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contains a curriculum that will achieve a level of competency equal to, or greater than, that required by the appropriate part of this chapter.

**PART 143 [Reserved]**

**PART 145—REPAIR STATIONS**

SPECIAL FEDERAL AVIATION REGULATIONS

SFAR No. 36 [NOTE]

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APPENDIX A TO PART 145

AUTHORITY: 49 U.S.C. 106(g), 40113, 44701–44702, 44707, 44717.

SOURCE: Docket No. 1157, 27 FR 6662, July 13, 1962, unless otherwise noted.

EDITORIAL NOTE: For miscellaneous technical amendments in this part 145, see Amdt. 145–3, 31 FR 3336, Mar. 3, 1966 and Amdt. 145–6, 31 FR 9211, July 6, 1966.

SPECIAL FEDERAL AVIATION REGULATION

SFAR No. 36

EDITORIAL NOTE: For the text of SFAR No. 36, see part 121 of this chapter.

**Subpart A—General**

**§ 145.1 Applicability.**

(a) This part prescribes the requirements for issuing repair station certificates and associated ratings to facilities for the maintenance and alteration of airframes, powerplants, propellers, or appliances, and prescribes the general operating rules for the holders of those certificates and ratings.

(b) A certificated repair station located in the United States is called a “domestic repair station”. A repair station located outside of the United States is called a “foreign repair station”.

(c) A manufacturer of aircraft, aircraft engines, propellers, appliances, or parts thereof, may be issued a Repair Station Certificate with a limited rating under subpart D of this part. Sections 145.11 through 145.79 do not apply to applicants for, or holders of, certificates issued under subpart D of this part. Any facility where the holder of a certificate issued under subpart D of this part exercises his privileges under that certificate may be referred to as a

“manufacturer’s maintenance facility.”

[Doc. No. 1157, 27 FR 6662, July 13, 1962, as amended by Amdt. 145-4, 31 FR 5249, Apr. 1, 1966]

**§ 145.2 Performance of maintenance, preventive maintenance, alterations and required inspections for an air carrier or commercial operator under the continuous airworthiness requirements of part 121, and for airplanes under the inspection program required by part 125.**

(a) Each repair station that performs any maintenance, preventive maintenance, alterations, or required inspections for an air carrier or commercial operator having a continuous airworthiness program under part 121 of this chapter shall comply with subpart L of part 121 (except §§ 121.363, 121.369, 121.373, and 121.379) of this chapter, as applicable. In addition, such repair station shall perform that work in accordance with the air carrier’s or commercial operator’s manual.

(b) Each repair station that performs inspections on airplanes governed by part 125 of this chapter shall do that work in accordance with the inspection program approved for the operator of the airplane.

[Amdt. 145-7, 31 FR 10614, Aug. 9, 1966, as amended by Amdt. 145-17, 45 FR 67235, Oct. 9, 1980; Amdt. 145-25, 66 FR 21067, Apr. 27, 2001]

**§ 145.3 Certificate required.**

No person may operate as a certificated repair station without, or in violation of, a repair station certificate. In addition, an applicant for a certificate may not advertise as a certificated repair station until the certificate has been issued to him.

**§ 145.11 Application and issue.**

(a) An application for a repair station certificate and rating, or for an additional rating, is made on a form and in a manner prescribed by the Administrator, and submitted with duplicate copies of—

- (1) [Reserved]
- (2) Its inspection procedures manual;
- (3) A list of the maintenance functions to be performed for it, under contract, buy another agency under § 145.49 or appendix A; and

(4) In the case of an applicant for a propeller rating (class 2) or any accessory rating (class 1, 2, or 3), a list, by type or make, as applicable, of the propeller or accessory for which he seeks approval.

(b) An applicant who meets the requirements of this part is entitled to a repair station certificate with appropriate ratings prescribing such operations specifications and limitations as are necessary in the interests of safety.

[Doc. No. 1157, 27 FR 6662, July 13, 1962, as amended by Amdt. 145-5, 31 FR 8585, June 21, 1966]

**§ 145.13 Certification of foreign repair stations: Special requirements.**

Before applying under § 145.11, an applicant for a foreign repair station certificate must notify the FAA office having jurisdiction over the area in which the applicant is located of his intention to so apply and send that office a statement of his reasons for wanting a repair station at his place of business. In addition to the information required by § 145.11, the applicant must furnish two copies of a suitably bound brochure, including a physical description of his facilities (with photographs), a description of his inspection system, and organizational chart, the names and titles of managing and supervisory personnel, and a list of services obtained under contract, if any, with the names of the contractors and the types of services they perform. In addition, the applicant must furnish evidence that the fee prescribed by appendix A of part 187 of this chapter has been paid.

[Doc. No. 1157, 27 FR 6662, July 13, 1962, as amended by Amdt. 145-20, 47 FR 35694, Aug. 16, 1982]

**§ 145.15 Change or renewal of certificates.**

(a) Each of the following requires the certificate holder to apply for a change in a repair station certificate, on a form and in the manner prescribed by the Administrator:

- (1) A change in the location or housing and facilities of the station.
- (2) A request to revise or amend a rating.
- (b) If the holder of a repair station certificate sells or transfers its assets,

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the new owner must apply for an amended certificate, in the manner prescribed in §145.11 and, if applicable, §145.13.

(c) A person requesting renewal of a foreign repair station certificate shall, within 30 days before his current certificate expires, send the request to the FAA office having jurisdiction over the station. If he does not make the request within that period, he must follow the procedure prescribed in §145.13 for applying for a new certificate, but without copies of the brochure.

[Doc. No. 1157, 27 FR 6662, July 13, 1962, as amended by Amdt. 145-8, 32 FR 15670, Nov. 14, 1967]

## § 145.17 Duration of certificates.

(a) A domestic repair station certificate or rating is effective until it is surrendered, suspended, or revoked.

(b) A foreign repair station certificate or rating expires at the end of 12 months after the date on which it was issued, unless it is sooner surrendered, suspended, or revoked. However, if the station continues to comply with §145.71 and applies for renewal before expiration of such certificate or rating, its certificate or rating may be renewed for 24 months.

(c) The holder of a certificate that expires or is surrendered, suspended, or revoked, shall return it to the Administrator.

[Doc. No. 1157, 27 FR 6662, July 13, 1962, as amended by Amdt. 145-16, 43 FR 22643, May 25, 1978]

## § 145.19 Display of certificate.

Each holder of a repair station certificate shall display the certificate and ratings at a place in the repair station that is normally accessible to the public and is not obscured. The certificate must be available for inspection by the Administrator.

## § 145.21 Change of location or facilities.

(a) The holder of a repair station certificate may not make any change in its location or in its housing and facilities that are required by §145.35, unless the change is approved in writing in advance.

(b) The Administrator may prescribe the conditions under which a repair

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station may operate while it is changing its location or housing facilities.

## § 145.23 Inspection.

Each certificated repair station shall allow the Administrator to inspect it, at any time, to determine its compliance with this part. The inspections cover the adequacy of the repair stations inspection system, records, and its general ability to comply with this part. After such an inspection is made, the repair station is notified, in writing, of any defects found during the inspection.

[Amdt. 145-5, 31 FR 8585, June 21, 1966]

## § 145.25 Advertising.

(a) Whenever the advertising of a certificated repair station indicates that it is certificated, it must clearly state its certificate number.

(b) Paragraph (a) of this section applies to advertising in—

- (1) Business letterheads;
- (2) Billheads and statements;
- (3) Customer estimates and inspection forms;
- (4) Hangar or shop signs;
- (5) Magazines, periodicals, or trade journals; or
- (6) Any form of promotional media.

## Subpart B—Domestic Repair Stations

## § 145.31 Ratings.

The following ratings are issued under this subpart:

(a) *Airframe ratings.* (1) Class 1: Composite construction of small aircraft.

(2) Class 2: Composite construction of large aircraft.

(3) Class 3: All-metal construction of small aircraft.

(4) Class 4: All-metal construction of large aircraft.

(b) *Powerplant ratings.* (1) Class 1: Reciprocating engines of 400 horsepower or less.

(2) Class 2: Reciprocating engines of more than 400 horsepower.

(3) Class 3: Turbine engines.

(c) *Propeller ratings.* (1) Class 1: All fixed pitch and ground adjustable propellers of wood, metal, or composite construction.

(2) Class 2: All other propellers, by make.

(d) *Radio ratings.* (1) Class 1: Communication equipment: Any radio transmitting equipment or receiving equipment, or both, used in aircraft to send or receive communications in flight, regardless of carrier frequency or type of modulation used; including auxiliary and related aircraft interphone systems, amplifier systems, electrical or electronic inter-crew signaling devices, and similar equipment; but not including equipment used for navigation of the aircraft or as an aid to navigation, equipment for measuring altitude or terrain clearance, other measuring equipment operated on radio or radar principles, or mechanical, electrical, gyroscopic, or electronic instruments that are a part of communications radio equipment.

(2) Class 2: Navigational equipment: Any radio system used in aircraft for en route or approach navigation, except equipment operated on radar or pulsed radio frequency principles, but not including equipment for measuring altitude or terrain clearance or other distance equipment operated on radar or pulsed radio frequency principles.

(3) Class 3: Radar equipment: Any aircraft electronic system operated on radar or pulsed radio frequency principles.

(e) *Instrument ratings.* (1) Class 1: Mechanical: Any diaphragm, bourdon tube, aneroid, optical, or mechanically driven centrifugal instrument that is used on aircraft or to operate aircraft, including tachometers, airspeed indicators, pressure gauges drift sights, magnetic compasses, altimeters, or similar mechanical instruments.

(2) Class 2: Electrical: Any self-synchronous and electrical indicating instruments and systems, including remote indicating instruments, cylinder head temperature gauges, or similar electrical instruments.

(3) Class 3: Gyroscopic: Any 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.

(4) Class 4: Electronic: Any instruments whose operation depends on electron tubes, transistors, or similar devices including capacitance type quantity gauges, system amplifiers, and engine analyzers.

(f) *Accessory ratings.* (1) Class 1: Mechanical accessories that depend 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.

(2) Class 2: Electrical accessories that depend on electrical energy for their operation, and generators, including starters, voltage regulators, electric motors, electrically driven fuel pumps magnetos, or similar electrical accessories.

(3) Class 3: electronic accessories that depend on the use of an electron tube transistor, or similar device, including supercharger, temperature, air conditioning controls, or similar electronic controls.

#### § 145.33 Limited ratings.

(a) Whenever the Administrator finds it appropriate, he may issue a limited rating to a domestic repair station that maintains or alters only a particular type of airframe, powerplant, propeller, radio, instrument, or accessory, or parts thereof, or performs only specialized maintenance requiring equipment and skills not ordinarily found in regular repair stations. Such a rating may be limited to a specific model aircraft, engine, or constituent part, or to any number of parts made by a particular manufacturer.

