

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.