CD-ROM, LAN-based or internet-based systems) must be allowed to use those systems without interference or extra procedures. It is incumbent upon the air agency to ensure its CHDO is equipped for the media it selects to ensure delays or other hindrances do not occur. To ensure a consistent approach to document and manual submissions and revisions, the requirement for signing the title page or revision page will be replaced by transmittal documents.

NOTE: Transmittal documents include cover letters, memos, e-mails, faxes, and any other media acceptable to the FSDO.

(1) This procedure must be followed for the remaining submissions discussed in this chapter.

(2) Repair stations and applicants will submit documents for FAA acceptance or approval accompanied by a transmittal document with the information captured in the note below.

(3) ASIs will accept, approve, or reject submissions using a transmittal document with the information captured in the note below.

NOTE: Federal agencies can no longer refuse electronic versions of manuals, forms, record systems, etc. Federal law prohibits agencies from making the use of electronic media more

difficult or from requiring additional steps or procedures for users of electronic media. Therefore, all repair station document submissions must be accompanied by a transmittal document that describes the submission and is signed by the appropriate manager. ASIs will accept or approve submissions with a transmittal document indicating the date; document, manual, or revision number; and an acceptance or approval statement. Additionally, ASIs will reject a certificate holder's submission using a transmittal document that indicates the date; document, manual, or revision number; and a detailed explanation of the discrepancies or non-conformances noted. A copy of the acceptance or approval letter should remain with the office.

D. Use of Electronic Transmissions (E-mail or Facsimile). E-mail or fax responses are an acceptable alternative to the cover letter if the repair station is equipped to transmit and receive any necessary attachments. This may include the use of electronic signatures. This method should be addressed in the repair station's procedures and be found acceptable to the FAA.

3. CAPABILITY LIST.

A. Review an air agency capability list.

(1) Review the capability list to ensure the repair station is rated for the articles identified on the list.

(2) Review the repair station manual procedure for:

- The revision process, including CHDO notification
- Where and how the list will be maintained
- Frequency and method of revising the list
- Reporting self-evaluation results to the appropriate manager

(3) Review the self-evaluation process for:

- Individual qualifications of persons performing the self-evaluations
- Performance of the self-evaluation before modifying the capability list

- Adequately identifying the tools, equipment, materials, technical data, adequate housing and facilities, and qualified personnel that are available before modifying the capability list

B. If the submission or revision is found acceptable, ASIs will:

(1) If a paper revision, remove the affected pages and insert the revised pages in the capability list or replace the list in its entirety, if that is the method used by the repair station, and file the transmittal documents in the appropriate office file.

(2) If in electronic format, replace the outdated disk or file with the current capability list or revised pages and place a copy of the acceptance letter in the certificate holder's office file.

C. Reject the capability list or revision by doing the following:

(1) Initiate a transmittal document indicating the date, document, and revision number of the capability list or revision being rejected.

(2) Return all copies to the applicant with an explanation of discrepancies that must be corrected and instructions for resubmitting the documents.

5. ADDITIONAL FIXED LOCATIONS.

A. A repair station may request additional fixed locations be added to its OpSpecs by submitting the request on FAA Form 8310-3, Application for Repair Station Certificate and/or Rating. The repair station must:

(1) List the physical address of all additional fixed locations to be added to its OpSpecs.

(2) Submit repair station and quality control manual revisions, to include how it will continue to meet the requirements of part 145 and its manual at each additional location.

(3) ASIs must approve the additional locations prior to the repair station exercising the privileges of its certificate at the additional facility. Supply any additional information needed by the FAA to consider the request.

B. The PI receives the application, manual revisions, and any other information necessary to

determine the appropriateness of the request. The inspector must:

(1) Review and accept the manual revisions that detail how the repair station will perform maintenance at the additional location.

(2) Review any other material or information submitted to assist the inspector in completing their review.

(3) Inspect the additional location to ensure it meets the following criteria:

- It is within the local commuting area and does not pose an inconvenience to the inspector for traveling to all locations
- It is appropriate for the work to be accomplished under the repair station's certificate and ratings as listed on the OpSpecs
- It is under the full control of the repair station

C. The PI approves the additional fixed location address by adding it to the repair station's OpSpecs.

7. CONTRACT MAINTENANCE.

NOTE: With the removal of appendix A from part 145, the prohibition of limited-rated repair stations to contract out work has also been removed. The FAA does not intend to allow "virtual repair stations" that provide only the approval for return to service. This means that ASIs must be attentive to the maintenance functions they are approving for each facility. Although a list such as appendix A was a convenient way to maintain certain levels of maintenance for each repair station, it was impossible to maintain it in a current status without this rule being in constant revision.

A. *Maintenance Functions.* When receiving a repair station's contract maintenance list, the repair station must submit, and have approved, the maintenance functions it intends to contract out to non-certificated providers. Repair stations can submit their maintenance functions in any manner acceptable to the FAA, but cannot contract certain maintenance functions to non-certificated sources until they have been approved. Repair station manuals must contain a procedure that describes how the repair station will submit its maintenance functions to the CHDO. The

repair station manual must also describe how the repair station will revise the list of maintenance functions.

(1) Maintenance functions must be approved if:

(a) The maintenance function is within the scope of the repair station rating, and

(b) The maintenance function is contracted to a non-certificated provider.

(2) Repair stations will submit the list of maintenance functions for approval to the CHDO with a transmittal document that describes the document being submitted and shows the date and/or revision number of the document. The repair station may also wish to provide a method for which a maintenance function can be added to its FAA-approved list on an emergency basis. ASIs should ensure that the procedure accepted in the repair station manual regarding these emergency procedures sufficiently addresses the following issues:

- How the maintenance function would be added
- How the FAA approval would be obtained in a short period of time

(3) ASIs will approve or reject the maintenance function list by:

- Initiating a transmittal document identifying the document, date, revision number, and stating the function is either approved or rejected
- Filing a copy of the transmittal in the repair station folder and providing a copy to the certificated repair station by mail or electronic media

(4) ASIs should provide a reason for rejecting the maintenance functions to assist repair stations in determining which functions would be allowed. Some reasons for rejecting maintenance functions include:

- Too much “core business” contracted out, leaving the repair station to provide little, if any, actual maintenance on the articles it is rated to work on
- Continually using contracting out as a means to keep staffing below adequate levels for the work the repair station is obligated to accomplish
- Contracting out a maintenance function without prior approval

NOTE: Contracting out maintenance functions should not be used to replace the need for adequately staffed and trained maintenance personnel. ASIs should be cautious of repair stations that constantly revise the maintenance function list on an emergency basis in order to complete work in a timely manner. ASIs should ensure that repair stations have the necessary trained personnel for the scope and complexity of the ratings they hold.

B. Contract Maintenance. Repair stations that do not intend to contract out maintenance functions must have the housing, facilities, material, and equipment necessary to perform the functions appropriate to their ratings. The tools, equipment, and technical data must be available at the time the work is performed. Repair stations wishing to contract maintenance functions out to non-certificated providers must submit a list of those maintenance functions for approval to the FAA.

(1) The repair station must make available a list that includes the maintenance functions, the name of the contractor that will perform the function(s), and their physical address.

(2) The ASI must determine:

- That the repair station manual has adequate procedures that dictate how the maintenance functions will be submitted and revised
- How the repair station will qualify and/or inspect non-certificated contractors
- How the approval for return to service will be applied once an article returns from a contractor’s facility

(3) A certificated repair station may not provide only approval for return to service of a type-certificated article following maintenance, preventive maintenance, or alterations.

NOTE: A certificated repair station may not contract out to a non-certificated person unless it provides in its contract that the FAA may conduct inspections or observe maintenance functions that are being performed for the repair station. If a non-certificated person refuses to allow the FAA access, the certificated repair station cannot approve the articles for return to service.

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SECTION 3. REPAIR STATION RATINGS

1. AIRFRAME RATINGS AND CLASSIFICATIONS UNDER PART 145, § 145.59.

A. Airframe Maintenance or Alteration.

(1) Repair stations performing maintenance or alterations on articles such as seats, seat belts, berths, galleys, lavatories, cabinetry, aircraft composite components, cabin/cockpit interior foam and fabric upholstered parts, electrical wiring harnesses, dividers, curtains, windows, and any other interior structure require an appropriate airframe rating. (See Table 161-1, Airframe Ratings and Classifications Under § 145.59.) Additionally, repair stations performing maintenance or alterations on external aircraft structures or fuselage articles such as aircraft painting, landing gear removal and installation, doors and the attaching components, fuselage repairs or alterations, or flight controls and attaching hardware require an appropriate airframe rating.

(2) Similarly, articles of all-cargo configured aircraft, such as unit loading devices, cargo pallets or containers, bulkheads, ball mats, floor roller tracks, and floor or side locks, are considered part of the airframe and require an appropriate airframe rating. An appropriate airframe rating is also required to perform maintenance or alterations on articles associated with an emergency medical support installation, such as stretchers, litters, and supporting hardware or structures.

B. Limited Ratings.

(1) Limited ratings listed in part 145, § 145.61 have long been interpreted as being limited to all the functions on a particular make and model of aircraft, powerplant, or propeller. Although this interpretation was appropriate when the current rating system was developed in the 1950s, the repair and maintenance industry has developed numerous “niche” businesses that are limited to not only a particular article make or model, but also to certain maintenance functions on a particular make or model.

(2) The current OpSpecs allow the limitation of make and models, as well as maintenance functions, to be properly identified in the “Limitations” section. Limitations must not be vague and undefined. If painting, for instance, is the only maintenance function a repair station intends to do, the limitation should read,

“Limited to painting airframe structure and components on Boeing 737 series aircraft,” or similar language. If the repair station is limited to performing maintenance on only a certain part of the airframe, that language should specify the manufacturer, make, and model of the component, and describe *exactly* what the repair station is limited to do.

NOTE: ASIs must ensure that the limitations of repair stations adequately address the capabilities of the repair station both by the make and model of the aircraft, powerplant, propeller, or component part of those articles, and by the maintenance capabilities for which it has the tools, equipment, housing, data, and trained personnel to maintain. At no time should a repair station be issued a rating if it does not have the required supporting components (tools, equipment, etc.) to perform the maintenance required of the rating.

(3) A repair station may apply for and, if it meets the eligibility requirements of the rule, be issued a repair station certificate and rating for a limited airframe for line maintenance.

(a) The limited airframe is needed to perform inspections and minor flight line repairs to air carrier aircraft. The OpSpecs should list all the aircraft, the airlines for which the repair station is contracted to perform line maintenance, and the locations where line maintenance is to be performed.

NOTE: A repair station must not perform line maintenance on articles that are outside the scope of its repair station certificate and ratings. Additionally, a repair station that is certificated to perform line maintenance must not operate at a location that is not listed in its OpSpecs.

(b) Repair stations certificated to perform only line maintenance must meet all of the eligibility requirements of the rule—including the requirement for suitable housing. The housing need not be on the airport grounds, but must adequately support the maintenance that the repair station is authorized to accomplish. However, the housing should adequately hold the repair station’s tools, equipment, technical data, and any owner/operator or spare parts to be installed in aircraft.

NOTE: All certificated repair stations must have suitable housing and facilities. Although part 145, § 145.205(d) allows some deviation from the housing requirement, that requirement is based on the repair station having suitable housing at another location that meets the requirements of part 145. If line maintenance is the only maintenance a repair station is certificated to perform, the repair station must still meet the housing and all other requirements of part 145.

C. Limited "Other" Category. With the implementation of the final part 145 rule on January 31, 2004, the limited "other" category rating was eliminated. This action was necessary because there were no limitations directing ASIs to ensure that this rating was being directed to articles to which part 43 applied. ASIs need to be aware that all repair station ratings must apply to an aircraft, powerplant, propeller, or component part thereof. If an applicant's request does not meet this criteria, a repair station certificate and rating is not appropriate.

NOTE: Repair stations and applicants are receiving requests from air carriers, Department of Defense maintenance contractors, or other repair stations to obtain part 145 certification. Although these requests may seem reasonable, part 145 certification is not required and does not apply to public aircraft operated by Federal, State, or local governments. Also, air carriers are requesting part 145 certification for the performance of certain functions on articles where part 43 doesn't apply using engineering orders or other documents as "approved data." Though these items may be used in or carried on the operator's aircraft during revenue flights, this does not mean these items meet the part 43 applicability requirements. These items may include galley utensils/items, portable medical oxygen bottles, and so forth.

D. Line Maintenance Authorization.

(1) A repair station may apply for and, if it meets the eligibility requirements for the rule, be issued a repair station certificate with a limited airframe rating to perform line maintenance. A limited airframe rating will be needed to perform inspections and minor flight line repairs to aircraft listed on its OpSpecs.

(2) A repair station that also desires to perform flight line maintenance to powerplants must also apply for, and meet the eligibility requirements for, a limited powerplant rating. The limited airframe rating allows the repair station to inspect powerplants installed on aircraft and to install powerplants, but does not authorize maintenance that exceeds the scope of its ratings.

NOTE: A repair station must not perform line maintenance on articles that are outside the capabilities of its ratings or the limitations listed in its OpSpecs. Additionally, a repair station that is certificated to perform line maintenance must not operate at a location not listed in its OpSpecs.

(3) The OpSpecs should list all aircraft types, makes, and/or models; the operators for which the repair station is contracted to perform line maintenance; and the location(s) where the line maintenance is to be performed.

(a) Inspectors should not rely solely on manual procedures to detail a repair station's privileges and limitations. Privileges and limitations should be included in the appropriate sections of the repair station's OpSpecs and be detailed enough to identify the capabilities of the certificate holder.

(b) Inspectors should review the maintenance or inspection cards to ensure the requirements that must be met are within the scope and definition of line maintenance. For example, some repair stations have submitted requests to perform "B" checks for air carriers under a line maintenance authorization. Some "B" checks are more complex than others and could result in critical areas of the airframe being exposed to the environment or other contamination if the repair station has no housing or facilities available at the location. These inspections must be performed in an enclosed environment so that collateral damage is not introduced into the aircraft, airframe, powerplant, or components.

(4) Repair stations certificated to perform line maintenance must meet all of the eligibility requirements of the rule, including the requirement for suitable housing. The housing need not be on the airport, but must adequately support the maintenance that the repair station is authorized to perform.

(a) The repair station's housing should provide adequate storage for the repair station's tools,

equipment, technical data, and any owner/operator spare parts or components to be installed on aircraft.

(b) Repair stations performing line maintenance do not need a hangar. Housing facilities located near the airport are acceptable provided they meet the requirements of § 145.103.

NOTE: All certificated repair stations must have suitable permanent housing and facilities. Although § 145.205(d) allows some deviation from the housing requirement, that requirement is based upon the repair station having suitable housing at another location that meets the requirements of part 145. If line maintenance is the only maintenance a repair station is certificated to perform, the repair station must still meet the housing and all other applicable requirements of part 145. Housing need not be on the airport where the line maintenance is performed, but the street address must be listed on the repair station OpSpecs.

(5) Repair stations must maintain the tools and equipment needed to perform line maintenance. Seldom-used tools may be leased as specified in § 145.51(b) and not maintained if the repair station has a signed contract from the owner of the tool or equipment. As with all repair stations, the required

tools and equipment must either be on the premises and in use when the work is being performed, or the repair station must have a contract that stipulates that the recommended tools are available.

(6) Certificating or adding a rating to authorize a repair station to perform line maintenance will follow the same certification procedures found in FAA Order 8300.10, Airworthiness Inspector's Handbook, vol. 2, ch. 162 or 163, as appropriate.