(b) Limited ratings are issued for—

(1) Airframes of a particular make and model;

(2) Engines of a particular make and model;

(3) Propellers of a particular make and model;

(4) Instruments of a particular make and model;

(5) Radio equipment of a particular make and model;

(6) Accessories of a particular make and model;

(7) Landing gear components;

(8) Floats, by make;

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(9) Nondestructive inspection, testing, and processing;

(10) Emergency equipment;

(11) Rotor blades, by make and model;

(12) Aircraft fabric work; and

(13) Any other purpose for which the Administrator finds the applicant's request is appropriate.

(c) For a limited rating for specialized services, the operations specifications of the station shall contain the specification used in performing that specialized service. The specification may either be a civil or military one that is currently used by industry and approved by the Administrator or one developed by the applicant and approved by the Administrator.

**§ 145.35 Housing and facility requirements.**

(a) An applicant for a domestic repair station certificate and rating, or for an additional rating, must comply with paragraphs (b) to (h) of this section and provide suitable—

(1) Housing for its necessary equipment and material;

(2) Space for the work for which it seeks a rating;

(3) Facilities for properly storing, segregating, and protecting materials, parts, and supplies; and

(4) Facilities for properly protecting parts and subassemblies during disassembly, cleaning, inspection, repair, alteration, and assembly;

so that work being done is protected from weather elements, dust, and heat; workers are protected so that the work will not be impaired by their physical efficiency; and maintenance operations have efficient and proper facilities.

(b) The applicant must provide suitable shop space where machine tools and equipment are kept and where the largest amount of bench work is done. The shop space need not be partitioned but machines and equipment must be segregated whenever—

(1) Machine or woodwork is done so near an assembly area that chips or material might inadvertently fall into assembled or partially assembled work;

(2) Unpartitioned parts cleaning units are near other operations;

(3) Fabric work is done in an area where there are oils and greases;

(4) Painting or spraying is done in an area so arranged that paint or paint dust can fall on assembled or partially assembled work;

(5) Paint spraying, cleaning, or machining operations are done so near testing operations that the precision of test equipment might be affected; and

(6) In any other case the Administrator determines it is necessary.

(c) The applicant must provide suitable assembly space in an enclosed structure where the largest amount of assembly work is done. The assembly space must be large enough for the largest item to be worked on under the rating he seeks and must meet the requirements of paragraph (a) of this section.

(d) The applicant must provide suitable storage facilities used exclusively for storing standard parts, spare parts, and raw materials, and separated from shop and working space. He must organize the storage facilities so that only acceptable parts and supplies will be issued for any job, and must follow standard good practices for properly protecting stored materials.

(e) The applicant must store and protect parts being assembled or disassembled, or awaiting assembly or disassembly, to eliminate the possibility of damage to them.

(f) The applicant must provide suitable ventilation for his shop, assembly, and storage areas so that the physical efficiency of his workers is not impaired.

(g) The applicant must provide adequate lighting for all work being done so that the quality of the work is not impaired.

(h) The applicant must control the temperature of the shop and assembly area so that the quality of the work is not impaired. Whenever special maintenance operations are being performed, such as fabric work or painting, the temperature and humidity control must be adequate to insure the airworthiness of the article being maintained.

**§ 145.37 Special housing and facility requirements.**

(a) In addition to the housing and facility requirements in §145.35, an applicant for a domestic repair station certificate and rating, or for an additional rating, for airframes, powerplants, propellers, instruments, accessories, or radios must meet the requirements of paragraphs (b) to (f) of this section.

(b) An applicant for an airframe rating must provide suitable permanent housing for at least one of the heaviest aircraft within the weight class of the rating he seeks. If the location of the station is such that climatic conditions allow work to be done outside, permanent work docks may be used if they meet the requirements of §145.35(a).

(c) An applicant for either a powerplant or accessory rating must provide suitable trays, racks, or stands for segregating complete engine or accessory assemblies from each other during assembly and disassembly. He must provide covers to protect parts awaiting assembly or during assembly to prevent dust or other foreign objects from entering into or falling on those parts.

(d) An applicant for a propeller rating must provide suitable stands, racks, or other fixtures for the proper storage of propellers after being worked on.

(e) An applicant for a radio rating must provide suitable storage facilities to assure the protection of parts and units that might deteriorate from dampness or moisture.

(f) An applicant for an instrument rating must provide a reasonably dust free shop if the shop allocated to final assembly is not air conditioned. Shop and assembly areas must be kept clean at all times to reduce the possibility of dust or other foreign objects getting into instrument assemblies.

**§ 145.39 Personnel requirements.**

(a) An applicant for a domestic repair station certificate and rating, or for an additional rating, must provide adequate personnel who can perform, supervise, and inspect the work for which the station is to be rated. The officials of the station must carefully consider the justifications and abilities of their employees and shall determine the abilities of its uncertificated employ-

ees performing maintenance operations on the basis of practical tests or employment records. The repair station is primarily responsible for the satisfactory work of its employees.

(b) The number of repair station employees may vary according to the type and volume of its work. However, the applicant must have enough properly qualified employees to keep up with the volume of work in process, and may not reduce the number of its employees below that necessary to efficiently produce airworthy work.

(c) Each repair station shall determine the abilities of its supervisors and shall provide enough of them for all phases of its activities. However, the Administrator may determine the ability of any supervisor by inspecting his employment and experience records or by a personal test. Each supervisor must have direct supervision over working groups but need not have overall supervision at management level. Whenever apprentices or students are used in working groups on assemblies or other operations that might be critical to the aircraft, the repair station shall provide at least one supervisor for each 10 apprentices or students, unless the apprentices or students are integrated into groups of experienced workers.

(d) Each person who is directly in charge of the maintenance functions of a repair station must be appropriately certificated as a mechanic or repairman under part 65 of this chapter and must have had at least 18 months of practical experience in the procedures, practices, inspection methods, materials, tools, machine tools, and equipment generally used in the work for which the station is rated. Experience as an apprentice or student mechanic may not be counted in computing the 18 months of experience. In addition, at least one of the persons so in charge of maintenance functions for a station with an airframe rating must have had experience in the methods and procedures prescribed by the Administrator for returning aircraft to service after 100-hour, annual, and progressive inspections.

(e) Each limited repair station shall have employees with detailed knowledge of the particular maintenance

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function or technique for which it is rated, based on attending a factory school or long experience with the product or technique involved.

### § 145.41 Recommendation of persons for certification as repairmen.

(a) When a person applies for a domestic repair station certificate and rating(s) or additional rating(s) that require a repairman, that person must—

(1) Recommend at least one person for certification as a repairman;

(2) Certify to the Administrator that the person recommended meets the requirements of § 65.101 of this chapter; and

(3) Certify that the person recommended is able to perform and supervise the assigned work.

(b) Each person recommended per paragraph (a)(1) of this section must be at or above the level of shop foreman or department head or be responsible for supervising the work performed by the repair station. A qualified person so recommended may be certificated as a repairman.

(Secs. 313, 314, and 601 through 610, of the Federal Aviation Act of 1958, as amended (49 U.S.C. 1354, 1355, 1421 through 1430); sec. 6(c), Dept. of Transportation Act (49 U.S.C. 1655(c)))

[Doc. No. 21269, 47 FR 33390, Aug. 2, 1982]

### § 145.43 Records of supervisory and inspection personnel.

(a) Each applicant for a domestic repair station certificate and rating, or for an additional rating, must have, and each certificated domestic repair station shall maintain, a roster of—

(1) Its supervisory personnel, including the names of the officials of the station that are responsible for its management and the names of its technical supervisors, such as foreman and crew chiefs; and

(2) Its inspection personnel, including the names of the chief inspector and those inspectors who make final airworthiness determinations before releasing an article to service.

(b) The station shall also provide a summary of the employment of each person whose name is on the roster. The summary must contain enough information as to each person on the ros-

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ter to show compliance with the experience requirements of this subpart, including—

(1) His present title (e.g., chief inspector, metal shop foreman, etc.);

(2) His total years of experience in the type of work he is doing;

(3) His past employment record, with names of places and term of employment by month, and year;

(4) The scope of his present employment (e.g., airframe overhaul, airframe final assembly, engine inspection, department, etc.); and

(5) The type and number of the mechanic or repairman certificate that he holds, and the ratings on that certificate.

(c) The station shall change the roster, as necessary, to reflect—

(1) Terminating the employment of any person whose name is on the roster;

(2) Assigning any person to duties that require his name to be carried on the roster; or

(3) Any appreciable change in the duties and scope of assignment of any person whose name is on the roster.

(d) The station shall keep the roster and employment summaries required by this section, subject to inspection by the Administrator upon his request.

(e) A domestic repair station may not use the services of a person directly in charge of maintenance or alteration unless it keeps current records on him as required by this section.

[Doc. No. 1157, 27 FR 6662, June 13, 1962, as amended by Amdt. 145-5, 31 FR 8585, June 21, 1966; Amdt. 145-15, 41 FR 47230, Oct. 28, 1976]

### § 145.45 Inspection systems.

(a) An applicant for a repair station certificate, and rating or for an additional rating, must have an inspection system that will produce satisfactory quality control and conform to paragraphs (b) to (f) of this section.

(b) The applicant's inspection personnel must be thoroughly familiar with all inspection methods, techniques, and equipment used in their specialty to determine the quality or airworthiness of an article being maintained or altered. In addition, they must—

(1) Maintain proficiency in using various inspection aids intended for that purpose;

(2) Have available and understand current specifications involving inspection tolerances, limitations, and procedures established by the manufacturer of the product being inspected and with other forms of inspection information such as FAA airworthiness directives and bulletins; and

(3) In cases where magnetic, fluorescent, or other forms of mechanical inspection devices are to be used, be skilled in operating that equipment and be able to properly interpret defects indicated by it.

(c) The applicant must provide a satisfactory method of inspecting incoming material to insure that, before it is placed in stock for use in an aircraft or part thereof, it is in a good state of preservation and is free from apparent defects or malfunctions.

(d) The applicant must provide a system of preliminary inspection of all articles he maintains to determine the state of preservation or defects. He shall enter the results of each inspection on an appropriate form supplied by it and keep the form with the article until it is released to service.

(e) The applicant must provide a system so that before working on any airframe, powerplant, or part thereof that has been involved in an accident, it will be inspected thoroughly for hidden damage, including the areas next to the obviously damaged parts. He shall enter the results of this inspection on the inspection form required by paragraph (d) of this section.

(f) At the time he applies for a repair station certificate, the applicant must provide a manual containing inspection procedures, and thereafter maintain it in current condition at all times. The manual must explain the internal inspection system of the repair station in a manner easily understood by any employee of the station. It must state in detail the inspection requirements in paragraphs (a) to (e) of this section, and the repair station's inspection system including the continuity of inspection responsibility, samples of inspection forms, and the method of executing them. The manual must refer whenever necessary to the

manufacturer's inspection standards for the maintenance of the particular article. The repair station must give a copy of the manual to each of its supervisory and inspection personnel and make it available to its other personnel. The repair station is responsible for seeing that all supervisory and inspection personnel thoroughly understand the manual.

