VOLUME 2 AIR OPERATOR AND AIR AGENCY CERTIFICATION AND APPLICATION PROCESS

CHAPTER 11 CERTIFICATION OF A TITLE 14 CFR PART 145 REPAIR STATION

Section 1 Safety Assurance System: Introduction

2-1181 PURPOSE. This chapter defines relevant terms for Title 14 of the Code of Federal Regulations (14 CFR) part 145 repair stations. It also explains the policies and procedures applicable to a repair station, regardless of its geographic location.

NOTE: Part 145 domestic certification will be completed using the Safety Assurance System (SAS) certification process.

2-1182 GENERAL.

A. Definitions.

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

- Repair station number;
- What the repair station's ratings are to include;
- Class ratings;
- Limited ratings;
- Limited specialized service ratings;
- The name (and any doing business as (DBA)) and location of the repair station;
- Date the certificate was issued; and
- The expiration date, as applicable.

2) Accountable Manager. The certificated repair station (CRS) designates the accountable manager as responsible for, and having authority over all repair station operations conducted under part 145. This person's duties include ensuring that repair station personnel follow the regulations and serving as the primary contact with the FAA.

NOTE: The FAA's definition of an accountable manager may differ from the European Aviation Safety Agency's (EASA) definition of an accountable manager; however, one person may serve both positions. The FAA has revised the operations specifications (OpSpecs) and enhanced Vital Information Database (eVID) to include both.

3) Article. For the purposes of part 145, an article is an aircraft, airframe, aircraft engine, propeller, appliance, or component part.

4) Capability List (CL). A CL is a list of articles on which the repair station is rated to perform maintenance, preventive maintenance, or alterations.

5) Certificated Repair Station. A CRS is a maintenance provider that has a fixed main base location, has met the certification requirements of part 145, and is engaged in the maintenance, preventive maintenance, inspection, and alteration of aircraft and aircraft products as defined in 14 CFR part 43. In addition, a repair station may have:

- Additional fixed locations located close to and within the same geographic area as the main base,
- Satellite facilities, and
- Line maintenance authorization.

6) Class Ratings. Class ratings are issued if the repair station can prove its capability to maintain a representative number of products under this rating. After issuance of a class rating, it should not have restrictions to a specific product added. For such a case, issue a limited rating.

7) Contracting. Contracting means entering into an agreement between the originating repair station and another person to perform maintenance functions on an article. The originating repair station will exercise the privilege of its certificate and assume responsibility for the work performed by the contracted person.

8) Correction. A correction is an action to eliminate a detected nonconformity as it relates to the articles or the maintenance processes.

9) Corrective Action. Corrective action is an action to eliminate the cause of a detected nonconformity or other undesirable condition to prevent its recurrence.

10) Correspondence Acceptable to the FAA—Documents, Manual or a Revision Submitted to the FAA for Acceptance. The air agency may immediately initiate and use the submitted correspondence contents without formal FAA acceptance. The FAA considers a document, manual, or revision acceptable. There is no requirement for the FAA to acknowledge receipt of or initiate a formal letter of acceptance upon review of the submitted correspondence. Submission of this document may be as a written or electronic document.

11) Directly in Charge. The person directly in charge is responsible for the work of a CRS that performs maintenance, preventive maintenance, alterations, or other functions affecting aircraft airworthiness.

a) 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 a higher authority.

b) A person designated as “directly in charge” of maintenance, preventive maintenance, or alterations must hold an appropriate Airman Certificate.

NOTE: This provision is not required for repair stations certificated outside the United States.

c) The repair station is responsible for providing adequate personnel who can perform, supervise, and inspect the work for which the station is rated. Additionally, each repair station determines the abilities of its supervisors and ensures that there are enough supervisory personnel for all phases of its activities.

12) Geographic Authorization. A CRS outside the United States is issued geographic authorization to maintain U.S.-registered aircraft where an appropriately rated repair station is not available. This provision is limited to repair stations located solely outside the United States that hold an airframe rating for an aircraft of the same make and model for which the repair station is rated.