(7) Repair stations that may desire to perform line maintenance at more than one location must apply for, and provide the airport and operator information for, each location for which they perform line maintenance. Locations will be listed in the repair station's OpSpecs.

NOTE: During surveillance activities, ASIs must ensure that repair stations performing line maintenance are using the correct data from the correct operator, are operating from a location authorized in their OpSpecs, and are in compliance with part 145. The repair station manual must reflect how it operates at each location and, if the repair station has elected to use other rule provisions such as work away from the fixed location, that there are procedures contained in the manual that detail these operations.

TABLE 161-1. AIRFRAME RATINGS AND CLASSIFICATIONS UNDER § 145.59

Rating	Class	Definitions and Notes
Airframe	<i>Class 1:</i> Composite construction of small aircraft	May perform maintenance and alterations of airframes and airframe components in accordance with part 43 on any article for which it is rated and within the limitations in its OpSpecs. This rating also allows the removal and installation of powerplants, propellers, radios, instruments, and passenger convenience items, but not the performance of maintenance to internal sections of these components. Airframe: Fuselage, booms, nacelles, cowlings, fairings, airfoil surfaces (including rotors but excluding propellers and rotating airfoils of engines) and landing gear of an aircraft and their accessories and controls. Large Aircraft: Gross takeoff weight of more than 12,500 lbs. Typically considered transport-category aircraft. Small Aircraft: Gross takeoff weight of 12,500 pounds or less. Typically considered general aviation aircraft.
	<i>Class 2:</i> Composite construction of large aircraft	
	<i>Class 3:</i> All-metal construction of small aircraft	
	<i>Class 4:</i> All-metal construction of large aircraft	

3. POWERPLANT RATINGS AND CLASSIFICATIONS UNDER § 145.59.

A. Components and articles included in the powerplant rating are turbo-superchargers, magnetos, carburetors, appurtenances, and other articles necessary for the proper operation of the powerplant. Although “powerplant” is not defined in the regulations, “aircraft engine” is. This rating does not include removal and installation of the powerplant onto the aircraft. If a repair station wishes to maintain and also install the powerplant, it must obtain an appropriate limited airframe rating. (See Table 161-2, Powerplant Ratings and Classifications Under § 145.59.)

NOTE: The guidance on limited ratings provided in paragraph 1B also applies to limited powerplant ratings.

B. Limited powerplant ratings for certain maintenance functions must identify the powerplant manufacturer and make and model of the powerplant the repair station intends to maintain.

(1) This type of rating allows complete repair or alteration of powerplants limited to a particular make and model. However, powerplant maintenance has also found numerous “niche” businesses that may include the performance of a specific maintenance function on a wide variety of powerplants.

(2) The OpSpecs must identify all makes and models, as well as any limitations to its maintenance capabilities, such as, “*Limited to plasma spray operations on Pratt and Whitney series turbine blades.*” This rating allows the repair station to plasma

spray all Pratt and Whitney turbine blades, regardless of the make or model powerplant the blades came from. Additional manufacturers would need to be listed if they also had the technical data, tools, and equipment to perform this maintenance function on General Electric or Rolls Royce powerplants.

NOTE: Because maintenance procedures, tools, equipment, and technical data may differ between manufacturers, ASIs must ensure that repair stations obtain the appropriate supporting requirements for the capabilities that they are requesting. Using tools, equipment, or data from another manufacturer conflicts with part 43 requirements and the FAA does not endorse this practice.

C. Currently, confusion exists when determining the appropriate rating for auxiliary power units (APU). APUs are considered accessories by virtue of their function of providing power to the aircraft while it is not in flight. However, APUs are also used as powerplants for some of the newer models of aircraft, which further blurs the lines between what has been considered general aviation and corporate or commuter aircraft. Until a new rating system is developed, ASIs should consider those articles used as the primary means of propulsion for these newer aircraft as powerplants, not APUs, and repair stations should be rated appropriately. However, repair stations performing maintenance or alterations on APUs used strictly to produce auxiliary power for transport-category aircraft should obtain an accessory rating.

TABLE 161-2. POWERPLANT RATINGS AND CLASSIFICATIONS UNDER § 145.59

Rating	Class	Definitions and Notes
Powerplant	Class 1: Reciprocating engines of 400 horsepower or less	May perform maintenance and alterations of powerplants but not to adjoining airframe or propeller components. Repair stations may remove access panels, doors, and nacelles, as needed, to gain access to the powerplant. This rating does not include the installation of powerplants to the aircraft. A powerplant-rated repair station will also need a limited airframe rating to remove or install powerplants on the aircraft.
	Class 2: Reciprocating engines of more than 400 horsepower	
	Class 3: Turbine engines	

5. PROPELLER RATINGS AND CLASSIFICATIONS UNDER § 145.59. See Table 161-3, Propeller Ratings and Classifications Under § 145.59.

NOTE: The guidance on limited ratings provided in paragraph 1B also applies to limited propeller ratings.

NOTE: Because maintenance procedures, tools, equipment, and technical data may differ

between manufacturers, ASIs must ensure that repair stations obtain the appropriate supporting requirements for the capabilities that the repair station is requesting. Using tools, equipment, or data from another manufacturer conflicts with part 43 requirements and the FAA does not endorse this practice.

TABLE 161-3. PROPELLER RATINGS AND CLASSIFICATIONS UNDER § 145.59

Rating	Class	Definitions and Notes
Propeller	<i>Class 1:</i> All fixed pitch and ground adjustable propellers of wood, metal, or composite construction	May perform maintenance and alterations on propellers, but not to adjoining airframe or powerplant components. Installation of propellers may be accomplished by a propeller, powerplant, or airframe-rated repair station.
	<i>Class 2:</i> All other propellers, by make	

7. PROPELLER RATINGS.

A. A repair station certificated as a propeller, powerplant, or airframe-rated repair station may install propellers and the attaching hardware.

B. Because the process of installing a propeller does not significantly differ between aircraft and powerplants versus a propeller test bench, repair stations with an airframe, powerplant, or propeller rating with appropriate privileges and limitations may install propeller assemblies.

technology also serves communication and/or navigation functions. The combination of functionality and operations of these articles may require the repair station to attain a rating for all three classes, depending on the complexity of the article.

B. The instrument rating is divided into four classes—mechanical, electrical, gyroscopic, and electronic—based on the article’s general principles of operation. Multiple class ratings may be necessary to perform repairs on these articles.

9. RADIO AND INSTRUMENT RATINGS AND CLASSIFICATIONS UNDER § 145.59.

A. The radio rating is divided into communication, navigation, and radar classes. (See Table 161-4, Radio and Instrument Ratings and Classifications Under § 145.59.) The first two classes, communication and navigation, are based on their intended function in the airplane, whereas the radar class is based on a specific technology or mode of operation. Modern avionics equipment typically integrates communications and navigation functions into a single appliance. Also, radar equipment or a radio that operates using pulse

NOTE: Because maintenance procedures, tools, equipment, and technical data may differ between manufacturers, ASIs must ensure that repair stations obtain the appropriate supporting requirements for the capabilities that they are requesting. Using tools, equipment, or data from another manufacturer conflicts with part 43 requirements and the FAA does not endorse this practice.

NOTE: The guidance on limited ratings provided in paragraph 1B also applies to limited radio and instrument ratings.

TABLE 161-4. RADIO AND INSTRUMENT RATINGS AND CLASSIFICATIONS UNDER § 145.59

Rating	Class	Definitions and Notes
Radio	<i>Class 1: Communication equipment</i>	Radio transmitting and/or receiving equipment used in an aircraft to send or receive communications in flight, including auxiliary and related aircraft inter-phone systems, electrical or electronic inter-crew signaling devices, and similar equipment. Does not include equipment for navigating or aiding navigation of aircraft.
	<i>Class 2: Navigational equipment</i>	A radio system used in an aircraft for en route or approach navigation. This does not include equipment operated on pulsed radio frequency principals, or equipment used for measuring altitude or terrain clearance.
	<i>Class 3: Radar equipment</i>	An aircraft electronic system operated on radar or pulsed radio frequency principles.
Instrument	<i>Class 1: Mechanical</i>	A diaphragm, bourdon tube, aneroid, optical, or mechanically-driven centrifugal instrument used on aircraft or to operate aircraft, including tachometers, airspeed indicators, pressure gauges drift sights, magnetic compasses, altimeters, or similar mechanical instruments.
	<i>Class 2: Electrical</i>	Self-synchronous and electrical indicating instruments and systems, including remote indicating instruments, cylinder head temperature gauges, or similar electrical instruments.
	<i>Class 3: Gyroscopic</i>	An instrument or system using gyroscopic principles and motivated by air pressure or electrical energy, including automatic pilot control units, turn and bank indicators, directional gyros, and their parts, and flux gate and gyrosyn compasses.
	<i>Class 4: Electronic</i>	An instrument whose operation depends on electron tubes, transistors, or similar devices, including capacitance type quantity gauges, system amplifiers, and engine analyzers.

11. ACCESSORIES RATINGS AND CLASSIFICATIONS UNDER § 145.59.

The accessory rating is divided into mechanical, electrical, and electronic classes, based on an article's principle of operation. (See Table 161-5, Accessories Ratings and Classifications Under § 145.59.) The combination of functionality and operations of these articles may require the repair station to attain a rating for all three classes, depending on the complexity of the article.

NOTE: Because maintenance procedures, tools, equipment, and technical data may differ

between manufacturers, ASIs must ensure that repair stations obtain the appropriate supporting requirements for the capabilities that they are requesting. Using tools, equipment, or data from another manufacturer conflicts with part 43 requirements and the FAA does not endorse this practice.

NOTE: The guidance on limited ratings provided in paragraph 1B also applies to limited accessory ratings.

TABLE 161-5. ACCESSORIES RATINGS AND CLASSIFICATIONS UNDER § 145.59

Rating	Class	Definitions and Notes
Accessory	<i>Class 1: Mechanical</i>	An accessory that depends on friction, hydraulics, mechanical linkage, or pneumatic pressure for operation, including aircraft wheel brakes, mechanically-driven pumps, carburetors, aircraft wheel assemblies, shock absorber struts, and hydraulic servo units.
	<i>Class 2: Electrical</i>	An accessory that depends on electrical energy for its operation, and a generator, including starters, voltage regulators, electric motors, electrically-driven fuel pumps, magnetos, or similar accessories.
	<i>Class 3: Electronic</i>	An accessory that depends on the use of an electron tube transistor, or similar device, including supercharger, temperature, air conditioning controls, or similar electronic controls.

13. LIMITED SPECIALIZED SERVICE RATINGS, § 145.61.

A. Limited specialized service ratings are issued to an applicant or a certificated repair station that performs specific processes associated with the maintenance, preventive maintenance, or alterations of an article. Generally, limited specialized service ratings are issued for maintenance functions which are performed in accordance with an approved process specification. A limited specialized service rating allows a repair station to perform specific processes associated with the maintenance, preventative maintenance, or alteration of articles, and approve them for return to service.

B. All repair stations that have a limited specialized service rating use process specifications, in lieu of manufacturer's maintenance data, in the performance of maintenance or alterations. However, just because a repair station uses a process specification does not mean the repair station needs a limited specialized service rating. It is inappropriate for an ASI to initiate action to alter a repair station's ratings and OpSpecs based solely on the repair station's use of a process specification.

C. The process specification must involve a repair process or work scheme that is novel, unique, or unusual in application, for which the manufacturer's data is not used for approving an article to its original condition, and that specifies repair limits. The repair station's OpSpecs must contain the specification used

in performing that specialized service. The specification could be a military-, civil-, or applicant-developed specification that was approved by the FAA. Specialized services would include, but not be limited to, welding, heat treating, plating, and plasma spraying.

NOTE: An example of a novel and unique procedure for which a limited specialized service rating would be issued is the inspection of turbine blades using Krypton gas. This is a unique procedure not normally found or used in industry. The specialized service rating should only be given if the process or procedure is unique, as explained in this example.

D. The limited specialized service rating would require a repair station to have the housing, facilities, equipment, tools, trained personnel, and data to perform the process on an aviation article. The process specification on the OpSpecs would set forth the minimum standards for performing the generic process (specialized service). For example, the process specification would include an explanation of the housing, facilities, equipment, tools, trained personnel, and data necessary for the overall process. The applicable manufacturer's maintenance manual, air carrier manual, or other data acceptable to or approved by the FAA would define the specific parameters associated with performing the process on the particular aviation article.

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.

(c) Certificate management offices (CMO) with oversight responsibilities for 14 CFR part 121 air carriers who also possess part 145 repair station certificates will be assigned certification and surveillance responsibilities for these repair stations and any satellite repair stations. The CMO must

provide adequate personnel to oversee repair station activities appropriate to the size and complexity of the work performed as well as the number of certificated satellite repair stations.

(7) 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) may not 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 163. INTERNATIONAL FIELD OFFICE PROCEDURES FOR CERTIFICATING/RENEWING/AMENDING A PART 145 REPAIR STATION LOCATED OUTSIDE 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/renewal/amendment of a Title 14 of the Code of Federal Regulations (14 CFR) part 145 repair station located outside the United States.

NOTE: For the purposes of this chapter, repair station applicants from part 145 facilities located outside the United States may be referred to as “applicants,” “repair stations,” or “facilities.”

5. INTRODUCTION. This chapter provides the procedures International Field Offices (IFO) must follow while certificating or performing surveillance for part 145 repair stations located outside the United States. Each aviation safety inspector (ASI) assigned to an IFO must be conscious of the sensitive issues associated with working in the international environment. Inspectors must conduct themselves with the highest degree of professionalism while assigned outside the United States. An inspector must be courteous and respectful when dealing with foreign nationals and the various officials of the foreign National Aviation Authorities (NAA). Each inspector should understand that while working for the Federal Aviation Administration (FAA), his or her every action is representative of the U.S. Government. The FAA expects IFO employees to be fully aware that they are guests in a foreign country, and to recognize national culture within their working environment. The FAA expects IFO inspectors to observe the above guidance during all phases of the certification/renewal/amendment process.

A. This chapter is divided into four sections. Section 1 includes introductory material, such as

general descriptions of the five-phase certification/renewal/amendment process, new requirements for satellite repair stations, and special situations and provisions unique to IFOs.

B. Section 2 describes initial certification procedures.

C. Section 3 describes certificate renewal procedures.

D. Section 4 describes certificate amendment procedures and geographic authorizations.

7. THE CERTIFICATION/RENEWAL/AMENDMENT PROCESS.

A. This process provides for interaction between the applicant and the FAA, from the initial inquiry to certificate issuance or denial of the repair station application. These procedures ensure that programs, systems, and intended methods of compliance are thoroughly reviewed, evaluated, and tested. The certification/renewal/amendment process consists of five phases:

- Preapplication Phase
- Formal Application Phase
- Document Compliance Phase
- Demonstration and Inspection Phase
- Certification Phase

B. Preapplication Phase.

(1) Preapplication Meeting. The preapplication meeting should be held in the IFO. This will allow the applicant to become familiar with the assigned FAA certification team. This meeting should also provide the FAA with a point of contact from the applicant’s facility. The certification team and applicant should openly discuss the applicant’s intent. The FAA should answer any questions the applicant may have regarding the process. During the preapplication meeting, the FAA and applicant should discuss the following items:

(a) The applicant's submittal of the FAA Form 8400-6, Preapplication Statement of Intent (PASI), shows its intent to initiate the certification process.

i. An applicant should thoroughly review the appropriate regulations and advisory material. This will allow the applicant to become acquainted with the personnel, facility, equipment, and documentation requirements. After this review, the applicant must address how these requirements will be met when completing the PASI.

ii. The inspector must advise the applicant that a fee is associated with all certification activities, per 14 CFR part 187. The fee includes charges for inspectors' travel, hotels, meals, all transportation, time, and any administrative time required to complete the certification process.

iii. The IFO manager, or the authorized designee, must evaluate the complexity of the proposed operation. This evaluation allows the certification team's establishment 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 the certification process.