[Doc. No. 1157, 27 FR 6662, June 13, 1962, as amended by Amdt. 145-15, 41 FR 47230, Oct. 28, 1976]

**§ 145.47 Equipment and materials: Ratings other than limited ratings.**

(a) An applicant for a domestic repair station certificate and rating, or for an additional rating, must have the equipment and materials necessary to efficiently perform the functions appropriate to the ratings he seeks. An applicant for an airframe, propeller, powerplant, radio, instrument, or accessory rating must be equipped to perform the functions listed in appendix A to this part that are appropriate for the rating he seeks.

(b) The equipment and materials required by this part must be of such type that the work for which they are being used can be done competently and efficiently. The station shall ensure that all inspection and test equipment is tested at regular intervals to ensure correct calibration to a standard derived from the National Bureau of Standards or to a standard provided by the equipment manufacturer. In the case of foreign equipment, the standard of the country of manufacture may be used if approved by the Administrator. The equipment and materials required for the various ratings must be located on the premises, and under the full control of the station, unless they are used for a function that the repair station is authorized to obtain by contract. If it obtains them by contract, the repair station shall determine the airworthiness of the article involved, unless the contractor is an appropriately rated repair station.

(c) A certificated domestic or foreign repair station may contract maintenance and alteration of components of a type certificated product to a noncertificated source identified in the repair

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station's inspection procedures manual provided:

(1) The repair station is the manufacturer who originally manufactured the product for which it holds a U.S. type certificate;

(2) The contracted component is included as part of the type certificated product;

(3) The component maintenance is done by the original component manufacturer or its manufacturing licensee; and

(4) Before such a component is returned to service, the repair station ensures that it is being returned to service in accordance with the repair station's quality control system as approved by the Administrator and set forth in the repair station's operations specifications and inspection procedures manual.

(d) The applicant shall choose suitable tools and equipment for the functions named in appendix A to this part, as appropriate to each of his ratings, using those the manufacturer of the article involved recommends for maintaining or altering that article, or their equivalent.

(Secs. 313, 314, and 601 through 610, of the Federal Aviation Act of 1958, as amended (49 U.S.C. 1354, 1355, 1421 through 1430); sec. 6(c), Dept. of Transportation Act (49 U.S.C. 1655(c)))

[Doc. No. 1157, 27 FR 6662, July 13, 1962, as amended by Amdt. 145-19, 47 FR 33391, Aug. 2, 1982; Amdt. 145-21, 53 FR 47375, Nov. 22, 1988]

### § 145.49 Equipment and materials: Limited rating.

(a) An applicant for a limited rating (other than specialized services) under §145.33, must have the equipment and materials to perform any job function appropriate to the rating and class specified in §145.47 for the rating he seeks. However, he need not be equipped for a function that does not apply to the particular make or model article for which he seeks a rating, if he shows that it is not necessary under the recommendations of the manufacturer of the article.

(b) An applicant for a rating for specialized services or techniques under §145.33 must—

(1) For magnetic and penetrant inspec-

tion techniques, residual and continuous methods, and portable equipment for the inspection of welds both on and off the aircraft;

(2) For emergency equipment maintenance, have the equipment and materials to perform inspections, repairs, and tests of all kinds of inflated equipment, the re-packing, re-marking, re-sealing, and re-stocking of life rafts, and the weighing, refilling, and testing of carbon dioxide fire extinguishers and oxygen containers;

(3) For rotor blade maintenance, have the equipment, materials, and technical data recommended by the manufacturer; and

(4) For aircraft fabric work, have the equipment and materials to apply protective coatings to structures, machine stitch fabric panels, perform covering, sewing, and rib stitching operations, apply dope and paint using temperature and humidity control equipment, install patches, grommets, tapes, hooks, and similar equipment, and re-finish entire aircraft and aircraft parts.

### § 145.51 Privileges of certificates.

A certificated domestic repair station may—

(a) Maintain or alter any airframe, powerplant, propeller, instrument, radio, or accessory, or part thereof, for which it is rated;

(b) Approve for return to service any article for which it is rated after it has been maintained or altered;

(c) In the case of a station with an airframe rating, perform 100-hour, annual or progressive inspections, and return the aircraft to service; and

(d) Maintain or alter any article for which it is rated at a place other than the repair station, if—

(1) The function would be performed in the same manner as when performed at the repair station and in accordance with §§145.57 to 145.61;

(2) All necessary personnel, equipment, material, and technical data is available at the place where the work is to be done; and

(3) The inspection procedures manual of the station sets forth approved procedures governing work to be performed at a place other than the repair station.

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However, a certificated repair station may not approve for return to service any aircraft, airframe, aircraft engine, propeller, or appliance after major repair or major alteration unless the work was done in accordance with technical data approved by the Administrator.

[Doc. No. 1157, 27 FR 6662, July 13, 1962, as amended by Amdt. 145-2, 29 FR 5451, Apr. 23, 1964]

### § 145.53 Limitations of certificates.

A certificated domestic repair station may not maintain or alter any airframe, powerplant, propeller, instrument, radio, or accessory for which it is not rated, and may not maintain or alter any article for which it is rated if it requires special technical data, equipment, or facilities that are not available to it.

### § 145.55 Maintenance of personnel, facilities, equipment, and materials.

Each certificated domestic repair station shall provide personnel, facilities equipment, and materials at least equal in quality and quantity to the standards currently required for the issue of the certificate and rating that it holds.

### § 145.57 Performance standards.

(a) Except as provided in §145.2, each certificated domestic repair station shall perform its maintenance and alteration operations in accordance with the standards in part 43 of this chapter. It shall maintain, in current condition, all manufacturers' service manuals, instructions, and service bulletins that relate to the articles that it maintains or alters.

(b) In addition, each certificated domestic repair station with a radio rating shall comply with those sections of part 43 of this chapter that apply to electric systems, and shall use materials that conform to approved specifications for equipment appropriate to its rating. It shall use test apparatus, shop equipment, performance standards, test methods, alterations, and calibrations that conform to the manufacturers' specifications or instructions, approved specification, and, if

not otherwise specified, to accept good practices of the aircraft radio industry.

[Doc. No. 1157, 27 FR 6662, July 13, 1962, as amended by Amdt. 145-5, 31 FR 8585, June 21, 1966; Amdt. 145-7, 31 FR 10614, Aug. 9, 1966]

### § 145.59 Inspection of work performed.

(a) Each certificated domestic repair station shall, before approving an airframe, powerplant, propeller, instrument, radio, or accessory for return to service after maintaining or altering it, have that article inspected by a qualified inspector. After performing a maintenance or alteration operation, the station shall certify on the maintenance or alteration record of the article that it is airworthy with respect to the work performed.

(b) For the purposes of paragraph (a) of this section, the qualified inspector must be a person employed by the station, who has shown by experience as a journeyman that he understands the inspection methods, techniques, and equipment used in determining the airworthiness of the article concerned. He must also be proficient in using various types of mechanical and visual inspection aids appropriate for the article being inspected.

[Doc. No. 1157, 27 FR 6662, July 13, 1962, as amended by Amdt. 145-16, 43 FR 22643, May 25, 1978]

### § 145.61 Performance records and reports.

Each certificated domestic repair station shall maintain adequate records of all work that it does, naming the certificated mechanic or repairman who performed or supervised the work, and the inspector of that work. The station shall keep each record for at least two years after the work it applies to is done.

### § 145.63 Reports of defects or unairworthy conditions.

(a) Each certificated domestic repair station shall report to the Administrator within 72 hours after it discovers any serious defect in, or other recurring unairworthy condition of, an aircraft, powerplant, or propeller, or any component of any of them. The report shall be made on a form and in a manner prescribed by the Administrator, describing the defect or malfunction

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completely without withholding any pertinent information.

(b) In any case where the filing of a report under paragraph (a) of this section might prejudice the repair station, it shall refer the matter to the Administrator for a determination as to whether it must be reported. If the defect or malfunction could result in an imminent hazard to flight, the repair station shall use the most expeditious method it can to inform the Administrator.

(c) The holder of a domestic repair station certificate that is also the holder of a part 121 or 135 certificate, a Type Certificate (including a Supplemental Type Certificate), a Parts Manufacturer Approval (PMA), or a TSO authorization, or that is the licensee of a Type Certificate, need not report a failure, malfunction, or defect under this section if the failure, malfunction, or defect has been reported by it, under § 21.3, § 37.17, § 121.703, or § 135.57 of this chapter.

[Doc. No. 1157, 27 FR 6662, July 13, 1962, as amended by Amdt. 145-9, 35 FR 3155, Feb. 19, 1970; Amdt. 145-13, 35 FR 18189, Nov. 28, 1970; Amdt. 145-25, 66 FR 21067, Apr. 27, 2001]

EFFECTIVE DATE NOTE: By Amdt. 145-22, 65 FR 56206, Sept. 15, 2000, §145.63 was amended by revising paragraphs (a) and (c) and adding paragraphs (d) and (e), effective Jan. 16, 2001. At 65 FR 80743, Dec. 22, 2000, the effective date was delayed until July 16, 2001. At 66 FR 21626, Apr. 30, 2001, the effective date was delayed until Jan. 16, 2002. At 66 FR 58912, Nov. 23, 2001, the effective date was delayed until Jan. 16, 2003. For the convenience of the user, the added and revised text is set forth as follows:

§ 145.63 Reports of defects or unairworthy conditions.

(a) Each certificated domestic repair station shall, within 96 hours after it discovers any serious defect in, or other recurring unairworthy condition of, an aircraft, powerplant, or propeller, or any component of any of them, submit a report to a central collection point as specified by the Administrator. The report shall be made on a form or in another format acceptable to the Administrator, describing the defect or unairworthy condition completely without withholding any pertinent information.

\* \* \* \* \*

(c) The holder of a domestic repair station certificate that also is the holder of a part

121, part 125, or part 135 certificate, a Type Certificate (including a Supplemental Type Certificate), a Parts Manufacturer Approval, or a Technical Standard Order Authorization, or that is the licensee of a Type Certificate holder, need not report a failure, malfunction, or defect under this section if the failure, malfunction, or defect has been reported by it under § 21.3, § 121.703, § 121.704, § 125.409, § 125.410, § 135.415, or § 135.416 of this chapter.

(d) A certificated domestic repair station may submit a Service Difficulty Report (operational or structural) for—

(1) A part 121 certificate holder under § 121.703(g) or § 121.704(f) provided that the report meets the requirements of §§ 121.703(d) and 121.703(e), or §§ 121.704(c) and 121.704(d) of this chapter, as appropriate;

(2) A part 125 certificate holder under § 125.409(g) or § 125.410(f) provided that the report meets the requirements of §§ 125.409(d) and 125.409(e), or §§ 125.410(c) and 125.410(d) of this chapter, as appropriate;

(3) A part 135 certificate holder under § 135.415(g) or § 135.416(f) provided that the report meets the requirements of §§ 135.415(d) and 135.415(e), or §§ 135.416(c) and 135.416(d) of this chapter, as appropriate.