13) Limited Ratings. Repair stations are issued limited ratings for the performance of maintenance on particular makes and models of airframes, powerplants, propellers, radios, instruments, accessories, and/or parts.

14) Limited Specialized Service Ratings. Limited specialized service ratings are issued for a special maintenance function when the function is performed in accordance with a specification approved by the FAA. The OpSpecs must include the specifications used by the repair station to perform that service in accordance with part 145, § 145.61(c). No function of a limited rating for specialized service may be contracted out. Hydrostatic testing of pressure cylinders falls under Title 49 of the Code of Federal Regulations (49 CFR) part 180. This testing does not receive ratings. Direct questions regarding hydrostatic testing of pressure cylinders to the Department of Transportation (DOT) Pipeline and Hazardous Materials Safety Administration (http://www.phmsa.dot.gov).

NOTE: The repair station may request a limited rating for specialized services utilizing a civil or Military Specification (MIL-SPEC) currently used by industry. The principal inspector (PI) should carefully consider if this specification covers all areas required for the repair prior to approval. Will this repair, when completed, allow approval for return to service for the article? In some cases, the PI may need assistance from the Aircraft Certification Office (ACO) to determine if the specification is adequate for the rating requested. The PI is responsible for verifying the applicant can accomplish the work outlined in the specification. If the specification does not meet the requirements of part 43, § 43.13, then the PI should inform the applicant that the specification may be used as part of a process the applicant can develop under the provisions of § 145.61(c)(2). The PI must evaluate if the process is appropriate for the article. The PI should note the need for additional limitations, if any, in the limitation section of the OpSpecs. Many civil and MIL-SPECs currently used by industry are generic. The PI should verify the repair station has provisions in its manual for evaluation of the article to determine if anything would prohibit the specification utilization.

15) Line Maintenance. Line maintenance is unscheduled maintenance resulting from unforeseen events, or scheduled checks that contain servicing and/or inspections that do not require specialized training, equipment, or facilities. Line maintenance is not a rating but an authorization to provide a service to an air carrier certificated under 14 CFR parts 121 or 135, or

a foreign air carrier or foreign person operating a U.S.-registered aircraft in common carriage under 14 CFR part 129 on any aircraft of that air carrier or person.

a) A repair station certificated to provide maintenance on the complete aircraft or engine under a class or limited rating will have the line maintenance authorization listed on OpSpec D107, if located at a site other than the main base. For a repair station authorized to have multiple locations across geographic boundaries, the PI must develop a surveillance program that encompasses all facilities of the repair station regardless of location.

b) If the repair station has line maintenance authorization, then the repair station main base must have certification on the complete airframe or engine. OpSpec A003 would list the Manufacturer (e.g., Boeing), Make/Model (e.g., B737), or engine, and under the additional limitations, the statement, "Line maintenance is authorized at the main base and any location listed on OpSpec D107." Unless the repair station has aircraft limited to line maintenance only listed, OpSpec D107 does not require listing of the main base location.

c) A repair station with only a line maintenance authorization cannot provide work away from station from the line maintenance location(s). The FAA gives line maintenance authorization to the repair station to provide line maintenance for a specific air carrier, at a specific location, for a specific job. It is not a blanket approval. By granting this approval, the FAA certifies that the repair station is capable of performing that specific maintenance. This is an authorization granted to the repair station; therefore, all regulations governing the repair station will apply except for housing. Section 145.205(d) provides relief for housing.

NOTE: A U.S. domestic repair station issued an OpSpec D107, and holding an EASA approval may perform line maintenance in accordance with its EASA Repair Station Manual (RSM) supplement.

16) Maintenance Function. For the purposes of part 145 repair stations, a maintenance function is a step or series of steps in the process of performing maintenance, preventive maintenance, or alterations. Only persons authorized under §§ 145.157(a) and 145.213(d) may approve an article for return to service, perform a final inspection, or sign a maintenance release.

17) Operations Specifications. The FAA issues OpSpecs to indicate the authorizations and limitations to ratings as specified on the Air Agency Certificate.