NOTE: Advise the applicant that when submitting the application, it must be prepared to provide the FAA with documentation demonstrating that the repair station certificate or rating is necessary for maintaining U.S.-registered or U.S.-operated foreign aircraft or components as required by part 145, § 145.51(c).

(b) Instructions to the applicant on how to complete the FAA Form 8310-3, Application for Repair Station Certificate and/or Rating.

(c) Discussion of 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 part 145, § 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 regulatory criteria established in part 145, § 145.211. The quality control manual may be

incorporated into the repair station manual as a separate section.

NOTE: The quality control manual may be a section of the repair station manual, a separate manual, or a combination of the two, depending on the manual structure. The ASI must stress that all requirements listed in §§ 145.209 and 145.211 must be located in the manual(s) and easily identified.

iii. *Letter of compliance.* The letter of compliance will ensure that all applicable regulatory requirements are addressed during the certification process. This is accomplished by listing, in sequence, each section of part 145. After each section, the applicant must include a brief narrative or specific reference to a manual/document that describes how it will comply with that regulation. Review the letter of compliance 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.

iv. *Documentation for certificate.* Documentation demonstrating the necessity for the certificate or rating as described in § 145.51(c).

(d) Refer the applicant to Advisory Circular (AC) 145-9, Guide for Developing and Evaluating Repair Station and Quality Control Manuals, for written 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: The applicant is responsible for developing manuals and procedures that ensure safe operating practices and compliance with the rules. The certification team can offer suggestions for improvement but must not "write" the material. The manuals' procedures must reflect the way each repair station conducts its business.

(2) *Personnel Requirements.* Per part 145, § 145.151, 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, and inspection personnel. The repair station may need other (non-regulatory) management or supervisory personnel to support its quality system and provide for a sufficient number of trained and knowledgeable employees as required by § 145.151.

(a) The repair station must determine the abilities of its non-certificated employees who perform maintenance functions based on their training, knowledge, experience, or practical testing. Normally, the FAA will take into consideration personnel certification issued by the NAA where the repair station will be located. However, the FAA reserves the right to conduct individual interviews during the inspection to determine these employees' qualifications.

(b) Qualifications for supervisory, inspection, and those personnel authorized to approve an article for return to service must meet the English language requirements of part 145, §§ 145.157(b) and (c). These personnel must be able to understand, read, and write English. Again, the FAA normally will take into consideration personnel certification issued by the NAA where the repair station will be located. However, the FAA reserves the right to conduct individual interviews during the inspection to determine these employees' qualifications.

C. Formal Application Phase. The formal application phase begins when the team receives 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, the formal application, and attachments should be resolved now. The certification team members and all key management personnel from the applicant's organization should attend the meeting.

NOTE: The legal name of the owner and the address where the repair station will be located should be determined at this point of certification.

D. 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 completed in the IFO by the certification team.

E. 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.

F. Certification Phase.

(1) *Certificate Issuance.* When the applicant meets the regulatory requirements of part 145 and has paid the appropriate fees, the certification team will issue the repair station certificate and operations specifications (OpSpecs) with the appropriate ratings.

NOTE: If the applicant is located in a country with which the United States has a bilateral aviation safety agreement (BASA), the FAA may find that the applicant meets the requirements of part 145 based on a certification from the NAA of that country. This certification must be made in accordance with implementation procedures signed by the Administrator or the Administrator's designee. For additional information, refer to vol. 2, ch. 170 and 171.

(2) *Certificate Duration.* A certificate or rating issued to a repair station located outside the United States is effective from the date of issue until the last day of the 12th month after the date of issue unless the repair station surrenders the certificate or the FAA suspends or revokes it. The FAA may renew the certificate or rating for 24 months if the repair station has operated in compliance with the applicable requirements of part 145 within the preceding certificate duration period.

9. SATELLITE REPAIR STATIONS.

A. 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 part 145, § 145.107.

NOTE: A satellite repair station must be located in the domicile country of the certificated repair station with managerial control. This does not include the claimed territories of a country located outside the geographic boundaries of that country.

(1) The precertification number of a satellite facility matches the parent repair station's number. Advise the Aviation Data Systems Branch, AFS-620, that a number for a satellite repair station is required.

(2) Each satellite repair station is considered a stand-alone operation, and is required to meet all of the requirements of § 145.107. Certification and surveillance will be done in accordance with normal

procedures, with the regionally assigned IFO having jurisdiction over that facility.

B. A repair station may interchange personnel anywhere in its system, as long as:

(1) Personnel are identified on each repair station roster;

(2) The qualified personnel are listed on the roster for the repair station with managerial control and the satellite facility; and

(3) Inspection personnel are designated and available at the satellite station when a determination of airworthiness or return to service is made.

NOTE: Many corporations with multiple satellite repair stations are consolidating their operations, quality control systems, manuals, and recordkeeping systems. Principal inspectors (PI) must coordinate their certification and surveillance functions when notified that the certificated repair station with managerial control and its satellite facilities desire standardized systems.

11. AMENDMENT TO OR TRANSFER OF CERTIFICATE.

A. Part 145, § 145.57 specifically requires a repair station to submit a new application in the following situations:

(1) The holder of a repair station certificate must apply for a change to its certificate if it 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 when moving to a new address or location.

(2) 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. On occasion, repair station ownership changes without changing the facilities and personnel.

NOTE: ASIs should contact their regional general counsel office when asked questions concerning whether limited liability corporations (LLC) or changes in stockholder ownership constitute a transfer of repair station assets.

B. The inspector should recommend a new certificate number due to Freedom of Information Act (FOIA) and liability issues. ASIs should inform prospective owners that they may be held liable for the work performed under previous management. To retain the old number, new owners must stipulate in writing that they clearly understand the potential of release of information under FOIA when retaining the old certificate number.

13. SPECIAL PROVISIONS FOR REPAIR STATIONS LOCATED OUTSIDE THE UNITED STATES. The FAA, NAA, and industry should be aware of the following special provisions and situations.

A. Geographic Authorization. A geographic authorization is an approval provided to an airframe-rated facility to perform maintenance under contract for a U.S. air carrier or for an operator of U.S.-registered aircraft under 14 CFR part 129 at a location other than the facility. The FAA issues a geographic authorization to respond to the maintenance needs of a U.S. air carrier or part 129 operator at a station where the frequency and scope of that maintenance does not warrant permanently staffing and equipping the station for its accomplishment.

B. Perceived Need. Section 145.51(c)(1) requires the applicant to show the necessity for a certificate. The necessity is considered a perceived need. A current or future operational or economic need (perceived need) for the maintenance, preventive maintenance, or alteration of aeronautical articles, subject to the FAA's regulatory oversight, may be performed. The applicant *must* demonstrate that a certificate is necessary. (See Section 2, Certification Procedures, paragraph 5E(4)(e) for a detailed description of the perceived need requirements.)

C. Certificate Renewal. Certificates for repair stations located outside the United States have a limited duration. Initial certification is limited to 12 months from the date the certificate is issued. Thereafter, the FAA may renew the certificate or rating for a 24-month period if the repair station has operated in compliance with the applicable requirements of part 145 within the preceding period.

D. National Certification. FAA policy requires the FAA to seek the country's NAA concurrence on the applicant's request for certification. The FAA will request a copy of the applicant's NAA certificate and limitations document. Some countries might not issue

repair station certification; in such instances, part 145 does not prohibit the FAA from issuing a certificate.

E. Personnel Certification. The personnel certification requirements of 14 CFR part 65 are not required for supervisors or inspectors in repair stations located outside the United States. The FAA reserves the right to interview the applicant's supervisors, inspectors, and/or personnel responsible for final approval for return to service.

NOTE: The FAA may accept the personnel certification requirements in the country where the repair station is located, provided the English language requirements are met.

F. English Language Requirements for Technical Data. The FAA recognizes the national language of the country where the repair station is located. The

repair station may convert technical data (e.g., operator's Instructions for Continuous Airworthiness, manufacturers' maintenance manuals, or type certificate holders' continuous airworthiness data) into the national language. Internal documents, such as work cards, work sheets, and shop travelers, may also be converted.

NOTE: The repair station must establish procedures in its repair station manual that ensure that its English-language copy of technical data and any internal documents developed from this technical data are current and complete. The English-language copy of the technical data should be retained at the main base of the repair station. The data must be made available to the FAA upon request.

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SECTION 2. CERTIFICATION 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 between the ASIs (airworthiness and avionics). Additionally, multi-regional coordination may be required.

3. REFERENCES, FORMS, AND JOB AIDS.

A. References (current editions):

- 14 CFR parts 39, 43, 45, 65, 91, 121, 125, and 135
- AC 145-9, Guide for Developing and Evaluating Repair Station and Quality Control Manuals
- AC 145-7, Issuance of Repair Station Certificates to Foreign Approved Maintenance Organizations under the Maintenance Implementation Procedures of a Bilateral Aviation Safety Agreement
- 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 8310-3, Application for Repair Station Certificate and/or Rating
- FAA Form 8400-6, Preapplication Statement of Intent

C. Job Aids. None.

5. PREAPPLICATION PHASE.

A. Respond to an initial inquiry for a repair station or satellite facility certificate.

B. Discuss with the applicant the following subjects, which may be discussed during the initial inquiry or the preapplication meeting.

(1) The necessary technical expertise required by the applicant's proposed organization, to include the following:

(a) Aviation-related experience;

(b) Proposed organizational structure;

(c) Knowledge of the specific maintenance functions to be performed;

(d) Payment requirements, per 14 CFR part 187, including a deposit so the certification process can proceed past application phase;

NOTE: Advise the applicant that a fee will be charged for the initial renewal and each time the repair station certificate is amended.

(e) Providing the FAA with supporting documentation that meets the perceived needs required for the FAA certificate;

(f) Certificate duration period;

NOTE: Advise the applicant that its repair station certificate is effective from the date of issue until the last day of the 12th month after that date, unless the applicant surrenders the certificate or the certificate is suspended or revoked by the FAA. The FAA may renew the certificate for a 24-month period if the repair station has operated in compliance with the applicable requirements of part 145 within the preceding period.

NOTE: Although the regulation allows for a 24-month renewal period, current policy requires ASIs to perform annual surveillance of repair stations, including those facilities located outside the United States, which results in a renewal of the repair station certificate. This renewal ensures the repair station does not extend past the mandatory 24-month certificate period, which would require a new certification action—not a renewal. If a repair station is

granted a certificate renewal for up to 24 months, advise the repair station that the FAA is obligated to conduct annual surveillance and the repair station will be required to pay any fees required by part 187 for the non-renewal year surveillance.

(g) English language personnel requirements;
and

(h) English language requirements for technical data.

(2) The requirements for sufficient personnel to meet the demands of the proposed repair station. Advise the applicant that the FAA may interview its supervisors and inspection personnel to confirm their qualifications. The FAA recommends that the supervisors and inspection personnel hold certificates issued by the NAA of the country where the repair station is located, as applicable. However, the certificates are not required by regulation.

(3) Facility and tooling requirements for the ratings sought, to include:

(a) The facility must meet the requirements of § 145.103, including:

- Sufficient workspace and areas to ensure the proper segregation and protection of articles while work is being performed
- Suitable racks, hoists, trays, stands, and other segregation means for the storage and protection of articles undergoing maintenance or alterations
- Sufficient space to segregate articles and materials stocked for installation from articles undergoing maintenance or alteration
- Adequate ventilation, lighting, and control of temperature, humidity, and other climatic conditions to ensure that personnel can perform maintenance as required by this part
- Suitable permanent housing to enclose the largest type and model of aircraft listed on its OpSpecs

(b) Manufacturers' recommended or equivalent test equipment.

(c) Special tools, and any documentation that will support the repair station's use of equivalent tooling. (See the Note in Section 2, paragraph 11B(6)(b) for additional guidance on approving equivalent tooling and test equipment.

(4) The requirements for current technical data appropriate for the work to be performed. The following are considered technical data:

- Airworthiness directives
- Instructions for continued airworthiness
- Maintenance manuals
- Overhaul manuals
- Standard practices manuals
- Service bulletins
- Other applicable data acceptable or approved by the FAA

(5) The requirement to provide the FAA with a point of contact.

C. The IFO will furnish FAA Form 8400-6 (PASI) to the applicant with instructions for completion. The CPM will advise the applicant to submit the completed PASI to the IFO. The CPM will inform the applicant that the certification process cannot continue until the IFO reviews and accepts the PASI.

(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 helps the applicant make appropriate business decisions and is dependent on the applicant's ability to comply with the requirements).

(2) Advise the applicant that all required documents must be submitted to the FAA in the English language.

(3) Advise the applicant 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. The IFO will review the PASI for acceptance and completeness. If the PASI is acceptable, the IFO will notify the regional office of the pending application.

NOTE: Each IFO will retain and keep current a list of pending applications. Each pending application should be based on submission of a PASI.

(1) The inspector will obtain the pre-certification number from AFS-620.

(2) The inspector will check the "Information only" block and enter the date the PASI was received and reviewed by the IFO.

(3) In the "Remarks" section, enter "Proceeding with formal certification" and show the pre-certification number. (Normally, the pre-cert. number is the same as the final certification number, except that it has a letter added that identifies it as a pre-cert. This allows the applicant to develop draft documents that may be required for inclusion in the repair station manual, such as return to service tags.)

(4) The IFO manager or designee will assign an inspector or a team of inspectors (dependent on the application's complexity) to the certification process. The manager will also designate an inspector as the CPM.

(5) 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, each item discussed in paragraph 5B, the formal application and attachments, and so forth. Accomplish the following during the meeting(s):

(1) Discuss in detail each of the items identified in paragraph 5B to ensure that the applicant has a complete understanding of the process and procedures.

(2) Discuss the regulations applicable to the proposed maintenance operation.

(3) Provide the applicant with the following material:

- A copy of AC 145-9
- A copy of FAA Form 8310-3

(4) Inform the applicant that a formal application package for a repair station certificate located outside the United States and its territories must contain the following materials:

(a) A completed FAA Form 8310-3.

(b) A copy of the repair station manual and quality control manual for the IFO in a format acceptable to the FAA. Advise the applicant to follow the content of AC 145-9. Also, advise the applicant to develop its manuals as applicable to its repair station. If the manual or manuals are submitted in electronic media format, they must be compatible with FAA electronic capabilities and free of any programs that would adversely affect that capability. (See FAA Order 8300.10, vol. 2, ch. 161 and 164 for additional details).

NOTE: Federal agencies can no longer refuse electronic versions of manuals, forms, record systems, etc. Federal law prohibits agencies from making the use of electronic media more difficult or from requiring additional steps or procedures for users of electronic media. Therefore, all repair station document submissions must be accompanied by a transmittal document that describes the submission and is signed by the appropriate manager. ASIs will accept or approve submissions with a transmittal document indicating the date; document, manual, or revision number; and an acceptance or approval statement. Additionally, ASIs will reject a certificate holder's submission using a transmittal document that indicates the date; document, manual, or revision number; and a detailed explanation of the discrepancies or non-conformances noted. The acceptance or approval letter should remain with the manual or be kept on file.

NOTE: Transmittal documents include cover letters, memos, e-mails, faxes, or any other media acceptable to the Flight Standards District Office (FSDO).