(e) A certificated domestic repair station authorized to report a failure, malfunction, or defect under paragraph (d) of this section shall not report the same failure, malfunction, or defect under paragraph (a) of this section. A copy of the report submitted under paragraph (d) of this section shall be forwarded to the certificate holder.

Subpart C—Foreign Repair Stations

§ 145.71 General requirements.

A repair station certificate with appropriate ratings may be issued for a foreign repair station if the Administrator determines that it will be necessary for maintaining or altering United States registered aircraft and aircraft engines, propellers, appliances, and component parts thereof for use on United States registered aircraft. A foreign repair station must meet the requirements for a domestic repair station certificate, except those in §§ 145.39 through 145.43.

[Doc. No. 25454, 53 FR 47376, Nov. 22, 1988]

§ 145.73 Scope of work authorized.

(a) A certificated foreign repair station may, with respect to United States registered aircraft, maintain or alter aircraft, airframes, powerplants,

propellers, or component parts thereof. The Administrator may prescribe operations specifications containing limitations that the Administrator determines necessary to comply with the airworthiness requirements of this chapter.

(b) A certificated foreign repair station may perform only the specific services and functions within the ratings and classes that are stated in its operations specifications.

[Doc. No. 25454, 53 FR 47376, Nov. 22, 1988]

#### § 145.75 Personnel.

(a) Each applicant for a foreign repair station certificate and rating, or for an additional rating, must provide enough personnel who are able to perform, supervise, and inspect the work for which he seeks a rating, with regard being given to its volume of work.

(b) The supervisors and inspectors of each certificated foreign repair station must understand the regulations in this chapter, FAA airworthiness directives, and the maintenance and service instructions of the manufacturers of the articles to be worked on. However, they do not need airman certificates issued under this chapter and, along with the persons performing the work of the station, are not considered to be airmen within the meaning of section 101(7) of the Federal Aviation Act of 1958 (49 U.S.C. 1301) with respect to work performed in connection with their employment by the foreign repair station.

(c) In cases where the persons engaged in supervision or final inspection are not certificated under this chapter or by the country in which the station is located, their qualifications are determined by the Administrator, based on their ability to meet the requirements of paragraph (a) of this section as shown by oral or practical test or any other method the Administrator elects.

(d) No person may be responsible for the supervision or final inspection of work on an aircraft of United States registry at a foreign repair station unless he can read, write, and understand English.

#### § 145.77 General operating rules.

Each certificated foreign repair station shall comply with the operating rules prescribed in subpart B of this part, except for §§145.61 and 145.63, and has the privileges of a domestic repair station as provided in §145.51.

#### § 145.79 Records and reports.

(a) Each certificated foreign repair station shall maintain such records, and make such reports, with respect to United States registered aircraft, as the Administrator finds necessary, including those prescribed in paragraphs (b) and (c) of this section.

(b) Each certificated foreign repair station shall keep a record of the maintenance and alteration it performs on United States registered aircraft, in enough detail to show the make, model, identification number, and serial number of the aircraft involved, and a description of the work. In a case of major repairs or major alterations, or both, it shall report on a form and in a manner prescribed by the Administrator, giving the original copy to the aircraft owner and sending a copy to the Administrator through the FAA office having jurisdiction over the station. However, if a major repair or alteration is made on a United States scheduled flag air carrier aircraft, the report may be made in the log or other record provided by the carrier for that purpose. Upon request, the station shall make all of its maintenance and alteration records available to the Administrator.

(c) Each certificated foreign repair station shall, within 72 hours after it discovers any serious defect in, or other recurring unairworthy condition of, any aircraft, powerplant, propeller, or any component of any of them, that it works on under this part, report that defect or unairworthy condition to the Administrator.

(d) The holder of a foreign repair station certificate that is also the holder of a Type Certificate (including a Supplemental Type Certificate), a Parts Manufacturer Approval (PMA), or a TSO authorization or that is the licensee of a Type Certificate need not report a failure, malfunction, or defect under this section if the failure, malfunction, or defect has been reported

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by it, under §21.3 of this chapter or §37.17 of this chapter.

[Doc. No. 1157, 27 FR 6662, July 13, 1962, as amended by Amdt. 145-9, 35 FR 3155, Feb. 19, 1970; Amdt. 145-13, 35 FR 18189, Nov. 28, 1970]

EFFECTIVE DATE NOTE: By Amdt. 145-22, 65 FR 56206, Sept. 15, 2000, §145.79 was amended by revising paragraphs (c) and (d) and adding paragraphs (e) and (f), effective Jan. 16, 2001. At 65 FR 80743, Dec. 22, 2000, the effective date was delayed until July 16, 2001. At 66 FR 21626, Apr. 30, 2001, the effective date was delayed until Jan. 16, 2002. At 66 FR 58912, Nov. 23, 2001, the effective date was delayed until Jan. 16, 2003. For the convenience of the user, the added and revised text is set forth as follows:

**§ 145.79 Records and reports.**

\* \* \* \* \*

(c) Each certificated foreign repair station shall, within 96 hours after it discovers any serious defect in, or other recurring unairworthy condition of, any aircraft, powerplant, propeller, or any component of any of them, submit a report to a central collection point as specified by the Administrator. The report shall be made on a form or another format acceptable to the Administrator, describing the defect or unairworthy condition completely without withholding any pertinent information.

(d) The holder of a foreign repair station certificate that also is the holder of a Type Certificate (including a Supplemental Type Certificate), a Parts Manufacturer Approval, or a Technical Standard Order Authorization or that is the licensee of a Type Certificate holder need not report a failure, malfunction, or defect under this section if the failure, malfunction, or defect has been reported by it under §21.3 of this chapter.

(e) A certificated foreign repair station may submit a Service Difficulty Report (operational or structural) for—

(1) A part 121 certificate holder under §121.703(g) or §121.704(f) provided that the report meets the requirements of §§121.703(d) and 121.703(e) or §§121.704(c) and 121.704(d) of this chapter, as appropriate;

(2) A part 125 certificate holder under §125.409(g) or §125.410(f) provided that the report meets the requirements of §§125.409(d) and 125.409(e) or §§125.410(c) and 125.410(d) of this chapter, as appropriate;

(3) A part 135 certificate holder under §135.415(g) or §135.416(f) provided that the report meets the requirements of §§135.415(d) and 135.415(e) or §§135.416(c) and 135.416(d) of this chapter, as appropriate.

(f) A certificated foreign repair station authorized to report a failure, malfunction, or defect under paragraph (e) of this section shall not report the same failure, malfunc-

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tion, or defect under paragraph (c) of this section. A copy of the report submitted under paragraph (e) of this section shall be forwarded to the certificate holder.

**Subpart D—Limited Ratings for Manufacturers**

AUTHORITY: Secs. 313(a), 601, 602, 605, and 607, 72 Stat. 752; 49 U.S.C. 1354(a), 1421, 1422, 1425, and 1427.

SOURCE: Docket No. 1221, 31 FR 5249, Apr. 1, 1966, unless otherwise noted.

**§ 145.101 Application and issue.**

(a) Upon application in a form and manner prescribed by the Administrator, a repair station certificate with a limited rating for a manufacturer may be issued without further showing to—

(1) The holder or licensee of a Type Certificate who has an approved production inspection system;

(2) The holder of a Production Certificate;

(3) Any person who meets the requirements of §21.303 of this chapter, and has the prescribed Fabrication Inspection System; and

(4) The holder of a Technical Standard Order (TSO) authorization.

(b) Limited ratings are issued under paragraph (a) of this section for—

(1) Aircraft manufactured by the holder of the rating under a Type Certificate or a Production Certificate;

(2) Aircraft engines manufactured by the holder of the rating under a Type Certificate or a Production Certificate;

(3) Propellers manufactured by the holder of the rating under a Type Certificate or a Production Certificate;

(4) Appliances manufactured by the holder of the rating (i) under a Type Certificate, (ii) under a Production Certificate, (iii) under a TSO authorization, or (iv) in accordance with §21.303 of this chapter; and

(5) Parts manufactured by the holder of the rating under a TSO authorization or in accordance with §21.303 of this chapter.

**§ 145.103 Privileges of certificates.**

(a) The holder of a repair station certificate issued under this subpart may maintain and approve for return to service any article for which it is

rated, and perform preventive maintenance on that article, if certificated mechanics or repairmen are employed directly in charge of the maintenance and preventive maintenance.

(b) The privileges granted under this section apply to any location or facility unless the certificate limits the holder to specific locations or facilities.

#### § 145.105 Performance standards.

Except as provided in §145.2, each holder of a certificate issued under this subpart shall perform its maintenance and preventive maintenance operations in accordance with part 43 of this chapter.

[Amdt. 145-7, 31 FR 10614, Aug. 9, 1966]

#### APPENDIX A TO PART 145

NOTE: When an asterisk (\*) is shown after any job function listed in this appendix it indicates that the applicant need not have the equipment and material on his premises for performing this job function provided he contracts that particular type work to an outside agency having such equipment and material.

(a) An applicant for a Class 1, 2, 3, or 4 airframe rating must provide equipment and material necessary for efficiently performing the following job functions:

(1) Steel structural components:

Repair or replace steel tubes and fittings using the proper welding techniques when appropriate.

Anticorrosion treatment of the interior and exterior of steel parts,

Metal plating or anodizing\*,

Simple machine operations such as making bushings, bolts, etc.,

Complex machine operations involving the use of planers, shapers, milling machines, etc.\*,

Fabricate steel fittings,

Abrasive air blasting and chemical cleaning operations\*,

Heat treatment\*,

Magnetic inspection\*,

Repair or rebuild metal tanks\*.

(2) Wood structure:

Splice wood spars,

Repair ribs and spars (wood),

Fabricate wood spars\*,

Repair or replace metal ribs,

Interior alignment of wings,

Repair or replace plywood skin,

Treatment against wood decay.

(3) Alloy skin and structural components:

Repair and replace metal skin, using power tools and equipment,

Repair and replace alloy members and components such as tubes, channels, cowlings, fittings, attach angles, etc.,

Alignment of components using jigs or fixtures as in the case of joining fuselage sections or other similar operations,

Make up wooden forming blocks or dies,

Fluorescent inspection of alloy components\*,

Fabricate alloy members and components such as tubes, channels, cowlings, fittings, attach angles, etc.\*

(4) Fabric covering:

Repairs to fabric surfaces,

Recovering and refinishing of components and entire aircraft\*.

(5) Control systems:

Renewing control cables, using swaging and splicing techniques,

Rigging complete control system,

Renewing or repairing all control system hinge point components such as pins, bushings, etc.,

Install control system units and components.