18) Quality Control Manual (QCM). The QCM describes the inspection and quality control (QC) system and procedures used by the repair station.

19) Repair Station Manual. The RSM describes the procedures and policies of a repair station's operations.

20) Satellite Repair Station. A satellite repair station is an additional certificated facility or location under the managerial control of another CRS.

a) The main base must have procedures in the RSM that cover the management of the satellite, and a procedure on how the repair station will assure the satellite is following the quality system acceptable to the FAA.

b) The satellite may use the RSM and quality system of the main base repair station. If the satellite elects to use the main base RSM and quality system, then the satellite manual and quality system must define any differences between the two locations. The certifying PI for the satellite repair station must review the differences between the managerial and satellite repair stations to assure the satellite repair station meets the requirement of the regulation.

21) Supervisor. 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. Each supervisor must, if employed by a repair station located inside the United States, hold a certificate issued under 14 CFR part 65.

a) The preamble to part 145 (refer to § 145.153) indicates a difference between a "supervisor" and a "person directly in charge." A supervisor physically observes and directs a worker when needed. 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 a decision from a higher authority.

NOTE: This does not preclude the repair station from assigning one supervisor to multiple shops or areas provided the supervisor is properly certificated and qualified. The supervisor's workload should allow adequate time to oversee the work.

b) Part 145 does not dictate the ratio of supervisors to individuals under supervision. The repair station establishes this ratio. However, § 145.153 states in part that a CRS must ensure it has a sufficient number of supervisors to direct the work performed under the repair station's certificate and OpSpecs.

c) Part 43 identifies persons authorized to perform maintenance, preventive maintenance, rebuilding, and alterations. Section 43.3(d) states in part that a person working under the supervision of a mechanic or repairman certificate holder may perform the maintenance, preventive maintenance, and alterations that the supervisor is authorized to perform, if:

- The supervisor personally observes the work being done to the extent necessary to ensure that it is being done properly, and
- The supervisor is readily available, in person, for consultation.

NOTE: The definition of "in person" is "in one's bodily presence." An example of this is "applicants are requested to apply in person."

B. Capability List. A CRS with a limited rating may perform maintenance, preventive maintenance, or alterations on an article if listed on a current CL acceptable to the FAA or on the repair station's OpSpecs.

1) If the repair station chooses to use a CL, the RSM must:

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

2) The CL itself may be a separate document or part of the RSM; however, the manual must contain the procedures for revising the list and for performing the self-evaluation.

3) If the repair station elects to maintain a separate CL, it must perform a self-evaluation before adding an article to the CL. The individual(s) performing the self-evaluation should be familiar with the repair station processes and be able to perform an audit to determine compliance with part 145. The self-evaluation procedures in the RSM should ensure that the repair station has:

- The appropriate limited rating;
- Adequate housing and facilities;
- The recommended tools, equipment, and materials;
- Current technical data; and
- Sufficient qualified personnel.

4) The repair station must report the results of the self-evaluation to the appropriate repair station manager for review. If the self-evaluation was satisfactory, the CL may undergo revision. The repair station can submit the revised list and any other necessary technical data with a transmittal document to the PI at the CHDO.

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

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

6) A repair station that chooses to use a CL must maintain a current CL acceptable to the FAA, identifying each article by make and model or other nomenclature designated by the manufacturer. A CL should not use the term "all" to denote the make or model. "Series" may describe the model, provided the term does not denote a broad classification that is not well-defined. For example, "Cessna 150 series aircraft" may be an appropriate entry; whereas "Cessna 100 series aircraft" is a broad classification which includes many substantially different models.

7) If the repair station does not maintain or have the necessary tools, equipment, housing, facilities, and trained personnel to perform the required maintenance on the article(s) listed on the CL, delete the article(s) from the CL.

NOTE: The repair station must maintain, or have written evidence that it can obtain the tools and equipment required to maintain the articles on the CL.