(c) A letter requesting that the application be processed and indicating when facilities, equipment, material, and data will be ready for formal inspection.

(d) A letter of compliance.

(e) Documentation confirming perceived need requirement. In the statement of perceived need, the applicant should indicate its need to perform

maintenance on or alter/modify aeronautical products subject to U.S. airworthiness regulations in foreign countries, and to obtain a part 145-repair station certificate. The applicant can substantiate this perceived need by including a statement from an operator of U.S.-registered aircraft or a company that maintains or alters items to be installed on U.S.-registered aircraft, indicating that the repair station's services are required. The perceived need may also be established with documentation from a leasing company or a supplier/distributor showing that the applicant's services are needed. The applicant can confirm in writing that the leasing company or supplier/distributor is doing business with operators of U.S.-registered aircraft.

(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 a Class 2 Propeller Rating is requested, list it by make and model.

NOTE: 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 IFO and the Aircraft Certification Office must review the specification. This may cause some delay in the repair station certification process.

(h) An employee training program approved by the FAA that consists of initial and recurring training. For purposes of meeting the requirements of part 145 beginning April 6, 2005, an applicant must submit a training program for approval in accordance with §§ 145.51(a)(7) and 145.163. Applicants prior to that date are not required to submit their training program but may if they so choose.

- The training program must ensure that each employee assigned to perform maintenance, alterations, or an inspection function is capable of performing the assigned task.
- The repair station must document, in a format acceptable to the FAA, individual employees' initial and recurrent training.

(i) The IFO will provide the applicant with an estimate of the approximate cost of the certification process. The *certification* fee should be deposited in accordance with the IFO procedures, and under no

circumstances should a cash transaction take place. The inspector should not be involved in fee transfers. The fee should be transferred electronically into a bank account established by the IFO or other government agency account, i.e., the Embassy.

NOTE: At the end of the preapplication meeting, the IFO should have a procedure to start tracking all costs associated with the certification process, in accordance with part 187.

(5) The FAA inspector or team will evaluate the results of the preapplication meeting. If found acceptable, continue to the next phase.

7. FORMAL APPLICATION PHASE.

A. Receive the Formal Application. Ensure that all documents have been submitted and are complete.

B. Verify Fee Deposit. The appropriate fee deposit must be made before proceeding.

C. Evaluate the Application Package. Based on the initial survey of the application package, ensure that all the appropriate documents identified in the preapplication phase (see paragraph B5 of this section) have been received. A team decision must be made on whether to continue with the certification process.

D. Conduct an Application Meeting with the Applicant, as Necessary. The FAA recommends that the applicant meet with the IFO to formally submit its documents in person and discuss any additional questions or open issues. Any unanswered questions or issues concerning the package must be resolved before proceeding to the next phase. This should be done in the most cost-effective way possible, e.g., meetings, teleconferences, or other correspondence, at the discretion of the CPM.

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) The *repair station manual* should describe how each function of the repair station performs its intended operation. It should contain samples of all forms, tags, shop travelers, and so forth. It should also identify the location of work orders, work cards, customer list, and so forth. The manual should provide

a complete description on how the repair station conducts its business. It should be written plainly enough that its contents are understood by the repair station's employees. The repair station manual will be used when performing the inspection phase of the certification process. (See § 145.209 for manual content. For any additional information, see AC 145-9 and ch. 164.)

(3) The *quality control manual* may be incorporated as a separate section of the repair station manual; it is not required to be a separate manual. (See § 145.209 for manual content. For any additional information, see AC 145-9 and Order 8300.10, vol. 2, ch. 161 and 164).

(4) A certificated repair station must have an employee *training program* approved by the FAA that consists of initial and recurring training. To meet the requirements of part 145, an applicant must submit a training program for approval, in accordance with § 145.51(a)(7) and § 145.163.

(a) Applicants certificated prior to the effective date of the training program (April 6, 2005) are not required to comply with this requirement but may do so if they choose, prior to the deadline.

(b) A repair station that is certificated before the April 6, 2005 effective date of the training program must submit its program for approval by the last day of the month in which its repair station certificate was issued. For example, if the repair station certificate was issued in December 1995, then the training program would require approval by December 31, 2005.

i. The training program must ensure that each employee assigned to perform maintenance, alterations, or an inspection function is capable of performing the assigned task.

ii. The repair station must document initial and recurrent training of individual employees in a format acceptable to the FAA.

(5) The *letter of compliance* must address each section of part 145.

(6) The applicant must submit a list of personnel who meet the following *certification requirements*:

(a) Personnel requirements for a foreign repair station differ from domestic requirements in that airman certificates are not required for supervisory or inspection positions.

(b) Supervisory and inspections personnel in the country where the station is located need not hold a mechanic/airman certificate. Instead, the performance qualifications for supervisory and inspections personnel may be determined based on training, knowledge, experience, or practical tests. The appropriate repair station manager will determine these requirements. The FAA may conduct interviews of the individuals during the inspection phase to verify their qualifications.

(c) Qualifications for supervisory and inspection personnel responsible for return to service include the ability to understand the following:

- Applicable FAA regulatory requirements
- FAA Airworthiness Directives
- Maintenance and service instructions for the items to be worked
- U.S. Type Certificate Data Sheets (TCDS)
- The ability to read, write, and understand the English language

(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.

(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. The approval of process specifications will be discussed in paragraph 11, below.

(10) A copy of a capability list, if appropriate. Refer to part 145, § 145.215 and ch. 161 for additional details on capabilities lists.

(11) Airframe-rated repair stations, rated for a complete aircraft (e.g., a 737), may have *line station authorization* to perform line maintenance for their customers. The line station must be listed on the OpSpecs, which must contain the airport address, the address/phone number/fax number of the repair station's facility/office at each airport location, and a brief description of the maintenance services provided.

B. Document Any Deficiencies. Conduct a thorough and comprehensive review of all documents. 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. The applicant must provide the FAA with a written response that identifies the approximate date the errors will be corrected and the document resubmitted. The inspectors' letter to the applicant must be as clear and complete as possible to avoid causing delays from documents being mailed back and forth without resolving issues.

11. DEMONSTRATION AND INSPECTION PHASE.

A. Coordinate and Schedule an Inspection.

Coordination is required between the CPM, team members, and the applicant to ensure that the appropriate management personnel are available during the inspection.

(1) *Manuals.* During the inspection phase, the team should verify that the facility follows its repair station manual and the quality control manual.

NOTE: When the repair station manual is located in the work area and is in the national language, the FAA team must be provided with a supervisor or other person who can read the national language version to the team so it can confirm that this version has the same information as the English language version. This same process would apply when the FAA requests review of maintenance records, technical documents, and other material that is part of the certification. (The use of the national language is an option provided to repair stations located outside the United States. If a repair station elects to use the national language, it must provide a method for the FAA to confirm the material is accurate.)

(2) *Letter of Compliance.* The team should use the repair station letter of compliance to confirm that the facility meets all the requirements of the regulations.

(3) *Line Stations.* On an initial repair station certification only, the FAA should visit each location for which the applicant requests a line station authorization. The authorization may not be issued for a location outside the boundaries of the country where the repair station is located.

(4) *Geographic Authorizations.* These may only be issued to a repair station that has been rated for an entire aircraft, e.g., a 757. (See Section 3, Renewal Procedures, and Section 4, Certificate Amendment Procedures and Geographic Authorizations.) Normally, on initial certification the FAA will not consider issuing a geographic authorization.

B. Perform a Housing and Facility Inspection. Inspect the repair station facilities to ensure that the work being done is protected from weather elements, dust, and heat. Ensure that workers are protected to the point that the quality of their work will be unimpaired. (For additional guidance on facilities inspection, refer to Order 8300.10, vol. 2, ch. 165.) In addition, inspect the following:

(1) The inspection system, referring to ch. 164 to ensure that:

(a) Employees are familiar with and are capable of performing their assigned duties.

(b) Facilities can adequately perform the inspection functions, as defined in the repair station and quality control manuals.

(c) The repair station has in place a quality control system, which ensures that articles are airworthy after the repair station or any of its contractors perform maintenance.

(2) The maintenance recordkeeping system, to ensure compliance with § 145.219.

(3) The system for reporting serious defects or unairworthy conditions, to ensure compliance with § 145.221.

(4) The tooling and equipment is properly stored and maintained in good working order. Inspect tools and equipment for the following:

(a) Calibration at established intervals.

(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) The material needed for the rating. Ensure that this material is 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 or traceability back to an approved source/vendor. AC 20-62, Eligibility, Quality, & Identification of Aeronautical Replacement Parts, and AC 21-29, Detecting and Reporting Suspected Unapproved Parts (as revised), will provide additional guidance. Some materials have special handling and storage, recordkeeping, and purchasing requirements (e.g., advanced composite materials and adhesive).

(b) Confirm that the traceable materials in the supply room have documentation to show the material qualification (e.g., invoice, process specifications, supplier qualifications, and so forth).

(c) If necessary, a surveillance program of the facility's suppliers will meet the traceability 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 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 is expected to be traceable to a standard acceptable to the FAA.

NOTE: Designated Engineering Representatives (DER) may not 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 and not the FAA.

(d) During initial certification, all tools and equipment must be in place at the time of certification or rating approval for inspection by the FAA (see § 145.51(b)).

C. Evaluate Maintenance Organization. Ensure that:

(1) A sufficient number of personnel is available to satisfy the volume and type of work to be performed, as required by part 145, subpart D. Also ensure that:

(a) An employee is designated as the accountable manager.

NOTE: Joint Aviation Authority (JAA) Accountable Manager: A manager of a repair station who has corporate authority for ensuring that all maintenance required by the

customer can be financed and carried out to the standard required by the JAA full member Authority. A person designated as the JAA accountable manager may also qualify as the FAA accountable manager.

(b) Qualified personnel are provided to plan, supervise, perform, and approve for return to service the work for which the facility is rated.

(c) The facility has a sufficient number of employees with the training or knowledge and experience to accomplish the work being performed.

i. Interview a sampling of supervisors and inspection personnel to ensure that they are able to read, write, and understand the English language.

ii. During the interview, review and ask the supervisors and inspectors questions regarding their knowledge and experience level with the intended operation. (A recommended source for questions is the repair station manual and/or the employees' employment summaries.)

iii. Request to see any NAA maintenance certification the supervisors and inspectors may have been issued by the NAA.

iv. If qualifications remain in question for any individual, bring the concern to the attention of the repair station management and request that they reexamine the employee to confirm his or her qualifications.

(d) The repair station has a written process to determine the abilities of its non-certificated employees performing maintenance functions based on training, knowledge, experience, or practical tests. This process may be incorporated in the repair station manual or in a supplement document, such as a training program.

(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 § 145.161).

(3) Management, supervisory, and inspection personnel employment summaries are available for those individuals listed in paragraph 11C(2) above (refer to § 145.161).

(4) At the conclusion of the inspection, the FAA must discuss any deficiencies noted during the inspection. This should be an open discussion giving the applicant the opportunity to correct any misunderstandings. This meeting should not be confrontational but should be considered part of the informational process.

D. Additional Maintenance Organization Inspection Items.

(1) *Additional Facilities Fixed Locations.* The inspection procedures are the same as those required for a fixed location. Additional guidance can be found in ch. 161 and 165.

(2) *Work Performed At Another Location.* The process for this inspection is different from that of additional fixed locations in that a repair is occasionally needed at another location on an emergency basis. The repair station manual should have a procedure that describes how the repair station will meet all the same requirements of its manual, including quality control procedures, when working away from the fixed location. The procedures must also include how the repair station will notify the FAA and gain approval before work is performed. Additional guidance can be found in ch. 161 and 165.

(3) *Capability List.* For a repair station that intends to use a capability list, it is not necessary to perform a complete facility inspection for each item on the capability list. A review of each shop area should provide the FAA inspector with enough general information to establish the applicant's ability and compliance posture.

E. Analyze Deficiencies.

(1) If deficiencies are noted, notify the applicant in writing. If appropriate, meet with the applicant to review deficiencies in detail.

(2) The applicant must take corrective action and notify the CPM in writing for the certification process to continue. Each deficiency and corrective action must be fully documented and recorded in the certification file.

(3) Depending on the severity of the findings, a repeat inspection may be necessary. The CPM will make this decision based on safety issues only; administrative issues are not considered safety issues.

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:

- Any remark or discrepancy noted during inspection
- Findings and recommendations
- Date of inspection
- Office and signature of the CPM

(2) Prepare FAA Form 8000-4, Air Agency Certificate, which must be signed by the IFO manager.

(3) Prepare FAA automated repair station OpSpecs. The appropriate Airworthiness ASI will sign the OpSpecs, which will show the limitations to be issued.

NOTE: Air Agency Certificates and OpSpecs are legal documents. The language should clearly specify the authorizations, ratings, and/or limitations being approved. When completed, these forms should have no erasures, strikeovers, or typographical errors.

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) For repair stations located outside the United States, insert the expiration date. Refer to part 145, § 145.55. A renewal of a repair station located outside the United States should be issued for an initial certification period of 12 months. Thereafter, at the discretion of the IFO, the certificate will be renewed for a 24-month period from the date of renewal, unless coordinated through the regional office. (See Section 3, Renewal Procedures.)

(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.

(11) This certificate is not transferable, and any major change in the basic facilities or in the location thereof must be immediately reported to the appropriate FAA regional office.

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, including 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 the certification report is prepared properly. 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 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:

NOTE: Verify that the fees have been paid in full. The fee should be deposited in accordance with part 187 and with IFO procedures. (See Section 2, paragraph 5E(4)(i) for information on processing fees.)

- (1) Issuance of a certificate and OpSpecs.

- (2) A letter to the applicant indicating that the certificate is denied.

- (3) A letter to the applicant confirming termination of the certification process.

C. *Distribute Certification Report.* Distribute the completed report as follows:

- (1) Retain the original certification report in the IFO.

- (2) Forward one copy of the certificate report to all involved district and regional offices.

- (3) Send a letter to the NAA of the country where the repair station is located, advising them that the FAA certificate and OpSpecs have been issued. The letter should also request that the NAA advise the IFO any time the NAA takes certificate action or identifies serious concerns against that repair station.

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 IFO must ensure an orderly transition from the certification process to certificate management. Perform follow-up inspections and surveillance inspections, as required.

SECTION 3. RENEWAL PROCEDURES

1. PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites:

- Knowledge of the regulatory requirements of part 145 and completion of the repair station course
- Successful completion of the Airworthiness Inspector Indoctrination course(s) or equivalent
- Previous experience with certification or surveillance of part 145 repair stations

B. Coordination. This task requires coordination between the ASIs (airworthiness and avionics). Additionally, multi-regional coordination may be required.

3. REFERENCES, FORMS, AND JOB AIDS.

A. References:

- 14 CFR parts 43, 45, 65, 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, 162, 164, and 165

B. Forms:

- FAA automated repair station OpSpecs
- FAA Form 8000-4, Air Agency Certificate
- FAA Form 8310-3, Application for Repair Station Certificate and/or Rating

C. Job Aids. None.

5. PREAPPLICATION PHASE. The preapplication phase is not required for a renewal of a repair station certificate.

7. FORMAL APPLICATION PHASE.

A. A repair station located outside the United States must renew its certificate 12 months after its initial certification and thereafter no more than 24 months from the date of its last renewal, unless otherwise specified by the IFO.

NOTE: Although the regulation allows for a 24-month renewal period, current policy

requires ASIs to perform annual surveillance of repair stations, including those facilities located outside the United States, which results in a renewal of the repair station certificate. This renewal ensures the repair station does not extend past the mandatory 24-month certificate period, which would require a new certification action—not a renewal.