(6) Landing gear systems:

Renew or repair all landing gear hinge point components and attachments such as bolts, bushings, fittings, etc.,

Overhaul and repair elastic shock absorber units,

Overhaul and repair hydraulic-pneumatic shock absorber units\*,

Overhaul and repair brake system components\*,

Conduct retraction cycle tests,

Overhaul and repair electrical circuits,

Overhaul and repair hydraulic system components\*,

Repair or fabricate hydraulic lines.

(7) Electric wiring systems:

Diagnose malfunctions,

Repair or replace wiring,

Installation of electrical equipment,

Bench check electrical components (this check is not to be confused with the more complex functional test after overhaul).

(8) Assembly operations:

Assembly of airframe component parts such as landing gear, wings, controls, etc.,

Rigging and alignment of airframe components, including the complete aircraft and control system,

Installation of powerplants,

Installation of instruments and accessories,

Assembly and fitting of cowling, fairings, etc.,

Repair and assembly of plastic components such as windshields, windows, etc.,

Jack or hoist complete aircraft.

Conduct aircraft weight and balance operations (this function will be conducted in draft-free area)\*,

Balance control surfaces.

(b) An applicant for any class of powerplant rating must provide equipment and

material necessary for efficiently performing the following job functions appropriate to the class of rating applied for:

(1) Classes 1 and 2. (i) Maintain and alter powerplants, including replacement of parts:

- Chemical and mechanical cleaning,
- Disassembly operations,
- Replacement of valve guides and seats\*,
- Replacement of bushings, bearings, pins, inserts, etc.,
- Plating operations (copper, silver, cadmium, etc.)\*,
- Heating operations (involving the use of recommended techniques requiring controlled heating facilities),
- Chilling or shrinking operations,
- Removal and replacement of studs,
- Inscribing or affixing identification information,
- Painting of powerplants and components,
- Anticorrosion treatment for parts,
- Replacement and repair of powerplant alloy sheet metal and steel components such as baffles, fittings, etc.\*

(ii) Inspect all parts, using appropriate inspection aids:

- Magnetic, fluorescent and other acceptable inspection aids\*,
- Precise determination of clearances and tolerances of all parts,
- Inspection for alignment of connecting rods, crankshafts, impeller shafts, etc.,
- Balancing of parts, including crankshafts, impellers, etc.\*,
- Inspection of valve springs.

(iii) Accomplish routine machine work:

Precision grinding, honing and lapping operations (includes crankshaft, cylinder barrels, etc.)\*,

Precision drilling, tapping, boring, milling and cutting operations\*,

Reaming of inserts, bushings, bearings and other similar components,

Refacing of valves.

(iv) Perform assembly operations:

- Valve and ignition timing operations,
- Fabricate and test ignition harnesses,
- Fabricate and test rigid and flexible fluid lines,
- Prepare engines for long- or short-term storage,

Functional check powerplant accessories (this check is not to be confused with the more complex performance test of overhaul)\*,

Hoist engines by mechanical means,

Install engines in aircraft\*,

Align and adjust engine controls\*,

Installation of engines in aircraft and alignment and adjustment of engine controls, when completed, must be inspected by either an appropriately rated certificated mechanic or certificated repairman. Persons supervising or inspecting these functions must thoroughly understand the pertinent installation details involved.

(v) Test overhauled powerplants in compliance with manufacturers' recommendations: The test equipment will be the same as recommended by the manufacturers of the particular engines undergoing test or equivalent equipment that will accomplish the same purpose. The testing function may be performed by the repair station itself, or may be contracted to an outside agency. In either case the repair station will be responsible for the final acceptance of the tested engine.

(2) Class 3. Functional and equipment requirements for turbine engines will be governed entirely by the recommendations of the manufacturer, including techniques, inspection methods, and test.

(c) An applicant for any class of propeller rating must provide equipment and material necessary for efficiently performing the following job functions appropriate to the class of rating applied for:

(1) Class 1. (i) Maintain and alter propellers, including installation and replacement of parts:

- Replace blade tipping,
- Refinish wood propellers,
- Make wood inlays,
- Refinish plastic blades,
- Straighten bent blades within repairable tolerances,
- Modify blade diameter and profile,
- Polish and buff,
- Painting operations,
- Remove from and reinstall on powerplants.

(ii) Inspect components, using appropriate inspection aids:

Inspect propellers for conformity with manufacturer's drawings and specifications,

Inspect hubs and blades for failures and defects, using magnetic or fluorescent inspection devices\*,

Inspect hubs and blades for failures and defects, using all visual aids, including the etching of parts,

Inspect hubs for wear of splines or keyways or any other defect.

(iii) Repair or replace components: (Not applicable to this class).

(iv) Balance propellers:

Test for proper track on aircraft,

Test for horizontal and vertical unbalance (this test will be accomplished with the use of precision equipment).

(v) Test propeller pitch-changing mechanisms: (Not applicable to this class).

(2) Class 2. (i) Maintain and alter propellers, including installation and the replacement of parts:

All functions listed under paragraph (c)(1)(i) of this appendix when applicable to the make and model propeller for which a rating is sought,

Properly lubricate moving parts,

Assemble complete propeller and sub-assemblies, using special tools when required.

(ii) Inspect components, using appropriate inspection aids: All functions listed under paragraph (c)(1)(ii) of this appendix when applicable to the make and model propeller for which a rating is sought.

(iii) Repair or replace component parts:

Replace blades, hubs, or any of their components,

Repair or replace anti-icing devices,

Remove nicks or scratches from metal blades,

Repair or replace electrical propeller components.

(iv) Balance propellers: All functions listed under paragraph (c)(1)(iv) of this appendix when applicable to the make and model propeller for which a rating is sought.

(v) Test propeller pitch-changing mechanism:

Test hydraulically, propellers and components,

Test electrically operated propellers and components,

Test of constant speed devices\*.

(d) An applicant for a radio rating must provide equipment and materials as follows:

(1) For a Class 1 (Communications) radio rating, the equipment and materials necessary for efficiently performing the job functions listed in paragraph (4) and the following job functions:

The testing and repair of headsets, speakers, and microphones.

The measuring of radio transmitter power output.

(2) For a Class 2 (Navigation) radio rating, the equipment and materials necessary for efficiently performing the job functions listed in paragraph (4) and the following job functions:

The testing and repair of headsets.

The testing of speakers.

The repair of speakers.\*

The measuring of loop antenna sensitivity by appropriate methods.

The determination and compensation for quadrantal error in aircraft direction finder radio equipment.

The calibration of any radio navigational equipment, enroute and approach aids, or similar equipment, appropriate to this rating to approved performance standards.

(3) For Class 3 (Radar) radio rating, the equipment and materials necessary for efficiently performing the job functions listed in paragraph (4) and the following job functions:

The measuring of radio transmitter power output.

The metal plating of transmission lines, wave guides, and similar equipment in accordance with appropriate specifications.\*

The pressurization of appropriate radar equipment with dry air, nitrogen, or other specified gases.

(4) For all classes of radio ratings, the equipment and materials necessary for effi-

ciently performing the following job functions:

Perform physical inspection of radio systems and components by visual and mechanical methods.

Perform electrical inspection of radio systems and components by means of appropriate electrical and/or electronic test instruments.

Check aircraft wiring, antennas, connectors, relays, and other associated radio components to detect installation faults.

Check engine ignition systems and aircraft accessories to determine sources of electrical interference.

Check aircraft power supplies for adequacy and proper functioning.

Test radio instruments.\*

Overhaul, test, and check dynamotors, inverters, and other radio electrical apparatus.\*

Paint and refinish equipment containers.\*

Accomplish appropriate methods of marking calibrations, or other information on radio control panels and other components, as required.\*

Make and reproduce drawings, wiring diagrams, and other similar material required to record alterations and/or modifications to radio (photographs may be used in lieu of drawings when they will serve as an equivalent or better means of recording).\*

Fabricate tuning shaft assemblies, brackets, cable assemblies, and other similar components used in radios or aircraft radio installations.\*

Align tuned circuits (RF and IF).

Install and repair aircraft antennas.

Install complete radio systems in aircraft and prepare weight and balance reports\* (That phase of radio installation requiring alterations to the aircraft structure must be performed, supervised, and inspected by qualified personnel).

Measure modulation values, noise, and distortion in radios.

Measure audio and radio frequencies to appropriate tolerances and perform calibration necessary for the proper operation of radios.

Measure radio component values (inductance, capacitance, resistance, etc.).

Measure radiofrequency transmission line attenuation.

Determine wave forms and phase in radios when applicable.

Determine proper aircraft radio antenna, lead-in and transmission line characteristics and locations for type of radio equipment to which connected.

Determine operational condition of radio equipment installed in aircraft by using appropriate portable test apparatus.

Determine proper location for radio antennas on aircraft.

Test all types of electronic tubes, transistors, or similar devices in equipment appropriate to the rating.

(e) An applicant for any class of instrument rating must provide equipment and material necessary for efficiently performing the following job functions, in accordance with pertinent specifications and manufacturers' recommendations, appropriate to the class of rating applied for:

(1) Class 1. (i) Diagnose instrument malfunctions: Diagnose malfunctioning of the following instruments:

- Rate of climb indicators,
- Altimeters,
- Air speed indicators,
- Vacuum indicators,
- Oil pressure gauges,
- Fuel pressure gauges,
- Hydraulic pressure gauges,
- Deicing pressure gauges,
- Pitot-static tube,
- Direct indicating compasses,
- Accelerometer,
- Direct indicating tachometers,
- Direct reading fuel quantity gauges,
- Optical (sextants, drift sights, etc.)\*.

(ii) Maintain and alter instruments, including installation and replacement of parts:

Perform these functions on instruments listed under paragraph (e)(1)(i) of this appendix.

The function of installation includes fabrication of instrument panels and other installation structural components. The repair station should be equipped to perform this function. However, it may be contracted to a competent outside agency equipped to perform the function.

(iii) Inspect, test and calibrate instruments: Perform these functions on instruments listed under paragraph (e)(1)(i) of this appendix, on and off the aircraft, when appropriate.

(2) Class 2. (i) Diagnose instrument malfunctions: Diagnose malfunctioning of the following instruments:

- Tachometers,
- Synchroscope,
- Electric temperature indicators,
- Electric resistance type indicators,
- Moving magnet type indicators,
- Resistance type fuel indicators,
- Warning units (oil-fuel),
- Selsyn systems and indicators,
- Self-synchronous systems and indicators,
- Remote indicating compasses,
- Fuel quantity indicators,
- Oil quantity indicators,
- Radio indicators,
- Ammeters,
- Voltmeters.

(ii) Maintain and alter instruments, including installation and the replacement of parts:

Perform these functions on instruments listed under paragraph (e)(2)(i) of this appendix.

The function of installation includes fabrication of instrument panels and other installation structural components. The repair station should be equipped to perform this function. However, it may be contracted to a competent outside agency equipped to perform the function.

(iii) Inspect, test and calibrate instruments: Perform these functions on instruments listed under paragraph (e)(2)(i) of this appendix, on and off the aircraft, when appropriate.

(3) Class 3. (i) Diagnose instrument malfunctions: Diagnose malfunctioning of the following instruments:

- Turn and bank indicators,
- Directional gyros,
- Horizon gyros,
- Auto pilot control units and components\*,
- Remote reading direction indicators\*.

(ii) Maintain and alter instruments, including installation and replacement of parts:

Perform these functions on instruments listed under paragraph (e)(3)(i) of this appendix.

The function of installation includes fabrication of instrument panels and other installation structural components. The repair station should be equipped to perform this function. However, it may be contracted to a competent outside agency equipped to perform the function.

(iii) Inspect, test and calibrate instruments: Perform these functions on instruments listed under paragraph (e)(3)(i) of this appendix, on and off the aircraft, when appropriate.

(4) Class 4. (i) Diagnose instrument malfunctions: Diagnose malfunctioning of the following instruments:

- Capacitance type quantity gauge,
- Other electronic instruments,
- Engine analyzers.

(ii) Maintain and alter instruments, including installation and replacement of parts:

Perform these functions on instruments listed under paragraph (e)(4)(i) of this appendix.

The function of installation includes fabrication of instrument panels and other installation structural components. The repair station should be equipped to perform this function. However, it may be contracted to a competent outside agency equipped to perform the function.

(iii) Inspect, test and calibrate instruments: Perform these functions on instruments listed under paragraph (e)(4)(i) of this appendix, on and off the aircraft, when appropriate.

(f) An applicant for a Class 1, 2, or 3 accessory rating must provide equipment and material necessary for efficiently performing the following job functions, in accordance

with pertinent specifications and the manufacturers' recommendations:

- (1) Diagnose accessory malfunctions.
- (2) Maintain and alter accessories, including installation and the replacement of the parts.
- (3) Inspect, test, and, where necessary, calibrate accessories.

(Secs. 313, 314, and 601 through 610, of the Federal Aviation Act of 1958, as amended (49 U.S.C. 1354, 1355, 1421 through 1430); sec. 6(c), Dept. of Transportation Act (49 U.S.C. 1655(c)))

[Doc. No. 1157, 27 FR 11693, Nov. 28, 1962, as amended by Amdt. 145-14, 35 FR 19349, Dec. 22, 1970; Amdt. 145-19, 47 FR 33391, Aug. 2, 1982]

EFFECTIVE DATE NOTE: At 66 FR 41117, Aug. 6, 2001, Appendix A to part 145 was removed, effective Apr. 6, 2003.

EFFECTIVE DATE NOTE: At 66 FR 41117, Aug. 6, 2001, part 145 was amended by revising subparts A through D, and adding subpart E, (SFAR No. 36 Note remains unchanged), effective Apr. 6, 2003, with the exception of §145.163 which is effective April 6, 2005. For the convenience of the user, the revised text follows:

## PART 145—REPAIR STATIONS

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### Subpart A—General

#### § 145.1 Applicability.

This part describes how to obtain a repair station certificate. This part also contains the rules a certificated repair station must follow related to its performance of maintenance, preventive maintenance, or alterations of an aircraft, airframe, aircraft engine, propeller, appliance, or component part to which part 43 applies. It also applies to any person who holds, or is required to hold, a repair station certificate issued under this part.

#### § 145.3 Definition of terms.

For the purposes of this part, the following definitions apply:

(a) *Accountable manager* means the person designated by the certificated repair station who is responsible for and has the authority over all repair station operations that are conducted under part 145, including ensuring that repair station personnel follow the regulations and serving as the primary contact with the FAA.

(b) *Article* means an aircraft, airframe, aircraft engine, propeller, appliance, or component part.

(c) *Directly in charge* means having the responsibility 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 does not need to physically observe and direct each worker constantly but must be available for consultation on matters requiring instruction or decision from higher authority.

(d) *Line maintenance means—*

(1) Any unscheduled maintenance resulting from unforeseen events; or

(2) Scheduled checks that contain servicing and/or inspections that do not require specialized training, equipment, or facilities.

**§ 145.5 Certificate and operations specifications requirements.**

(a) No person may operate as a certificated repair station without, or in violation of, a repair station certificate, ratings, or operations specifications issued under this part.

(b) The certificate and operations specifications issued to a certificated repair station must be available on the premises for inspection by the public and the FAA.

**Subpart B—Certification**

**§ 145.51 Application for certificate.**

(a) An application for a repair station certificate and rating must be made in a format acceptable to the FAA and must include the following:

(1) A repair station manual acceptable to the FAA as required by § 145.207;

(2) A quality control manual acceptable to the FAA as required by § 145.211(c);

(3) A list by type, make, or model, as appropriate, of each article for which the application is made;

(4) An organizational chart of the repair station and the names and titles of managing and supervisory personnel;

(5) A description of the housing and facilities, including the physical address, in accordance with § 145.103;

(6) A list of the maintenance functions, for approval by the FAA, to be performed for the repair station under contract by another person in accordance with § 145.217; and

(7) A training program for approval by the FAA in accordance with § 145.163.

(b) The equipment, personnel, technical data, and housing and facilities required for the certificate and rating, or for an additional rating must be in place for inspection at the time of certification or rating approval by the FAA. An applicant may meet the equipment requirement of this paragraph if the applicant has a contract acceptable to the FAA with another person to make the equipment available to the applicant at the time of certification and at any time that it is necessary when the relevant work is being performed by the repair station.

(c) In addition to meeting the other applicable requirements for a repair station certificate and rating, an applicant for a repair station certificate and rating located outside the United States must meet the following requirements:

(1) The applicant must show that the repair station certificate and/or rating is necessary for maintaining or altering the following:

(i) U.S.-registered aircraft and articles for use on U.S.-registered aircraft, or

(ii) Foreign-registered aircraft operated under the provisions of part 121 or part 135, and articles for use on these aircraft.

(2) The applicant must show that the fee prescribed by the FAA has been paid.

(d) An application for an additional rating, amended repair station certificate, or renewal of a repair station certificate must be made in a format acceptable to the FAA. The application must include only that information necessary to substantiate the change or renewal of the certificate.

**§ 145.53 Issue of certificate.**

(a) Except as provided in paragraph (b) of this section, a person who meets the requirements of this part is entitled to a repair station certificate with appropriate ratings prescribing such operations specifications and limitations as are necessary in the interest of safety.

(b) If the person is located in a country with which the United States has a bilateral aviation safety agreement, the FAA may find that the person meets the requirements of this part based on a certification from the civil aviation authority of that country. This certification must be made in accordance with implementation procedures signed by the Administrator or the Administrator's designee.

**§ 145.55 Duration and renewal of certificate.**

(a) A certificate or rating issued to a repair station located in the United States is effective from the date of issue until the repair station surrenders it or the FAA suspends or revokes it.

(b) 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.

(c) A certificated repair station located outside the United States that applies for a renewal of its repair station certificate must—

(1) Submit its request for renewal no later than 30 days before the repair station's current certificate expires. If a request for renewal is not made within this period, the repair station must follow the application procedures in § 145.51.

(2) Send its request for renewal to the FAA office that has jurisdiction over the certificated repair station.

(d) The holder of an expired, surrendered, suspended, or revoked certificate must return it to the FAA.

**§ 145.57 Amendment to or transfer of certificate.**

(a) The holder of a repair station certificate must apply for a change to its certificate in a format acceptable to the FAA. A change to the certificate is necessary if the certificate holder—

(1) Changes the location of the repair station, or

(2) Requests to add or amend a rating.

(b) If the holder of a repair station certificate sells or transfers its assets, the new owner must apply for an amended certificate in accordance with § 145.51.

**§ 145.59 Ratings.**

The following ratings are issued under this subpart:

(a) *Airframe ratings.*

(1) *Class 1:* Composite construction of small aircraft.

(2) *Class 2:* Composite construction of large aircraft.

(3) *Class 3:* All-metal construction of small aircraft.

(4) *Class 4:* All-metal construction of large aircraft.

(b) *Powerplant ratings.*

(1) *Class 1:* Reciprocating engines of 400 horsepower or less.

(2) *Class 2:* Reciprocating engines of more than 400 horsepower.

(3) *Class 3:* Turbine engines.

(c) *Propeller ratings.*

(1) *Class 1:* Fixed-pitch and ground-adjustable propellers of wood, metal, or composite construction.

(2) *Class 2:* Other propellers, by make.

(d) *Radio ratings.*

(1) *Class 1:* Communication equipment. Radio transmitting and/or receiving equipment used in an aircraft to send or receive communications in flight, regardless of carrier frequency or type of modulation used. This equipment includes auxiliary and related aircraft interphone systems, amplifier systems, electrical or electronic intercrew signaling devices, and similar equipment. This equipment does not include equipment used for navigating or aiding navigation of aircraft, equipment used for measuring altitude or terrain clearance, other measuring equipment operated on radio or radar principles, or mechanical, electrical, gyroscopic, or electronic instruments that are a part of communications radio equipment.

(2) *Class 2:* Navigational equipment. A radio system used in an aircraft for en route or approach navigation. This does not include equipment operated on radar or pulsed radio frequency principles, or equipment used for measuring altitude or terrain clearance.

(3) *Class 3:* Radar equipment. An aircraft electronic system operated on radar or pulsed radio frequency principles.

(e) *Instrument ratings.*

(1) *Class 1:* Mechanical. 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.

(2) *Class 2:* Electrical. Self-synchronous and electrical-indicating instruments and systems, including remote indicating instruments, cylinder head temperature gauges, or similar electrical instruments.

(3) *Class 3:* Gyroscopic. 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.

(4) *Class 4:* Electronic. An instrument whose operation depends on electron tubes, transistors, or similar devices, including capacitance type quantity gauges, system amplifiers, and engine analyzers.

(f) *Accessory ratings.*

(1) *Class 1:* A mechanical 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.

(2) *Class 2:* An electrical 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 electrical accessories.

(3) *Class 3:* An electronic accessory that depends on the use of an electron tube transistor, or similar device, including supercharger, temperature, air conditioning controls, or similar electronic controls.

**§ 145.61 Limited ratings.**

(a) The FAA may issue a limited rating to a certificated repair station that maintains or alters only a particular type of airframe, powerplant, propeller, radio, instrument, or accessory, or part thereof, or performs only specialized maintenance requiring equipment and skills not ordinarily performed under other repair station ratings. Such a rating may be limited to a specific model aircraft, engine, or constituent part, or to any number of parts made by a particular manufacturer.