B. The repair station is responsible for submitting a new application 30 days before the expiration date of its certificate.

C. The IFO must track renewal dates to establish an effective yearly work program.

D. Ensure that all documents for the formal application package have been submitted and are complete. Verify the inclusion of the following:

(1) Completed FAA Form 8310-3.

(2) A statement/document about the repair station's continuing need for the FAA certificate. (See perceived need in Section 1, paragraph 13B.)

(3) List of contractors if changes have been made to it since the repair station's last renewal. A copy of those changes must be included in the package.

(4) Repair station manual/quality control manual, if either of the manuals has been revised since the repair station's last renewal. A copy of the revision must be provided with the application package.

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) Perceived need document. If the repair station is unable to establish the continuing need requirement, the FAA will renew the repair station certificate based on its previous continuing need statement. However, the FAA will advise the repair station in writing that if the repair station is still unable to show a continuing need at the time of its next renewal, the FAA may not renew the certificate.

NOTE: It is not necessary for a renewal applicant to submit an activity report for each article for which it is rated. A single document indicating that minor or no changes were made to its customer list will satisfy the need requirements. The need can be verified during the inspection phase.

(3) The repair station's list of maintenance functions to be contracted to another entity, if changes have been made. (See part 145, § 145.217. For additional information, see ch. 161 and 164.)

B. Repair Station Manual/Quality Control Manual or Section. If revisions are made to these manuals, they should be reviewed as they are submitted. In some cases, a repair station may elect to revise its manuals for its certificate renewal. Regardless of when they are submitted, the FAA must accept these revisions. The revision's inclusion should not delay the renewal process. The FAA may elect to review the revisions and accept or reject them after the certificate renewal has been completed based on the old manuals. Acceptance of the revision must be accomplished in accordance with ch. 164, which requires the FAA to provide the repair station with a letter accepting the revision.

NOTE: Repair stations do not need to wait until the IFO accepts revisions to implement them. However, if the FAA finds a revision unacceptable, the repair station must have a procedure in place that describes how articles returned to service will be addressed.

C. Document any Deficiencies. Conduct a thorough and comprehensive review of all documents. 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. The applicant must provide the FAA with a written response that identifies the approximate date the errors will be corrected and the document resubmitted. The inspector's letter to the applicant must be as clear and complete as possible to avoid causing delays from documents being mailed back and forth without resolving issues.

D. Review Corrective Action Plan. Continue with the renewal process if the repair station provides a corrective action plan that satisfies the requirements of the inspection.

11. DEMONSTRATION AND INSPECTION PHASE.

A. Renewal Procedures. Follow the procedures identified in Section 2, paragraph 11 when performing a certificate renewal inspection.

NOTE: No fee deposit is required for renewal of a certificate. However, during the certification phase the inspector will confirm that the appropriate FAA fee has been paid in entirety in accordance with part 187 and AC 187-1, Flight Standards Service Schedule of Charges Outside the United States. (See paragraph 15B(1).)

B. Line Station Authorization Surveillance. A repair station quality control system audit is required to ensure compliance with its quality control procedures. Review the audits of line stations to ensure the repair station has visited each of its line stations once per year. The quality control audit should provide a report for each line station showing which station was audited, the date of the audit, what was audited, and findings and corrective action identified during the audit. Once a year, perform a physical inspection of a minimum 10 percent sampling of line stations to confirm the effectiveness of the repair station's quality control procedures.

NOTE: Line stations outside the geographic boundary of the country where the certificated facility is located will not receive a line station authorization. An authorization request for line stations outside these boundaries must follow the geographic authorization process. (See Section 4.)

C. Geographic Authorization Surveillance. A geographic authorization may be issued to a repair station located outside the United States to maintain U.S.-registered aircraft at a location outside the country where the repair station certificate is held. (See ch. 161 for additional description and guidance on geographic authorization.)

(1) A repair station quality control system is required to audit its geographic authorization location annually to ensure compliance with the repair station manual and quality control procedures. Review the audits to ensure compliance with the repair station's approved manuals.

(2) If the repair station's geographic authorizations are within the geographic boundaries of

the certificate-holding district office (CHDO), the ASI should perform an annual 10 percent sampling of the geographic authorization locations.

(3) Surveillance of a geographic authorization should also be coordinated with the U.S. Air Carrier certificate management office to reduce the possibility of duplicate surveillance and increase the efficient use of resources.

D. Findings/Deficiencies. Due to the distance, travel, expense, and short time frame requirements associated with repair stations located outside the United States, apply the following policy regarding deficiencies/findings noted during the document review and inspection phases:

(1) If the FAA discovers deficiencies in an application for renewal or after conducting an inspection, the FAA may allow the applicant sufficient time after notification to correct the deficiencies or to submit a plan for corrective action (depending on the nature of the deficiencies). If the FAA finds the written plan for corrective action acceptable, it may renew the repair station certificate.

(2) If the applicant fails to correct the deficiencies within the specified time agreed to between it and the FAA, the FAA will terminate the application for renewal.

(3) If the part 145 repair station certificate expires during the time period between inspections or due to unusual circumstances, the FAA may extend the duration of the repair station certificate for a reasonable period of time. Provided that the applicant demonstrates an ability and willingness to correct the noted deficiencies, the FAA may extend the certificate for a period of up to 90 days.

(4) Depending on the nature of the deficiencies, the FAA may amend the repair station's ratings. In any of the above situations, after the FAA is satisfied with all corrective action, the certificate will be reissued using the original renewal date. No renewal time or advantage should be gained by allowing deficiencies to go uncorrected.

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:

- Any remark or discrepancy noted during inspection
- Findings and recommendations
- Date of inspection
- Office and signature of the CPM

(2) Prepare FAA Form 8000-4, Air Agency Certificate, which must be signed by the IFO manager.

NOTE: Air Agency Certificates and OpSpecs are legal documents. The language should clearly specify the authorizations, ratings, and/or limitations being approved. When completed, these forms should have no erasures, strikeouts, or typographical errors.

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, and so forth.

(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,” add “insert the new renewal date.” Refer to § 145.55. A renewal of a repair station located outside the United States should be issued for an initial certification period of 12 months. Thereafter, at the discretion of the IFO, the

certificate may be renewed up to 24 months from the date of the last renewal, unless otherwise coordinated with the regional office.

NOTE: Although the regulation allows for a 24-month renewal period, current policy requires ASIs to perform annual surveillance of repair stations, including those facilities located outside the United States, which results in a renewal of the repair station certificate. This renewal ensures the repair station does not extend past the mandatory 24-month certificate period, which would require a new certification action—not a renewal.

(9) Under “Date issued:” insert the original 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.

(11) This certificate is not transferable, and any major change in the basic facilities or in the location thereof must be immediately reported to the appropriate FAA regional office.

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) The associated capability list (as described in ch. 161).

(b) Limited Ratings, to include makes, models, or parts.

(c) Limited Rating for Specialized Services, including 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:

- FAA Form 8310-3, completed
- A letter of compliance (only if there are changes to the certificate/rating)
- A copy of the Air Agency Certificate issued
- A copy of the issued OpSpecs
- 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:

(1) Verify that the fees have been paid in full. The fee should be deposited in accordance with part 187 and with IFO procedures. FAA policy requires submitting an invoice to the repair station using an items list of fees charged when issuing the certificate. It is permissible to issue a renewal certificate pending receipt of the fee. Due to normal corporate accounting practices, it may take a few weeks before the fee is transmitted.

(a) If the fee is not received within a reasonable period of time, the IFO should advise the repair station in writing that certificate action may be required if the fee is not transmitted as soon as possible.

(b) The IFO should establish office policy regarding time frames and procedures for fee payments. The IFO is familiar with local mail and electronic transaction time frames.

(2) Issuance of a certificate and OpSpecs.

(3) A letter to the applicant indicating that the certificate is denied (as applicable).

(4) A letter to the applicant confirming termination of the certification process (as applicable).

C. Distribute Certification Report. Distribute the completed report as follows:

(1) Retain the original certification report in the IFO.

(2) Forward one copy of the certificate to all involved district and regional offices.

(3) Send a letter to the NAA of the country where the repair station is located, advising it that the FAA certificate and OpSpecs have been issued. The letter should also request that the NAA advise the IFO any time the NAA take certificate action or identifies serious concerns against that repair station.

D. Document Task. File all supporting paperwork in the certificate holder/applicant's office file and update the VIS.

17. FUTURE ACTIVITIES. The IFO must ensure an orderly transition from the certification process to certificate management. Perform follow-up inspections and surveillance inspections, as required.

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SECTION 4. CERTIFICATE AMENDMENT PROCEDURES AND GEOGRAPHIC AUTHORIZATIONS

1. PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites:

- Knowledge of the regulatory requirements of 14 CFR part 145 and completion of the repair station course
- Successful completion of the Airworthiness Inspector Indoctrination course(s) or equivalent
- Previous experience with certification or surveillance of part 145 repair stations

B. Coordination. This task requires coordination between the ASIs (airworthiness and avionics). Additionally, multi-regional coordination may be required.

3. PREAPPLICATION PHASE: ADDING AN ADDITIONAL RATING. The ASI should follow the initial certification procedures in Section 2, paragraph 5.

A. PASI. A PASI is not required for a change or amendment to a certificate.

(1) An application meeting is not required for amending a repair station certificate.

(2) The repair station must submit a completed application Form 8310-3.

(3) The repair station must submit a revised letter of compliance that covers the additional ratings.

B. Change to Facility or Address Change.

(1) The repair station must submit a new application when a change to the facility affects the repair station certificate (e.g., adding additional space or reducing the size of the facility).

(2) The repair station must submit a new application prior to moving to a new facility/changing its address. The FAA will review the application and may authorize continued work while the applicant moves to another facility.

C. Change in Ownership. When a repair station sells or transfers ownership of its organization, the new owner must submit a new application.

(1) If the sale or transfer of ownership (normally referred to as a financial takeover) does not affect the employees, facilities, equipment, or daily operation of the repair station, only a new application is required.

(2) An applicant is required to submit a new application and manuals for an ownership change that affects the repair station's daily operation (e.g., management change, facility and equipment change, etc.). The application process should be handled in the same manner as a new application (see Section 2 for initial certification procedures). However, applicants may continue to operate under the old certificate while being processed for new certification unless the ASI and the regional office determine a safety concern prohibits the continued operation.

5. GEOGRAPHIC AUTHORIZATION.

A. Criteria for Issuing Geographic Authorization. (Geographic authorization is different from work away from the station or line station maintenance authorization.) The repair station must fulfill the following criteria. Ensure that:

(1) The repair station has an airframe rating for a complete aircraft, i.e., Boeing 757, Airbus 320, and so forth.

(2) The make/model aircraft is operating into the requested location. The aircraft being operated into the requested location need not be the aircraft with the part 129 authorization.

(3) The FAA will not issue a geographic authorization at a location where an appropriately-rated repair station already exists, unless the U.S. operator shows why the additional geographic authorization is necessary. For example, legitimate reasons for issuing the rating may be that locally rated repair stations cannot meet the operators' schedule or are unable to deal with an additional workload.

(4) Each geographic authorization is included in the repair station's internal self-evaluation program. The program must include an annual evaluation and report of each geographic authorization location. This report must be made available to the FAA on request.

NOTE: Geographic authorization may not be issued to a location within the United States

and its territories. The FAA has determined that ample certificated repair stations are located within the United States to provide service. The intent of a geographic authorization is to provide U.S. operators and foreign operators that hold a § 129.14 authorization the ability to meet the requirements of their maintenance program in locations where appropriately rated FAA-certificated repair stations are not available.

B. Geographic Authorization Procedures. The IFO will:

(1) Receive notice of the air carrier's need. The process starts when the air carrier notifies its CHDO that it needs the services of a repair station at a location where a geographic authorization is required for the repair station.

NOTE: An operator under § 129.14 will use the IFO office that issued the § 129.14 authorization.

(2) Receive a letter from the repair station requesting geographic authorization. The letter should explain how the repair station will meet the criteria set forth in paragraph 5A, and include a copy of the repair station manual procedures section that addresses geographic authorizations and responsibilities.

(3) When eligibility for geographic authorization is established, coordinate closely with the air carrier CHDO to ensure that duplicate efforts do not occur.

NOTE: Certification and surveillance of geographic authorization is the responsibility of the IFO. However, this does not relieve the CHDO of its responsibilities for surveillance of the air carrier's responsibilities to meet part 121, § 121.369. The CHDO's coordination with IFOs located outside the United States is an efficient method of surveillance of air carrier operations in areas that would normally require the CHDO to use resources that may be better used in other areas. Geographic authorization is limited to line maintenance type operations.

(4) Receive a copy of the contract from the air carrier CHDO.

(5) Provide the CHDO with a copy of the repair station's commitment to meet paragraph 5A criteria.

(6) Receive a copy of the repair stations' self-evaluation report, if applicable. If this is an initial or an added geographic authorization location, the repair station must provide the FAA with a copy of its self-evaluation report, which states its ability to function at the requested location.

(7) Review the self-evaluation report to ensure that the repair station has trained personnel, tooling, equipment, manuals, and inspection processes to support the requested geographic authorization.

(8) Revise the repair station OpSpecs to include the initial or new geographic authorization location. The OpSpecs must list each authorization by location address, make, and model of aircraft. Additionally, list the air carrier customer name and the section of its appropriate air carrier manual that will be used in performing maintenance.

(9) On an initial geographic authorization, revise the repair station certificate to list the geographic authorization directly below the airframe rating.

(10) Forward the revised certificate and OpSpecs to the repair station and send a copy to the CHDO.

NOTE: Do not delay in sending a copy of the revised certificate and OpSpecs to the repair station. Delays may adversely affect the ability of air carriers to meet their operational schedules.

C. Surveillance Requirement for Geographic Authorization.

(1) It is not necessary for the IFO or the CHDO to conduct an on-site surveillance for a request to add a new location. (An additional location may be added without further showing.)

(2) When conducting repair station certificate renewal or off year surveillance, the ASI must review the repair station's geographic authorization self-evaluation reports to ensure that each location has been evaluated within the previous year.

(3) The IFO must establish an office policy to require inspectors that are performing surveillance in a city or country where a repair station has a geographic authorization to visit those locations, provided the visit does not require additional travel within the country or cause extended travel resources. This means the inspector must be able to travel to the locations using

ground transportation and must be able to complete the visit within their normal workday unless otherwise authorized by their supervisor.

(4) Forward an explanation of the fees, which include all times and costs associated with surveillance of visiting a geographic authorization, to the repair station's ASI for inclusion in the repair station certificate's renewal cost.

(5) A CHDO may not charge the repair station for any surveillance of geographic authorization it performs as part of its air carrier surveillance.

(6) Close coordination must occur between the CHDO, the IFO where the geographic authorization is located, and the certificate holder's IFO to reduce the possibility of multiple surveillance activities. All findings associated with a geographic authorization must be coordinated between all offices involved with the geographic location.

(7) The IFO that retains the repair station certificate is responsible for enforcement activity. It must communicate findings with the air carrier CHDO. Any additional enforcement action relating to the air carrier is the responsibility of the CHDO.

7. APPLICATION PHASE. Added ratings or change to the certificate will be the same process as renewal of a certificate discussed in Section 3.

9. DOCUMENT COMPLIANCE PHASE.

A. Follow the same renewal process discussed in Section 3.

B. Ensure that any manual revision required by the application for an added rating or change to the certificate is reviewed for compliance with part 145. Manual revisions and documentation findings should be dealt with as discussed in Section 3.

11. DEMONSTRATION AND INSPECTION PHASE. This phase should follow the same requirements as discussed in Section 3, as appropriate to the requested change to the repair station certificate and OpSpecs.

13. ISSUE OF AMENDED CERTIFICATE AND OPSPECS. Amendments to a repair station certificate and OpSpecs must be accomplished as discussed in Section 3 and must reflect the applicant's requested change.

15. TASK OUTCOMES. These are the same as discussed in Section 3.

17. FUTURE ACTIVITIES. The IFO must ensure that an orderly transition occurs from the certification process to certificate management. Perform follow-up inspection and surveillance inspections, as required.

CHAPTER 164. EVALUATE A PART 145 REPAIR STATION AND QUALITY CONTROL MANUAL OR REVISION

SECTION 1. BACKGROUND

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

A. Maintenance: 3230, 3371, 3372

B. Avionics: 5230, 5371, 5372

3. OBJECTIVE. This chapter provides guidance for evaluating, accepting, or rejecting all Title 14 of the Code of Federal Regulations (14 CFR) part 145 repair station and/or quality control manual original submissions or revisions.

5. GENERAL.

A. Before issuing an Air Agency Certificate, the applicant's repair station and/or quality control manual must reflect the applicant's current procedures and be acceptable to the Federal Aviation Administration (FAA).

NOTE: If the training program required by part 145, § 145.163 is included in either of these manuals, that portion must be FAA-approved. The training program requirement is not effective until April 6, 2005.

B. When a certificate holder revises an existing manual, the FAA must also accept the revisions.

C. The manuals submitted by a certificate holder or applicant may be separate or may be combined into a single manual. The format should be consistent and all regulatory requirements must be included. The aviation safety inspector (ASI) must ensure the procedures used in the performance of maintenance, preventive maintenance, or alterations are reflected accurately in the manuals. It is expected that, to fully describe the repair station's inspection/quality system, there will be some procedures that may not be regulatory.

D. When evaluating a manual as part of an original certification, each entire manual will be submitted prior to certification. If this task is performed as a revision, only the portion of the manual that is revised must be submitted.

E. Each certificated repair station must maintain a current repair station and quality control manual.

F. A certificated repair station's current repair station/quality control manual must be accessible for use by repair station personnel. All repair station employees on all shifts must have access to the manual, regardless of the media used (electronic, CD-ROM, etc.).

G. A certificated repair station must provide to its certificate-holding district office (CHDO) the current repair station/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.

H. There are some recommendations included in this handbook referenced from Advisory Circular (AC) 145-9, Guide for Developing and Evaluating Repair Station and Quality Control Manuals, that are not required by the regulations. They have been included to assist the inspector and certificate holder/applicant in developing a more complete description of the repair station's overall functions, responsibilities, and quality control procedures.

I. For certificate holders under parts 121, 125, and 135, and for foreign air carriers or foreign persons operating a U.S.-registered aircraft in common carriage under part 129, maintenance, preventive maintenance, and alterations must be performed in accordance with applicable sections of that air carrier's manuals.

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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 may require coordination with other specialties, regions, or district offices.

3. REFERENCES, FORMS, AND JOB AIDS.

A. References:

- 14 CFR parts 1, 39, 43, 65, 91, 121, 125, 129, 135, 145, and SFAR 36
- 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. 162, 163, and 165

B. *Forms.* None.

C. *Job Aids.* None.

5. REPAIR STATION MANUAL PROCEDURES.

A. Receive the certificate holder or applicant's manual or revision as required by §§ 145.51, 145.207, and 145.211(c).

B. Review the submitted manual or revision to ensure that it meets the regulatory requirements of §§ 145.209 and 145.211. The manual or revision must include the following:

(1) An organizational chart that identifies:

- (a) Each management position with authority to act on behalf of the repair station.
- The organizational chart required by § 145.209 may identify management positions by title only

- Management includes, but is not limited to, the executive functions of planning, organizing, coordinating, directing, controlling, and supervising
- This does not eliminate the requirement in § 145.51 for an applicant to submit the names and titles of its management and supervisory personnel at the time of application

(b) The area of responsibility assigned to each management position, which is the area(s) in the repair station that the manager is directly accountable for and maintains decision authority over.

(c) The duties, responsibilities, and authority of each management position.

(2) Procedures for maintaining and revising the rosters required by § 145.161.

NOTE: Within five business days of the revision, the rosters required by this section must reflect changes caused by termination, reassignment, change in duties, scope of assignment, or addition of personnel.

(3) A description of a repair station's operations describing how the maintenance is to be performed, where it would start, and how it progresses through the entire repair cycle for approval for return to service. Also include:

(a) A description of the housing may include dimensions, construction method, heating and ventilation systems, lighting, door openings, and physical address.

(b) A description of the facilities that describes how the shop, hangar, or other work areas are laid out.

(c) A description of the equipment, tooling, and materials used to perform maintenance.

NOTE: The "description of materials used to perform maintenance" should not be a physical description of the material, but rather an explanation of the repair station's handling and storage of the materials. If materials require specific environmental controls or cannot be stored next to certain chemicals or solvents, these should be identified. For

example, it would not be acceptable to store oxygen equipment near petroleum products.

- If the repair station does not own the equipment, procedures must be included in the manual that describe how the equipment will be obtained (lease, rentals, etc.). The manual must also include where the equipment will be used, how personnel will be trained to use the equipment, and how the repair station will ensure calibration issues, if any, are addressed after transporting the equipment.
- If the repair station chooses to use equipment, tools, or materials other than those recommended by the manufacturer, the manual must include a procedure used by the repair station to determine the equivalency of that equipment, tool, or material.

NOTE: When the repair station is adding a rating, or an applicant has applied for certification, all required equipment for the rating it seeks must be in place for inspection by the FAA. This provides the ASI with the opportunity to evaluate its placement and use and to verify that repair station personnel are trained to operate it.

(4) Capability list procedures used to:

(a) Revise the capability list provided in § 145.215 and notify the CHDO of revisions to the list, including how often the CHDO will be notified of revisions; and

(b) Develop and perform the self-evaluation required by § 145.215(c) for revising the capability list, including the methods and frequency of such evaluations and procedures for reporting the results to the appropriate manager for review and action.

(5) Procedures for revising the training program and submitting revisions to the CHDO for approval, which should include:

(a) The title of the person authorized to make a training program revision.

(b) The method of submitting a revision (electronic, hard copy, disk, etc.).

(c) A procedure for recording a revision and a method of identifying the revised material or text.

NOTE: The training program does not go into effect until April 6, 2005. Manuals without the training program included must be accepted until guidance is issued and a revision to this chapter is completed.

(6) Procedures for accomplishing work performed at a location other than the repair station's fixed location, which should contain the following:

(a) Title of the person responsible for determining the location is appropriate for the work to be performed.

(b) Title of the person responsible for initiating such work and assigning the personnel necessary to perform inspections and supervise the work.

(c) Procedures for communication between responsible repair station personnel at the fixed location and the maintenance personnel working away from the station. This should include the transfer of parts, supplies, tools/equipment, technical data, and trained personnel.

(d) Procedures that will be used away from the repair station if they deviate from established procedures used at the fixed location. The repair station must ensure that all work performed while exercising the privileges of its certificate are accomplished per the appropriate maintenance manual and its repair station or quality control manual. The determination for performing work at another location must meet the following requirements:

- The work is necessary due to a special circumstance, such as a one-time occurrence, as determined by the FAA; or
- It is necessary to perform such work on a recurring, but not continuous, basis and the repair station's manual includes the procedures for accomplishing maintenance, preventive maintenance, alterations, or specialized services at a place other than the repair station's fixed location.

NOTE: The FAA determination must be made prior to the performance of any maintenance, preventive maintenance, or alterations away from the repair station's fixed location unless

an acceptable procedure is included in the manual.

(7) Procedures for performing maintenance, preventive maintenance, and alterations for certificate holders under parts 121, 125, and 135 and for foreign air carriers or foreign persons operating a U.S.-registered aircraft in common carriage under part 129.

(a) The FAA requires that maintenance under a continuous airworthiness maintenance program (CAMP) be performed in accordance with the operator's manual. It is the operator's responsibility to ensure the work performed on its behalf is done in accordance with the approved maintenance program.

(b) The certificated repair station that performs maintenance, preventive maintenance, or alterations for an air carrier or commercial operator that has a CAMP under part 121 or part 135 must follow the air carrier or commercial operator's maintenance program or applicable sections of its maintenance manual.

(c) A certificated repair station that performs inspections for a certificate holder conducting operations under part 125 must follow the operator's FAA-approved inspection program.

(d) A certificated repair station that performs maintenance, preventive maintenance, or alterations for a foreign air carrier or foreign person operating a U.S.-registered aircraft under part 129 must follow the operator's FAA-approved maintenance program.

(e) The FAA may authorize a certificated repair station to perform line maintenance on any aircraft of an air carrier certificated under part 121 or 135, or of a foreign air carrier or foreign person operating a U.S.-registered aircraft in common carriage under part 129, provided the certificated repair station:

- Has the appropriate ratings to perform the maintenance or preventive maintenance on transport-category aircraft;
- Performs such line maintenance in accordance with the operator's manual and approved maintenance program;
- Has the necessary equipment, trained personnel, and technical data to perform such line maintenance; and

- Has operations specifications that include an authorization to perform line maintenance.

NOTE: A repair station must be appropriately rated to perform line maintenance for an air carrier. This would normally require an airframe rating to accomplish scheduled checks, daily inspections, or servicing of articles. However, a repair station with the appropriate ratings may accomplish unscheduled maintenance and repairs. This could include avionics facilities limited to avionics functions such as troubleshooting electrical or electronic systems or replacing defective electronic articles.

(8) Procedures for maintaining and revising the contract maintenance information, including the submission of revisions to the CHDO for approval and how often the FAA will be notified of revisions.

(a) The FAA must approve the maintenance functions contracted to non-certificated providers.

(b) The repair station must maintain a list of each facility that it contracts maintenance functions with, including the type of certificate and ratings, if any, held by each facility.

(c) The maintenance function list need not be included in the manual, but the manual should include the location or office where the list is maintained.

NOTE: Maintenance functions are a step or series of steps in the process of performing maintenance, preventive maintenance, or alterations which result in approving an article for return to service. It is not the intent of this rule to create "virtual repair stations" that provide only an approval for return to service. ASIs must evaluate the amount of work a repair station desires to contract out versus the work that is performed in-house.

(9) A description of the recordkeeping system used by the repair station to obtain, store, and retrieve the records required by part 43. These records must be in English.

(10) Procedures for revising the repair station's manual and notifying its CHDO of revisions to the manual, including how often the FAA will be notified of revisions. The procedure must include:

(a) The title of the person authorized to make a revision.

(b) The method of submitting a revision (electronic, hard copy, disk, etc.).

(c) A procedure for recording a revision and a method of identifying the revised material or text.

(d) A description of the system used to identify and control sections of the repair station manual.

(11) Procedures for submitting malfunction or defect reports in a format acceptable to the FAA, and for notifying the CHDO. If the repair station performs maintenance, preventive maintenance, or alterations for an air carrier, the manual must describe how it will notify the operator.

(12) Procedures for detecting and reporting suspected unapproved parts.

7. QUALITY CONTROL MANUAL PROCEDURES.

NOTE: The quality control manual may be separate from the repair station manual or included in that manual as a separate section or volume.

A. A certificated repair station must prepare and keep current a quality control manual in a format acceptable to the FAA. Depending upon the size, complexity, and rating(s) of the repair station, that manual should include a description of the system and procedures used for:

(1) Receiving and documenting articles, standard parts, and raw materials.

(2) Performing incoming inspections of raw materials and standard parts that check for:

- Proper documentation, identification, and traceability
- Conformity to a specification and acceptable quality
- Shelf life
- Contamination
- Shipping damage
- State of preservation

(3) Performing preliminary inspection of all articles that are maintained or altered to check for:

- Proper documentation, identification, and traceability

- Shipping damage and contamination
- State of preservation
- Life limits
- Airworthiness Directives and service bulletins
- Functional test or tear down inspections
- FAA approval of new articles
- Determination of what repairs are necessary

(4) Inspecting all articles that have been involved in an accident for hidden damage before maintenance, preventive maintenance, or alteration is performed. Ensure that items are disassembled as necessary and inspected for hidden damage in adjacent areas.

(5) Performing in-progress inspections to ensure inspections, testing, and/or calibration is conducted at various stages while the work is in progress.

(6) Performing final inspections and approvals for return to service.

- Ensures the inspection, testing, and/or calibration of articles, including documentation, is accomplished at the completion of maintenance or alteration
- The manual must include a procedure for approval for return to service

(7) Ensuring continuity of inspection responsibility.

- Include procedures for ensuring that the responsibilities of any inspector are properly performed in their absence
- If the repair station has multiple shifts, include procedures to ensure the continuing responsibility for maintenance in progress through the use of a status book, shift turnover log, or similar documents

(8) Calibrating measuring and test equipment used in maintaining articles, including the intervals at which the equipment will be calibrated.

(9) Taking corrective action on deficiencies related to repair station operation.

(a) Part 145, § 145.211(c)(1)(ix) states that the quality control manual must include procedures used for taking corrective action on deficiencies. A corrective action is taken to remedy an undesirable situation. The correction of deficiencies is normally an integral part of a repair station's improvement process, and could include revisions to procedures that were not working properly (reference AC 145-9, paragraph 4-13 for additional guidance).

NOTE: The repair station is not required at this time to have an internal evaluation program, quality assurance program, or a continuous improvement program.

(b) Corrective action requires that a fact-based investigation determine the root cause or causes to eliminate them. Corrective action would be applicable in two situations: Before the article is approved for return for service and after the article has been approved for return to service.

(c) If a deficiency is found before the article is approved for return to service, the repair station should follow its procedures describing how rework will be accomplished. If the deficiency is noted after the article is approved for return to service, the repair station should follow its procedures to notify the CHDO and the owner/operator of any potential problems and recall any unairworthy product. The objective of the investigation into the cause of the deficiency and the corrective actions taken is to prevent a recurrence of the same or similar problems.

NOTE: When the CHDO receives notification of a deficiency found *after* the article is approved for return to service, it shall be reported to the Suspected Unapproved Parts Program Office, AVR-20, on FAA Form 8120-11, Suspected Unapproved Parts Report. Refer to FAA Order 8120.10, Suspected Unapproved Parts Program, or AVR-20's Intranet site at <http://intranet.faa.gov/avr/sup/index.cfr> for additional information.

(d) The procedures in the quality control manual should include a system for documenting any deficiencies and the corrective actions taken to prevent a recurrence. The system should let employees track any open corrective action requests and the date the corrective action is due. The program should also be tracked to include audits of the corrective action(s) taken to ensure it was effective. These audits should

also be tracked to ensure that they are completed in a timely fashion.

(10) Establishing and maintaining proficiency of inspection personnel.

(a) The procedure should ensure that inspection personnel are familiar with the applicable regulations and are proficient at inspecting the articles they are assigned to inspect.

(b) Testing, formal training, recurrent training, or a combination of these methods could be used to maintain the proficiency of inspection personnel.

(11) Establishing and maintaining current technical data for maintaining articles.

(12) Revising the repair station's quality manual and notifying its CHDO of revisions to the manual, including how often the FAA will be notified of revisions. The procedure must include:

(a) The title of the person authorized to make a revision.

(b) The method of submitting revisions (electronic, hard copy, disk, etc.).

(c) A procedure for recording revisions and a system for identifying revised material or text.