(b) The FAA issues limited ratings for—

(1) Airframes of a particular make and model;

(2) Engines of a particular make and model;

(3) Propellers of a particular make and model;

(4) Instruments of a particular make and model;

(5) Radio equipment of a particular make and model;

(6) Accessories of a particular make and model;

(7) Landing gear components;

(8) Floats, by make;

(9) Nondestructive inspection, testing, and processing;

(10) Emergency equipment;

(11) Rotor blades, by make and model; and

(12) Aircraft fabric work.

(c) For a limited rating for specialized services, the operations specifications of the repair station must contain the specification used to perform the specialized service. The specification may be—

(1) A civil or military specification currently used by industry and approved by the FAA, or

(2) A specification developed by the applicant and approved by the FAA.

### Subpart C—Housing, Facilities, Equipment, Materials, and Data

#### § 145.101 General.

A certificated repair station must provide housing, facilities, equipment, materials, and data that meet the applicable requirements for the issuance of the certificate and ratings the repair station holds.

#### § 145.103 Housing and facilities requirements.

(a) Each certificated repair station must provide—

(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:

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

(ii) 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 activities;

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

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

(v) Ventilation, lighting, and control of temperature, humidity, and other climatic conditions sufficient to ensure personnel per-

form 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.

(c) A certificated repair station may perform maintenance, preventive maintenance, or alterations on articles outside of its housing if it provides suitable facilities that are acceptable to the FAA and meet the requirements of § 145.103(a) so that the work can be done in accordance with the requirements of part 43 of this chapter.

#### § 145.105 Change of location, housing, or facilities.

(a) A certificated repair station may not change the location of its housing without written approval from the FAA.

(b) A certificated repair station may not make any changes to its housing or facilities required by § 145.103 that could have a significant effect on its ability to perform the maintenance, preventive maintenance, or alterations under its repair station certificate and operations specifications without written approval from the FAA.

(c) The FAA may prescribe the conditions, including any limitations, under which a certificated repair station must operate while it is changing its location, housing, or facilities.

#### § 145.107 Satellite repair stations.

(a) A certificated repair station under the managerial control of another certificated repair station may operate as a satellite repair station with its own certificate issued by the FAA. A satellite repair station—

(1) May not hold a rating not held by the certificated repair station with managerial control;

(2) Must meet the requirements for each rating it holds;

(3) Must submit a repair station manual acceptable to the FAA as required by § 145.207; and

(4) Must submit a quality control manual acceptable to the FAA as required by § 145.211(c).

(b) Unless the FAA indicates otherwise, personnel and equipment from the certificated repair station with managerial control and from each of the satellite repair stations may be shared. However, inspection personnel must be designated for each satellite repair station and available at the satellite repair station any time 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.

(c) A satellite repair station may not be located in a country other than the domicile country of the certificated repair station with managerial control.

**§ 145.109 Equipment, materials, and data requirements.**

(a) Except as otherwise prescribed by the FAA, a certificated repair station must have the equipment, tools, and materials necessary to perform the maintenance, preventive maintenance, or alterations under its repair station certificate and operations specifications in accordance with part 43. The equipment, tools, and material must be located on the premises and under the repair station's control when the work is being done.

(b) A certificated repair station must ensure all test and inspection equipment and tools used to make airworthiness determinations on articles are calibrated to a standard acceptable to the FAA.

(c) The equipment, tools, and material must be those recommended by the manufacturer of the article or must be at least equivalent to those recommended by the manufacturer and acceptable to the FAA.

(d) A certificated repair station must maintain, in a format acceptable to the FAA, the documents and data required for the performance of maintenance, preventive maintenance, or alterations under its repair station certificate and operations specifications in accordance with part 43. The following documents and data must be current and accessible when the relevant work is being done:

- (1) Airworthiness directives,
- (2) Instructions for continued airworthiness,
- (3) Maintenance manuals,
- (4) Overhaul manuals,
- (5) Standard practice manuals,
- (6) Service bulletins, and
- (7) Other applicable data acceptable to or approved by the FAA.

**Subpart D—Personnel**

**§ 145.151 Personnel requirements.**

Each certificated repair station must—

(a) Designate a repair station employee as the accountable manager;

(b) Provide qualified personnel to plan, supervise, perform, and approve for return to service the maintenance, preventive maintenance, or alterations performed under the repair station certificate and operations specifications;

(c) Ensure it has a sufficient number of employees with the training or knowledge and experience in the performance of maintenance, preventive maintenance, or alterations authorized by the repair station certificate and operations specifications to en-

sure all work is performed in accordance with part 43; and

(d) Determine the abilities of its noncertificated employees performing maintenance functions based on training, knowledge, experience, or practical tests.

**§ 145.153 Supervisory personnel requirements.**

(a) A certificated repair station must ensure it has a sufficient number of supervisors to direct the work performed under the repair station certificate and operations specifications. The supervisors must oversee the work performed by any individuals who are unfamiliar with the methods, techniques, practices, aids, equipment, and tools used to perform the maintenance, preventive maintenance, or alterations.

(b) Each supervisor must—

(1) If employed by a repair station located inside the United States, be certificated under part 65.

(2) If employed by a repair station located outside the United States—

(i) Have a minimum of 18 months of practical experience in the work being performed; or

(ii) Be trained in or thoroughly familiar with the methods, techniques, practices, aids, equipment, and tools used to perform the maintenance, preventive maintenance, or alterations.

(c) A certificated repair station must ensure its supervisors understand, read, and write English.

**§ 145.155 Inspection personnel requirements.**

(a) A certificated repair station must ensure that persons performing inspections under the repair station certificate and operations specifications are—

(1) Thoroughly familiar with the applicable regulations in this chapter and with the inspection methods, techniques, practices, aids, equipment, and tools used to determine the airworthiness of the article on which maintenance, preventive maintenance, or alterations are being performed; and

(2) Proficient in using the various types of inspection equipment and visual inspection aids appropriate for the article being inspected; and

(b) A certificated repair station must ensure its inspectors understand, read, and write English.

**§ 145.157 Personnel authorized to approve an article for return to service.**

(a) A certificated repair station located inside the United States must ensure each person authorized to approve an article for return to service under the repair station certificate and operations specifications is certificated under part 65.

(b) A certificated repair station located outside the United States must ensure each person authorized to approve an article for return to service under the repair station certificate and operations specifications is—

(1) Trained in or has 18 months practical experience with the methods, techniques, practices, aids, equipment, and tools used to perform the maintenance, preventive maintenance, or alterations; and

(2) Thoroughly familiar with the applicable regulations in this chapter and proficient in the use of the various inspection methods, techniques, practices, aids, equipment, and tools appropriate for the work being performed and approved for return to service.

(c) A certificated repair station must ensure each person authorized to approve an article for return to service understands, reads, and writes English.

**§ 145.159 Recommendation of a person for certification as a repairman.**

A certificated repair station that chooses to use repairmen to meet the applicable personnel requirements of this part must certify in a format acceptable to the FAA that each person recommended for certification as a repairman—

(a) Is employed by the repair station, and

(b) Meets the eligibility requirements of § 65.101.

**§ 145.161 Records of management, supervisory, and inspection personnel.**

(a) A certificated repair station must maintain and make available in a format acceptable to the FAA the following:

(1) A roster of management and supervisory personnel that includes the names of the repair station officials who are responsible for its management and the names of its supervisors who oversee maintenance functions.

(2) A roster with the names of all inspection personnel.

(3) A roster of personnel authorized to sign a maintenance release for approving a maintained or altered article for return to service.

(4) A summary of the employment of each individual whose name is on the personnel rosters required by paragraphs (a)(1) through (a)(3) of this section. The summary must contain enough information on each individual listed on the roster to show compliance with the experience requirements of this part and must include the following:

(i) Present title,

(ii) Total years of experience and the type of maintenance work performed,

(iii) Past relevant employment with names of employers and periods of employment,

(iv) Scope of present employment, and

(v) The type of mechanic or repairman certificate held and the ratings on that certificate, if applicable.

(b) Within 5 business days of the change, the rosters required by this section must reflect changes caused by termination, reassignment, change in duties or scope of assignment, or addition of personnel.

**§ 145.163 Training requirements.**

(a) A certificated repair station must have an employee training program approved by the FAA that consists of initial and recurrent training. For purposes of meeting the requirements of this paragraph, beginning April 6, 2005—

(1) An applicant for a repair station certificate must submit a training program for approval by the FAA as required by § 145.51(a)(7).

(2) A repair station certificated before that date must submit its training program to the FAA for approval by the last day of the month in which its repair station certificate was issued.

(b) The training program must ensure each employee assigned to perform maintenance, preventive maintenance, or alterations, and inspection functions is capable of performing the assigned task.

(c) A certificated repair station must document, in a format acceptable to the FAA, the individual employee training required under paragraph (a) of this section. These training records must be retained for a minimum of 2 years.

(d) A certificated repair station must submit revisions to its training program to its certificate holding district office in accordance with the procedures required by § 145.209(e).

**Subpart E—Operating Rules**

**§ 145.201 Privileges and limitations of certificate.**

(a) A certificated repair station may—

(1) Perform maintenance, preventive maintenance, or alterations in accordance with part 43 on any article for which it is rated and within the limitations in its operations specifications.

(2) Arrange for another person to perform the maintenance, preventive maintenance, or alterations of any article for which the certificated repair station is rated. If that person is not certificated under part 145, the certificated repair station must ensure that the noncertificated person follows a quality control system equivalent to the system followed by the certificated repair station.

(3) Approve for return to service any article for which it is rated after it has performed maintenance, preventive maintenance, or an alteration in accordance with part 43.

(b) A certificated repair station may not maintain or alter any article for which it is not rated, and may not maintain or alter any

article for which it is rated if it requires special technical data, equipment, or facilities that are not available to it.

(c) A certificated repair station may not approve for return to service<sup>7</sup>

(1) Any article unless the maintenance, preventive maintenance, or alteration was performed in accordance with the applicable approved technical data or data acceptable to the FAA.

(2) Any article after a major repair or major alteration unless the major repair or major alteration was performed in accordance with applicable approved technical data; and

(3) Any experimental aircraft after a major repair or major alteration performed under §43.1(b) unless the major repair or major alteration was performed in accordance with methods and applicable technical data acceptable to the FAA.

**§ 145.203 Work performed at another location.**

A certificated repair station may temporarily transport material, equipment, and personnel needed to perform maintenance, preventive maintenance, alterations, or certain specialized services on an article for which it is rated to a place other than the repair station's fixed location if the following requirements are met:

(a) The work is necessary due to a special circumstance, as determined by the FAA; or

(b) It is necessary to perform such work on a recurring 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.

**§ 145.205 Maintenance, preventive maintenance, and alterations performed 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) A certificated repair station that performs maintenance, preventive maintenance, or alterations for an air carrier or commercial operator that has a continuous airworthiness maintenance program under part 121 or part 135 must follow the air carrier's or commercial operator's program and applicable sections of its maintenance manual.

(b) 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.

(c) 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.