(13) Qualifying and surveying non-certificated persons who perform maintenance, preventive maintenance, or alterations for the repair station. A certificated repair station may contract a maintenance function pertaining to an article to a non-certificated person, provided that:

(a) The non-certificated person follows a quality control system equivalent to the system followed by the certificated repair station;

(b) The certificated repair station remains directly in charge of the work performed by the non-certificated person;

(c) The certificated repair station verifies, by testing and/or inspecting, that the work has been performed satisfactorily and that the article is airworthy before approving it for return to service; and

(d) The non-certificated person's contract allows the FAA to inspect or observe work being performed on any articles for the certificated repair station.

NOTE: The ability to inspect a non-certificated person can only be accomplished while the contract is in force. This requirement

does not give ASIs access to non-FAA-certificated facilities if there is no work being performed under contract for a certificated repair station.

B. Where applicable, the manual should contain references to the instructions for continued airworthiness, maintenance manuals, inspection standards, or other approved or accepted data specific to the article being maintained.

C. A sample of each of the inspection and maintenance forms used in the performance of maintenance and the instructions for completing those forms.

NOTE: These forms may be addressed in a separate accepted manual that is submitted to the CHDO and maintained in current condition by the repair station.

9. TASK OUTCOMES.

A. Complete PTRS.

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

(1) If no regulatory conflicts were found, the Flight Standards District Office (FSDO) may send a transmittal document acknowledging receipt of the manuals.

(2) If conflicts with the rule are noted, the principal inspector will detail those discrepancies in writing to the certificate holder.

NOTE: ASIs may inform the certificate holder that no deficiencies were noted. This should not be mistaken as an “acceptance” of the manuals.

NOTE: Federal agencies can no longer refuse electronic versions of manuals, forms, record systems, etc. Federal law prohibits agencies from making the use of electronic media more difficult or from requiring additional steps or procedures for users of electronic media. Therefore, all repair station document submissions must be accompanied by a transmittal document that describes the submission and is signed by the appropriate manager. ASIs will accept or approve submissions with a transmittal document indicating the date; document, manual, or revision number; and an acceptance or approval statement. Additionally, ASIs will

reject a certificate holder’s submission using a transmittal document that indicates the date; document, manual, or revision number; and includes a detailed explanation of the discrepancies or non-conformances noted. The acceptance or approval letter should remain with the manual or be kept on file.

(3) Approving the training program, manual, or a revision to either document by sending the certificate holder a letter indicating the date; document, manual, or revision number; and an acceptance statement. The principal inspector should sign the transmittal document.

NOTE: A certificate holder using electronic media such as CD-ROM disks, LAN-based manual systems, or internet-based manual systems may scan the cover letters and insert them electronically into the applicable document if they do not wish to maintain a file of acceptance or approval letters.

C. Use of Electronic Transmissions (E-mail or Facsimile). E-mail or fax responses are an acceptable alternative to the cover letter if the repair station is equipped to transmit and receive any necessary attachments. This may include the use of electronic signatures. This method should be addressed in the repair station’s procedures and found acceptable to the FAA.

D. Rejection. Reject the manual(s) or revisions by doing the following:

(1) Initiate a cover letter indicating the date and document, manual, or revision number of the document or manual being rejected.

(2) Return all copies to the applicant with an explanation of discrepancies that must be corrected and instructions for resubmitting the documents in order to proceed with the certification or revision process.

E. Acceptance. Once the applicant/certificate holder receives the acceptance of the repair station and/or quality control manuals, or the approval of the training program and/or manual, copies of the manuals or disks must be provided to the CHDO. The principal inspector will file a copy in the certificate holder/applicant’s office file along with a copy of the acceptance letter.

(1) In a paper revision, the ASI will remove the affected pages and insert the revised pages in the

manuals or the training program. The ASI will update the manual control system and file the cover letters in the appropriate office file.

(2) In an electronic format, the ASI will replace the outdated disk with the current or initial manual or

training submission. The ASI will place a copy of the acceptance letter in the certificate holder's office file.

F. Document Task. File all supporting paperwork in the certificate holder/applicant's office file.

11. FUTURE ACTIVITIES. None.

CHAPTER 165. EVALUATE PART 145 REPAIR STATION FACILITIES AND EQUIPMENT

SECTION 1. BACKGROUND

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

A. Maintenance: 3378

B. Avionics: 5378

3. OBJECTIVE. This chapter provides evaluation and inspection guidance for a Title 14 of the Code of Federal Regulations (14 CFR) part 145 repair station for original certification, change in rating, change in location, or adding facilities.

5. GENERAL.

A. When determining the suitability of permanent housing or other facilities used for the maintenance of an aeronautical article, the inspector should consider climatic conditions. This is to determine if high or low temperatures, excessive dust or sand, or other conditions will adversely affect worker efficiency. The inspector should also consider the maintenance being performed to determine if work processes are adversely affected by environmental conditions.

B. Applications for a repair station certificate, amendment to, transfer of, or an additional rating must be made in a format acceptable to the Federal Aviation Administration (FAA) and conform to the requirements of part 145. Additional guidance for the certification and operation of a part 145 repair station may be found in separate FAA Order 8300.10, Airworthiness Inspector's Handbook, chapters as well as the current version of Advisory Circular (AC) 145-9, Guide for Developing and Evaluating Repair Station and Quality Control Manuals.

7. SATELLITE REPAIR STATION INSPECTION.

A. A certificated repair station may apply for additional facilities or locations to become satellites of the repair station with managerial control. If practical, the satellite repair station may use all or portions of the managerial repair station's manuals to develop its own manuals. Each satellite must satisfy all requirements of

part 145 for each rating sought. Ratings for the satellite may not exceed the rating of the managerial repair station.

(1) Personnel and equipment from the repair station with managerial control and each certificated satellite repair station under its control may be shared.

NOTE: Procedures must be included in the manual to describe how tools will be recalibrated or removed from service if calibration is compromised during their transport between facilities.

(2) Inspection personnel must be designated for each satellite repair station and be available at the repair station anytime a determination of airworthiness or return to service is made. In other circumstances, inspection personnel may be away from the premises but must be available by telephone, radio, or other electronic means.

(3) The satellite repair station may not hold a rating that is not held by the certificated repair station with managerial control.

(4) The satellite repair station must be located in the same domicile country as the certificated repair station with managerial control.

B. A satellite facility inspection is conducted in the same manner as a repair station facility inspection.

9. REPAIR STATION INSPECTION.

NOTE: The following procedures apply to all repair stations regardless of their geographic location.

A. Each certificated repair station must provide the following:

(1) Housing for the facilities, equipment, materials, and personnel consistent with its ratings.

(2) Facilities for properly performing the maintenance, preventive maintenance, or alterations of

articles, or the specialized services for which it is rated. Facilities must include the following:

(a) Sufficient work space and areas for the proper segregation and protection of articles during all maintenance, preventive maintenance, or alterations;

(b) Segregated work areas enabling environmentally hazardous or sensitive operations such as painting, cleaning, welding, avionics work, electronic work, and machining to be done properly and in a manner that does not adversely affect other maintenance or alteration articles or alterations;

(c) Suitable racks, hoists, trays, stands, and other segregation means for the storage and protection of all articles undergoing maintenance, preventive maintenance, or alteration;

(d) Space sufficient to segregate articles and materials stocked for installation from those articles undergoing maintenance, preventive maintenance, or alteration; and

(e) Ventilation, lighting, and control of temperature, humidity, and other climatic conditions sufficient to ensure personnel perform maintenance, preventive maintenance, or alterations to the standards required by this part.

B. A certificated repair station with an airframe rating must provide suitable permanent housing to enclose the largest type and model of aircraft listed on its operations specifications (OpSpecs).

NOTE: Each certificated repair station must have a fixed location where materials, equipment, tools, and data are stored. While consideration can be given for certain operating situations, aviation safety inspectors (ASI) must not authorize “virtual” or completely “mobile” repair stations. Even though the majority of the work is done away from the fixed location, each repair station must have a permanent, fixed base from which it operates the repair station.

(1) ASIs should evaluate the housing needs of the repair station based upon the depth and complexity of the work the repair station will perform. For example, if an airframe-rated repair station will only be doing interior refurbishment or interior electrical work that does not require the aircraft to be completely housed, a nose dock or other similar housing may suffice for the housing requirement. Any work done on

removed aircraft components must be accomplished in an appropriate housing, back shop, or other permanent structure.

(2) Repair stations that frequently work away from their fixed location must ensure another certificate holder’s housing and facilities are adequate and meet the requirements of the regulations for the ratings that they hold. Procedures should be included in their manuals that describe how they will evaluate a certificate holder’s facilities prior to performing maintenance under the privileges of their certificate at the facility.

(3) Some repair stations, such as internal fuel tank repair stations, do not require housing that will enclose the largest aircraft listed on their OpSpecs. Most of this type of work is performed in the aircraft wing, and protection from the elements should not be a major consideration. The use of mobile coverings to protect articles being installed or removed from the wing should provide sufficient protection from the elements.

C. A certificated repair station may perform those maintenance functions for which it is rated on articles outside of its housing if it provides suitable facilities that are acceptable to the FAA. The facility must meet the requirements of § 145.103(a), and the work must be done in accordance with the requirements of part 43 of this chapter.

D. A certificated repair station may perform maintenance, preventive maintenance, or alterations for the following certificated operators or carriers:

(1) A 14 CFR part 121 or part 135 air carrier or commercial operator that has a continuous airworthiness maintenance program and the repair station must follow their program and applicable sections of their maintenance manual.

(2) A 14 CFR part 125 operator and the repair station must follow the operator’s FAA-approved inspection program.

(3) A foreign air carrier or foreign person operating a U.S.-registered aircraft and the repair station must follow the operator’s FAA-approved maintenance/inspection program.

E. A certificated repair station may be authorized to perform line maintenance for an air carrier certificated under part 121 or part 135, a foreign air carrier, or a

foreign person operating a U.S.-registered aircraft in common carriage under 14 CFR part 129, provided:

(1) The repair station performs such line maintenance in accordance with the operator's manual and approved maintenance program;

(2) The repair station has the necessary equipment, trained personnel, and technical data to perform such line maintenance; and

(3) The repair station OpSpecs include an authorization to perform line maintenance.

NOTE: All certificated repair stations must have suitable permanent housing and facilities. Although § 145.205(d) allows some deviation from the housing requirement, that requirement is based upon the repair station having suitable housing at another location that meets the requirements of part 145. If line maintenance is the only maintenance a repair station is certificated to perform, the repair station must still meet the housing and all other applicable requirements of part 145. Housing need not be on the airport where the line maintenance is performed, but the street address must be listed on the repair station OpSpecs.

E. A repair station may have the need to perform maintenance away from its permanent fixed base of operation. This requirement may be necessary due to a special circumstance, as determined by the FAA, or may be recurring based on a repair station's need. Such work may include, but not be limited to:

- Aircraft recovery
- Biennial testing of systems on aircraft operating under Instrument Flight Rules (IFR)
- Fuel cell maintenance
- Nondestructive Testing (NDT) inspections
- Interior modifications

(1) A repair station performing maintenance away from its fixed location may transport the materials, equipment, and technical personnel to the aircraft location or facility to facilitate the required maintenance.

(2) At no time while performing work away from its fixed base will the work scope exceed the capabilities for which the repair station is rated.

(3) A repair station that performs maintenance functions away from its fixed location on a recurring basis must ensure the temporary facility it uses meets the requirements of § 145.103(a).

(4) The repair station must ensure that its repair station manual includes the procedures for accomplishing maintenance, preventive maintenance, alterations, or specialized services at a place other than the repair station's fixed location.

G. A repair station may need to perform maintenance at multiple fixed locations (i.e., additional facilities/localized within a defined area).

(1) A repair station does not require a geographic authorization or satellite certificate if it is seeking to work at another site within a localized area. A localized area may be defined as several buildings or hangars, which may be on or near an airport or at or near the primary fixed base address as stated on the repair station OpSpecs. Repair stations using multiple fixed locations under a single air agency certificate need not have all the tools, equipment, data, or personnel at each location. The repair station's primary fixed base and any additional fixed locations are considered a single repair station. Each facility address must be listed in the repair station OpSpecs. This situation is not considered work away from the station.

(2) The repair station manual must incorporate procedures that reflect how the repair station will meet the requirements of part 145 at each of its facilities. The procedures must include any supplemental operations (i.e., movement of articles, equipment, or tools required to perform the work) that may affect the repair station's ability to ensure the airworthiness of the articles maintained by the repair station. The repair station remains directly in charge of the work performed at all fixed locations.

(3) All fixed location addresses must be listed on the repair station's OpSpecs. The repair station must submit a written request/application to use additional locations prior to exercising the privileges of its certificate and ratings at the additional fixed locations. The FAA must inspect and approve each location and update the OpSpecs with the address for each additional location.

(4) There also may be instances where an engine test cell facility is located away from the primary facility but operates under the same certificate as the primary facility. This may occur when:

(a) The FAA determines that the separate locations do not have any significant impact on the maintenance performed, and the separate locations are under the full control of the primary facility; and

(b) The separate facilities must be in a defined area relative to the primary facility, and located

within the same country. An FAA inspector must be able to use ground transportation to get from one facility to another without major expense or inconvenience.

(5) OpSpec A101 must contain the address of all of the repair station's additional fixed locations.

SECTION 2. PROCEDURES

1. PREREQUISITES AND COORDINATION REQUIREMENTS.

A. Prerequisites:

- Knowledge of the regulatory requirements of 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 may require coordination with another specialty or district office, and the certificated repair station.

3. REFERENCES, FORMS, AND JOB AIDS.

A. References:

- 14 CFR parts 43, 65, 91, 121, 125, and 135
- AC 145-9, Guide for Developing and Evaluating Repair Station and Quality Control Manuals
- FAA Order 8300.10, vol. 2, ch. 85, 161, 162, 163, and 164

B. Forms:

- FAA Form 8310-3, Application for Repair Station Certificate and/or Rating

C. Job Aids. None.

5. PROCEDURES.

A. Review Documentation. Review the Repair Station Certificate Manuals/Revision, Capabilities Listing, and OpSpecs for accuracy to determine that ratings are appropriate for work being performed, for accuracy. Also determine if maintenance functions will be contracted out, and contracted persons will meet the requirements of part 145, § 145.217.

B. Evaluate the Housing and Facilities. Inspect the following:

(1) Housing and shop areas to ensure the following:

(a) Adequate housing includes sufficient workspace for maintenance functions to be accomplished.

(b) If a repair station holds an airframe class rating or limited airframe (specific model aircraft) rating, that housing includes suitable permanent housing for the largest type and model aircraft listed on its OpSpecs.

NOTE: If climatic conditions allow, the repair station may perform maintenance, preventive maintenance, or alterations outside of its housing if these facilities are acceptable to the FAA and meet the requirements of § 145.103(a).

(c) Proper storage and protection of:

- Materials
- Parts
- Supplies

(d) Proper identification and protection of parts and subassemblies during:

- Disassembly
- Cleaning
- Inspection
- Repair
- Alteration
- Assembly

(e) Segregation of the following:

- Incompatible work areas, e.g., metal shop, battery charging area, or painting area next to an assembly area
- Unpartitioned parts cleaning areas
- Articles and materials stocked for installation from those articles undergoing maintenance or alteration

(f) Proper ventilation, lighting, and temperature and humidity for the type and complexity of work being accomplished.

(2) Technical documents to ensure that they are current and accessible when relevant work is being performed:

- Airworthiness Directives (AD)

- Instructions for Continued Airworthiness (ICA)
- Maintenance manuals
- Overhaul manuals
- Standard practice manuals
- Service Bulletins
- Other applicable data acceptable to or approved by the FAA

(3) Equipment, tools, and test equipment, to ensure:

(a) Required types and quantities are available and under the control of the repair station during performance of the work function.

(b) All test and inspection equipment and tools used to make airworthiness determinations are calibrated to a standard acceptable to the FAA.

NOTE: The 14 CFR part 145 rule states that tooling is calibrated to a standard acceptable to the Administrator. That may be a standard derived from the National Institute of Standards and Technology (NIST), or 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 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) A repair station may substitute manufacturers' tooling with one that is of its equivalent. If the repair station uses equivalent tooling it is responsible for the determination of equivalency. The repair station must provide a means to the FAA that will demonstrate that the tool meets the manufacturer's standards and specifications with all respects regarding tolerances and accuracy.

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

ii. The equivalency can only be made based upon an evaluation of a technical data file. The repair station will establish a technical data file for each piece of equivalent tooling. The file will contain, but is not limited to, data, drawings, specifications, instructions, photographs, templates, certificates, and reports.

1. In the case of calibration equipment, the technical data file should also include data sheets attesting to the accuracy when calibration standards are necessary, as well as any special manufacturing processes that are used, including gauges and recording equipment in the controlling process.

2. If calibration equipment is involved, adequacy of that calibration system shall be established with documented procedures to evaluate the adequacy of that calibration equipment and its traceability to one of the previously listed standards.

iii. A demonstration of the functionality of the special equipment or test apparatus may be necessary to determine its equivalency.

NOTE: Designated Engineering Representatives (DER) may not 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 and not the FAA.

C. Analyze Findings. If deficiencies were found, meet with the certificate holder to discuss possible corrective actions.

7. TASK OUTCOMES.

A. Complete PTRS.

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

(1) If the facilities were found acceptable:

- An entry into the PTRS stating satisfactory/or entries in the comment section
- A letter to the repair station acknowledging the successful completion of the inspection (optional)

(2) If the facilities were found unacceptable:

- A letter describing any deficiencies that must be corrected
- A follow-up evaluation to ensure that the repair station is in compliance with regulations

C. Document Task. File all supporting paperwork in the certificated repair station's office file.

9. FUTURE ACTIVITIES. Perform follow-up inspection, as appropriate.

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	AFSC	Air Force Specialty Codes
49 CFR	Title 49 of the Code of Federal Regulations	AFSS	automated flight service station
49 U.S.C.	Title 49 of the United States Code	AFTN	aeronautical fix telecommunication network
A/FD	Airport/Facility Directory	AH	alert height
A&P	Airframe and Powerplant	AGL	above ground level
AAD	Automatic Activation Device	AIDS	Accident Incident Data Subsystem
AAIP	Approved Aircraft Inspection Program	Air Oper VIS	Air Operator Vital Information Subsystem
AC	Advisory Circular	AIP	Airplane Inspection Program
ACAT	Air Carrier Assessment Tool	ALS	Advance Life Support
ACCSS	air carrier cabin safety specialists	AMA	Aviation Mechanic Airframe
ACE	aerobatic competency evaluator	AMC	acceptable means of compliance
ACO	Aircraft Certification Office	AME	Aviation Medical Examiner
ACR	airman certification representative	AMG	Aviation Mechanic General
AD	Airworthiness Directives	AMO	Approved Maintenance Organization
ADA	Airline Deregulation Act	AMP	Aviation Mechanic Powerplant
ADF	automatic direction finding	AMT	Aviation Maintenance Technician
AEE	Office of Environment and Energy	AMTS	Aviation Maintenance Technician School
AEG	Aircraft Evaluation Groups	ANM	Seattle Aircraft Evaluation Group
AEM	Area Equivalent Method	AOA	Airport Operations Area
AES	Automated Exemption System	AOD	Automatic Opening Device
AFM	Aircraft Flight Manual Airplane Flight Manual	AOG	Aircraft on the Ground

Appendix 1

APP	Accident Prevention Program	BLS	Basic Life Support
APPM	Accident Prevention Program Manager	CAA	Civil Airworthiness Authority
APU	Auxiliary Power Unit	CAB	Civil Aviation Board
AR	Authorized Representative	CAIS	Comprehensive Airmen Information Subsystem
ARA	Airborne Radar Approach	CAM	Civil Aeronautics Manual
ARFF	Aircraft Rescue and Fire Fighting Equipment	CAMI	Civil Aero Medical Institute
ARINC	Aeronautical Radio, Inc.	CAMP	Continuous Airworthiness Maintenance Program
ASAS	Aviation Safety Analysis System	CAN	Center Area NOTAM
ASI	aviation safety inspector	CAR	Civil Air Regulations
ASR	Airport Surveillance Radar	CASE	Coordinating Agencies for Supplier's Evaluation
AST	aviation safety technician	CASFO	Civil Aviation Security Field Office
ASTM	American Society for Testing and Materials	CASP	Continuous Analysis and Surveillance Program
ATCS	Alternate Testing Center Supervisor	CATS	Computer Assisted Testing Services
ASW	Southwest Aircraft Evaluation	CBI	computer-based instruction
AT	Air Traffic	CDL	Configuration Deviation List
ATA	Air Transport Association	CE	commercial pilot examiner
ATC	air traffic control	CFI	certificated flight instructor
ATE	Automatic Test Equipment	CFR	Code of Federal Regulations
ATOS	Air Transportation Oversight System	CFRS	certificated foreign repair station
ATP	airline transport pilot	CG	center of gravity
ATPE	airline transport pilot examiner	CHDO	certificate-holding district office
AVGAS	Aviation Gasoline	CIRE	commercial and instrument rating examiner
BA	Bilateral Agreement	CL	capabilities list
BASA	Bilateral Aviation Safety Agreement	CM	Condition Monitoring
BFA	Balloon Federation of America	CMO	Certificate Management Office
BITE	Built-In Test Equipment		

CMP	Configuration Maintenance Procedures	DNL	Decibel Noise Level
CMR	Certification Maintenance Requirements	DOD	Department of Defense
CMT	Certificate Management Team	DOT	Department of Transportation
COA	certificate of authority	DPE	designated pilot examiner
COB	close of business	DPRE	Designated Parachute Rigger Examiners
COMAT	company material	DS	discard
ConDOR	Constructed Dynamic Observation Reports	EA	Environmental Assessment
Conus	continental United States	EA/EO	Engineering Change Authorization/ Order
CPL	commercial pilot license	EAA	Experimental Aircraft Association
CPM	certification project manager	EFIS	electronic flight instrument systems
CRW	canopy relative work	EIR	Enforcement Investigation Report
CSP	Comprehensive Surveillance Plan	EIS	Enforcement Information Subsystem
CTA	control areas	EIS	Environmental Impact Statement
CTC	computer testing center	ELT	Emergency Locator Transmitter
CTD	computer testing designee	EMI	electromagnetic interference
CTM	Computer Testing Manager	EP	Evaluation Panel
CVR	cockpit voice recorder	EPI	Element Performance Inspections
DAR	Designated Airworthiness Representative	ETOPS	Extended-Range Operation With Two- Engine Airplanes
DAS	Designated Alteration Station	EVAS	Emergency Vision Assurance Systems
DBA	Other Business Names	FAA	Federal Aviation Administration
d.b.a.	doing business as	FA Act	Federal Aviation Act of 1958
DCT	Data Collection Tool	FADEC	Full Authority Digital Engine Control
DER	Designated Engineering Representative	FAR	Federal Aviation Regulations
DFDAU	digital flight data acquisition unit	FCAA	Foreign Civil Aviation Authority
DH	decision height	FCC	Federal Communications Commission
DME	Designated Mechanic Examiners	FD	flight director
DME	distance measuring equipment		

Appendix 1

FDC	flight data center	HF	high frequency
FDR	Flight Data Recorder	HIRF	High Intensity Radiated Fields
FIE	flight instructor examiner	HT	Hard-Time
FIR	flight information regions	HUD	heads-up display
FIRC	flight instructor refresher clinic	HUMS	Health Usage Monitoring Systems
FL	flight level	IA	Inspection Authorization
FLIR	Forward Looking Infrared	IAP	instrument approach procedures
FM	flight manual	IAW	in accordance with
FMCS	flight management computer systems	ICA	instructions for continued airworthiness
FMS	flight management system	ICAO	International Civil Aviation Organization
FOI	fundamentals of instructing	ICAS	International Council of Air Shows
FOIA	Freedom of Information Act	ICS	Intercom Systems
FONSI	finding of no significant impact	IEC	International Electrotechnical Commission
FSAIC	Flight Standards Safety Analysis Information Center	IEM	Interpretive Explanatory Material
FSAS	Flight Standards Automation System	IFO	International Field Office
FSDO	Flight Standards District Office	IFP	Instrument Foreign Pilot
FSS	flight service station	IFR	instrument flight rules
FTD	flight training device	IFSD	in-flight shut down
GM	General Manuals	IG	Interim Guidance
GPS	global positioning system	IGA	international general aviation
GPWS	ground proximity warning systems	IIC	inspector-in-charge
GSGC	Ground School Graduation Certificate	ILS	instrument landing system
GTD	ground training device	IMC	instrument meteorological conditions
HAZMAT	hazardous material	IN/FC	Inspection/Functional check
HEL	helicopter	INM	Integrated Noise Model
HEMES	Helicopter Hospital Emergency Medical Evacuation	INS	inertial navigation system
		IP	implementation procedures

IPM	Inspection Procedures Manual	MEL	Multiengine Land
IRA	Instrument Rating Airplane	MES	Multiengine Sea
IRS	inertial reference systems	MIDO	Manufacturing Inspection District Offices
ISC	Industry Steering Committee	MIP	maintenance implementation procedures
ISIS	Integrated Safety Information Subsystem	MIS	Mechanical Interruption Summary Reports
ISO	International Standards Organization	MISR	Mechanical Interruption Summary Reports
ISS	inertial sensor system	MIST	Maintenance International Standardization Team
JAA	Joint Aviation Authorities	MLS	microwave landing system
JAD	Job Aid Disc	MME	maintenance management exposition
JAR	Joint Aviation Requirement	MMEL	Master Minimum Equipment List
JTA	Job Task Analysis	MMF	Manufacturer Maintenance Facility
LAHSO	land-and-hold-short operations	MNPS	Minimum Navigation Performance Specification
LIBRA	Logical Information Based on Reliability	MOE	maintenance organization exposition
LLC	limited liability corporation	MOS	Military Occupational Speciality
LOA	letter of authorization	MOU	memorandum of understanding
LOI	Letter of Investigation	MRA	Mutual Recognition Agreement
LORAN	long-range navigation	MRB	Maintenance Review Board
LOX	liquid oxygen	MRB	Material Review Board
LRN	long-range navigation	MRR	Mechanical Reliability Reports
LRNS	long-range navigation system	MSG	Maintenance Steering Group
LRU	Line Replaceable Units	MSL	mean sea level
LU/SV	Lubrication/Serviceing	MTBF	mean time between failure
MAST	Maintenance Airworthiness Standardization Team	NAA	National Aviation Authority
MC/FPE	military competency/foreign pilot examiner	NAO	Noise Abatement Officer
MEL	minimum equipment list	NAS	National Airspace System

Appendix 1

NASIP	National Aviation Safety Inspection Program	OpSpecs	operations specifications
NAT	North Atlantic	OPSS	Operations Specifications Subsystem
NAT/MNPS	North Atlantic Minimum Navigation Performance Specifications	OP/VC	Operational/Visual check
NAVAID	Navigational Aid	ORA	Operations Research Analyst
NEPA	National Environmental Policy Act of 1969	OST	Office of the Secretary of Transportation
NDB	nondirectional beacon	OTAC	Outside-the-Aircraft Check
NDI	Non-destructive Inspection	PAI	principal avionics inspector
NDT	Nondestructive Testing	PAR	Precision Approach Radar
NDPER	National Designated Pilot Examiner Registry	PASI	Preapplication Statement of Intent
NEB	National Examiner Board	PC	Production Certificate
NFDC	National Flight Data Center	PCA	Positive Control Area
NFPA	National Fire Protection Association	PCA	primary category aircraft
NIST	National Institute of Standards and Technology	PE	private pilot examiner
NM	nautical miles	PI	principal inspector
NOPAC	North Pacific	PIC	pilot-in-command
NOTAM	Notice to Airmen	PMA	Parts Manufacturer Approval
NPG	National Work Program Guidelines	PMI	principal maintenance inspector
NTSB	National Transportation Safety Board	POI	principal operations inspector
NVLAP	National Voluntary Laboratory Accreditation Program	PPE	proficiency pilot examiner
OC	On-Condition	PPH	Policy Procedures Handbook
OCA	oceanic control areas	PPM	PTRS Procedures Manual
OEM	Original Equipment Manufacturer	PSRAB	Propulsion System Reliability Assessment Board
OJT	on-the-job training	PTRS	Program Tracking and Reporting Subsystem
OMT	Organization Management Team	PTS	practical test standards
		QMS	Quality Monitoring System

RAIM	receiver autonomous integrity monitoring	AIRMET	Airmen's Meteorological Information
RFSD	Regional Flight Standards Division	SIP	simulator implementation procedures
RII	Required Inspection Items	SL	Service Letter
RNAV	Area Navigation	SODA	Statement of Demonstrated Ability
ROC	Regional Operations Center	SOIR	simultaneous operations on intersecting runways (replaced by LAHSO)
rpm	revolutions per minute	SPAS	Safety Performance Analysis System
RS	restoration	SPG	Special Planning Group
RT	remedial training	SRM	Structural Repair Manuals
RTCA	Radio Technical Commission of Aeronautics	SSID	Supplemental Structural Inspection Document
RVR	runway visual range	STC	Supplemental Type Certificate
RVSM	Reduced Vertical Separation Minimum	SUP	suspected unapproved parts
RWBC	Regional Whistleblower Coordinators	TAF	terminal weather forecasts
SA	selective availability	TALTAR	Tactical Landing Approach Radar
SAE	Society of Automotive Engineers	TAWS	Terrain Awareness and Warning Systems
SAI	Safety Attribute Inspections	TBO	time between overhauls
SAT	System Analysis Team	TC	type certificate
SB	Service Bulletin	TCA	Appliance Type Approval
SDR	Service Difficulty Report	TCAS	Traffic Alert and Collision Avoidance Systems
SEAT	Surveillance and Evaluation Assessment Tool	TCDS	type certificate data sheet
SEL	Single-Engine Land	TCS	Testing Center Supervisor
SEP	Surveillance and Evaluation Program	TCE	training center evaluator
SES	Single-Engine Sea	TCO	training course outline
SFAR	Special Federal Aviation Regulations	TGL	temporary guidance leaflet
SIC	second-in-command	TRSB	Time Reference Scanning Beam
SIDA	Security Identification Display Area	TSA	Transportation Security Administration
SIGMET/	Significant Meteorological Information		

Appendix 1

TSO	Technical Standard Order	VIS	Vital Information Subsystem
TSOA	Technical Standard Order Authorization	VLF	very low frequency
UHF	ultrahigh frequency	V_{MC}	minimum controllable airspeed
ULD	unit load device	VMC	visual meteorological conditions
USNOF	United States NOTAM Office	VOR	VHF omni-directional radio range
USPA	United States Parachute Association	V_{REF}	approach speed
VFR	visual flight rules	WBPP	Whistleblower Protection Program
VHF	very high frequency	WINDOWS	Segmented Inspections and Built-In Inspection Tolerances

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