(d) Notwithstanding the housing requirement of §145.103(b), the FAA may grant approval for a certificated repair station to perform line maintenance for an air carrier certificated under part 121 or part 135, or a foreign air carrier or foreign person operating a U.S.-registered aircraft in common carriage under part 129 on any aircraft of that air carrier or person, provided—

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

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

(3) The certificated repair station's operations specifications include an authorization to perform line maintenance.

**§ 145.207 Repair station manual.**

(a) A certificated repair station must prepare and follow a repair station manual acceptable to the FAA.

(b) A certificated repair station must maintain a current repair station manual.

(c) A certificated repair station's current repair station manual must be accessible for use by repair station personnel required by subpart D of this part.

(d) A certificated repair station must provide to its certificate holding district office the current repair station manual in a format acceptable to the FAA.

(e) A certificated repair station must notify its certificate holding district office of each revision of its repair station manual in accordance with the procedures required by §145.209(j).

**§ 145.209 Repair station manual contents.**

A certificated repair station's manual must include the following:

(a) An organizational chart identifying—

(1) Each management position with authority to act on behalf of the repair station,

(2) The area of responsibility assigned to each management position, and

(3) The duties, responsibilities, and authority of each management position;

(b) Procedures for maintaining and revising the rosters required by §145.161;

(c) A description of the certificated repair station's operations, including the housing, facilities, equipment, and materials as required by subpart C of this part;

(d) Procedures for—

(1) Revising the capability list provided for in §145.215 and notifying the certificate holding district office of revisions to the list, including how often the certificate holding district office will be notified of revisions; and

(2) The self-evaluation required under §145.215(c) for revising the capability list, including methods and frequency of such evaluations, and procedures for reporting the results to the appropriate manager for review and action;

(e) Procedures for revising the training program required by §145.163 and submitting revisions to the certificate holding district office for approval;

(f) Procedures to govern work performed at another location in accordance with §145.203;

(g) Procedures for maintenance, preventive maintenance, or alterations performed under §145.205;

(h) Procedures for—

(1) Maintaining and revising the contract maintenance information required by §145.217(a)(2)(i), including submitting revisions to the certificate holding district office for approval; and

(2) Maintaining and revising the contract maintenance information required by §145.217(a)(2)(ii) and notifying the certificate holding district office of revisions to this information, including how often the certificate holding district office will be notified of revisions;

(i) A description of the required records and the recordkeeping system used to obtain, store, and retrieve the required records;

(j) Procedures for revising the repair station's manual and notifying its certificate holding district office of revisions to the manual, including how often the certificate holding district office will be notified of revisions; and

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

#### §145.211 Quality control system.

(a) A certificated repair station must establish and maintain a quality control system acceptable to the FAA that ensures the airworthiness of the articles on which the repair station or any of its contractors performs maintenance, preventive maintenance, or alterations.

(b) Repair station personnel must follow the quality control system when performing maintenance, preventive maintenance, or alterations under the repair station certificate and operations specifications.

(c) A certificated repair station must prepare and keep current a quality control manual in a format acceptable to the FAA that includes the following:

(1) A description of the system and procedures used for—

(i) Inspecting incoming raw materials to ensure acceptable quality;

(ii) Performing preliminary inspection of all articles that are maintained;

(iii) Inspecting all articles that have been involved in an accident for hidden damage

before maintenance, preventive maintenance, or alteration is performed;

(iv) Establishing and maintaining proficiency of inspection personnel;

(v) Establishing and maintaining current technical data for maintaining articles;

(vi) Qualifying and surveilling noncertificated persons who perform maintenance, prevention maintenance, or alterations for the repair station;

(vii) Performing final inspection and return to service of maintained articles;

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

(ix) Taking corrective action on deficiencies;

(2) References, where applicable, to the manufacturer's inspection standards for a particular article, including reference to any data specified by that manufacturer;

(3) A sample of the inspection and maintenance forms and instructions for completing such forms or a reference to a separate forms manual; and

(4) Procedures for revising the quality control manual required under this section and notifying the certificate holding district office of the revisions, including how often the certificate holding district office will be notified of revisions.

(d) A certificated repair station must notify its certificate holding district office of revisions to its quality control manual.

#### §145.213 Inspection of maintenance, preventive maintenance, or alterations.

(a) A certificated repair station must inspect each article upon which it has performed maintenance, preventive maintenance, or alterations as described in paragraphs (b) and (c) of this section before approving that article for return to service.

(b) A certificated repair station must certify on an article's maintenance release that the article is airworthy with respect to the maintenance, preventive maintenance, or alterations performed after—

(1) The repair station performs work on the article; and

(2) An inspector inspects the article on which the repair station has performed work and determines it to be airworthy with respect to the work performed.

(c) For the purposes of paragraphs (a) and (b) of this section, an inspector must meet the requirements of §145.155.

(d) Except for individuals employed by a repair station located outside the United States, only an employee certificated under part 65 is authorized to sign off on final inspections and maintenance releases for the repair station.

**§ 145.215 Capability list.**

(a) A certificated repair station with a limited rating may perform maintenance, preventive maintenance, or alterations on an article if the article is listed on a current capability list acceptable to the FAA or on the repair station's operations specifications.

(b) The capability list must identify each article by make and model or other nomenclature designated by the article's manufacturer and be available in a format acceptable to the FAA.

(c) An article may be listed on the capability list only if the article is within the scope of the ratings of the repair station's certificate, and only after the repair station has performed a self-evaluation in accordance with the procedures under §145.209(d)(2). The repair station must perform this self-evaluation to determine that the repair station has all of the housing, facilities, equipment, material, technical data, processes, and trained personnel in place to perform the work on the article as required by part 145. The repair station must retain on file documentation of the evaluation.

(d) Upon listing an additional article on its capability list, the repair station must provide its certificate holding district office with a copy of the revised list in accordance with the procedures required in §145.209(d)(1).

**§ 145.217 Contract maintenance.**

(a) A certificated repair station may contract a maintenance function pertaining to an article to an outside source provided—

(1) The FAA approves the maintenance function to be contracted to the outside source; and

(2) The repair station maintains and makes available to its certificate holding district office, in a format acceptable to the FAA, the following information:

(i) The maintenance functions contracted to each outside facility; and

(ii) The name of each outside facility to whom the repair station contracts maintenance functions and the type of certificate and ratings, if any, held by each facility.

(b) A certificated repair station may contract a maintenance function pertaining to an article to a noncertificated person provided—

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

(2) The certificated repair station remains directly in charge of the work performed by the noncertificated person; and

(3) The certificated repair station verifies, by test and/or inspection, that the work has been performed satisfactorily by the noncertificated person and that the article is airworthy before approving it for return to service.

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

**§ 145.219 Recordkeeping.**

(a) A certificated repair station must retain records in English that demonstrate compliance with the requirements of part 43. The records must be retained in a format acceptable to the FAA.

(b) A certificated repair station must provide a copy of the maintenance release to the owner or operator of the article on which the maintenance, preventive maintenance, or alteration was performed.

(c) A certificated repair station must retain the records required by this section for at least 2 years from the date the article was approved for return to service.

(d) A certificated repair station must make all required records available for inspection by the FAA and the National Transportation Safety Board.

**§ 145.221 Reports of failures, malfunctions, or defects.**

(a) A certificated repair station must report to the FAA within 96 hours after it discovers any failure, malfunction, or defect of an article. The report must be in a format acceptable to the FAA.

(b) The report required under paragraph (a) of this section must include as much of the following information as is available:

(1) Aircraft registration number;

(2) Type, make, and model of the article;

(3) Date of the discovery of the failure, malfunction, or defect;

(4) Nature of the failure, malfunction, or defect;

(5) Time since last overhaul, if applicable;

(6) Apparent cause of the failure, malfunction, or defect; and

(7) Other pertinent information that is necessary for more complete identification, determination of seriousness, or corrective action.

(c) The holder of a repair station certificate that is also the holder of a part 121, 125, or 135 certificate; type certificate (including a supplemental type certificate); parts manufacturer approval; or technical standard order authorization, or that is the licensee of a type certificate holder, does not need to report a failure, malfunction, or defect under this section if the failure, malfunction, or defect has been reported under §21.3, 121.703, 121.704, 125.409, 125.410, 135.415, or 135.416 of this chapter.

(d) A certificated repair station may submit a service difficulty report (operational or structural) for the following:

(1) A part 121 certificate holder under §121.703(g) or §121.704(f), provided the report meets the requirements of §§121.703(d) and

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121.703(e), or §§121.704(c) and 121.704(d) of this chapter, as appropriate.

(2) A part 125 certificate holder under §125.409(g) or §125.410(f), provided the report meets the requirements of §§125.409(d) and 125.409(e), or §§125.410(c) and 125.410(d) of this chapter, as appropriate;

(3) A part 135 certificate holder under §135.415(g) or §135.416(f), provided the report meets the requirements of §§135.415(d) and 135.415(e), or §135.416(c) and 135.416(d) of the chapter, as appropriate.

(e) A certificated repair station authorized to report a failure, malfunction, or defect under paragraph (d) of this section must not report the same failure, malfunction, or defect under paragraph (a) of this section. A copy of the report submitted under paragraph (d) of this section must be forwarded to the certificate holder.

**§ 145.223 FAA inspections.**

(a) A certificated repair station must allow the FAA to inspect that repair station at any time to determine compliance with this chapter.

(b) A certificated repair station may not contract for the performance of a maintenance function on an article with a noncertificated person unless it provides in its contract with the noncertificated person that the FAA may make an inspection and observe the performance of the noncertificated person's work on the article.

(c) A certificated repair station may not return to service any article on which a maintenance function was performed by a noncertificated person if the noncertificated person does not permit the FAA to make the inspection described in paragraph (b) of this section.

**PART 147—AVIATION MAINTENANCE TECHNICIAN SCHOOLS**

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APPENDIX A TO PART 147—CURRICULUM REQUIREMENTS

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APPENDIX C TO PART 147—AIRFRAME CURRICULUM SUBJECTS

APPENDIX D TO PART 147—POWERPLANT CURRICULUM SUBJECTS

AUTHORITY: 49 U.S.C. 106(g), 40113, 44701-44702, 44707-44709.

SOURCE: Docket No. 1157, 27 FR 6669 July 13, 1962, unless otherwise noted.

**Subpart A—General**

**§ 147.1 Applicability.**

This part prescribes the requirements for issuing aviation maintenance technician school certificates and associated ratings and the general operating rules for the holders of those certificates and ratings.

**§ 147.3 Certificate required.**

No person may operate as a certificated aviation maintenance technician school without, or in violation of, an aviation maintenance technician school certificate issued under this part.

[Doc. No. 15196, 41 FR 47230, Oct. 28, 1976]

**§ 147.5 Application and issue.**

(a) An application for a certificate and rating, or for an additional rating, under this part is made on a form and in a manner prescribed by the Administrator, and submitted with—

- (1) A description of the proposed curriculum;
- (2) A list of the facilities and materials to be used;