C. Additional Fixed Locations. A repair station may have additional fixed locations (facilities) without certificating each facility as a standalone or satellite repair station. The FAA may grant this authorization if all of the facilities are localized and within a defined area, such as several buildings or hangars, which may be on or near the same airport or at or near the address stated on the repair station certificate. All locations will operate under the authority of a single repair station certificate, each within the same geographic location as the main base and CHDO.

1) Additional locations are not separate facilities and must collectively be considered one repair station. A geographic authorization or other repair station certificate is not required. However, the repair station must have procedures in its manual to describe how it will operate in this manner and remain compliant with its manual and the requirements of part 145. The FAA does not consider this situation work away from the station. The OpSpecs must list each fixed location.

NOTE: The aviation safety inspector (ASI) and repair station accountable manager must collaborate when making a determination that repair station operations require additional locations. The FAA's primary concern is that all the facilities are localized and within a defined area of operation. The repair station must assure ASIs reasonable access to all locations, without the inconvenience of extended travel distances. Extended travel between facilities may have an adverse impact on FAA oversight and surveillance capabilities. Surveillance for the CRS must include all facilities.

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

3) The primary facility must have full control over all additional locations. It is not necessary that each location be completely equipped since tools, equipment, parts, etc., can be transported between facilities.

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

NOTE: Under normal circumstances, repair stations should not have additional fixed locations authorized across CHDO or regional boundaries since ASIs are responsible for overseeing the entire operation. Consideration of additional fixed locations outside the CHDO's area of responsibility requires coordination with the regional AFS-230 branches. Additional fixed locations that cross regional boundaries require coordination with each region and AFS-300, Aircraft Maintenance Division. Additional fixed locations outside regional boundaries should be coordinated with each regional Flight Standards division (RFSD) with concurrence from the Repair Station Branch, AFS-340.

D. Maintenance Functions. The FAA must approve maintenance functions before a CRS contracts out the performance of maintenance, preventive maintenance, or alterations of an article. Maintenance functions requiring approval are those items for which a repair station is rated to maintain, but chooses to contract out that maintenance, as referenced in § 145.201(a) to any maintenance provider.

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

NOTE: A repair station may contract maintenance functions to both FAA-certificated and non-FAA-certificated facilities. The FAA must approve all maintenance functions for both certificated and noncertificated providers. Only those functions that are within the scope of the repair station's ratings may receive approval. Purchase of parts maintained and approved for return to service from another CRS or work performed outside the scope of the originating repair stations ratings are not contracting. These actions may be considered brokering in that the originating repair station does not or cannot exercise the privilege of its certificate on the article.

1) If a repair station contracts out a maintenance function to another FAA-CRS, the originating repair station must determine that the contracted repair station has the proper rating to perform the maintenance. The repair station doing the maintenance is responsible for approving the work function performed; the originating repair station is responsible for approval for return to service of the article. The repair station must properly process articles received from a certificated facility through its own receiving inspection procedures before performing further maintenance.

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

- The non-FAA-certificated facility follows a QC program equivalent to the FAA-CRSs system with respect to the work performed for the CRS.
- Testing and/or inspection verify the work performed on the article.
- The article is airworthy with respect to the work performed by the noncertificated source.
- The RSM includes a procedure ensuring that contracts contain a provision for FAA inspections.

3) The repair station is responsible for approving for return to service any article which has had work performed on it and for ensuring the article's airworthiness. Inspection procedures within the manual must enable the repair station to determine the airworthiness of the work performed on each article received. If the repair station cannot determine the quality of the contracted work by inspection or test, it can contract the work to only an FAA-certificated facility that is able to inspect the performed work for compliance with part 43.

NOTE: It is not enough for the contracting repair station to give its QCM to the noncertificated contractor and assume the contractor will follow proper procedures. The CRS must provide adequate surveillance to ensure the contractor follows its QC procedures.

4) Section 43.17(c) authorizes an Approved Maintenance Organization (AMO) whose system of QC Transport Canada has approved to perform maintenance on U.S. aeronautical products. Section 43.17(d) requires the maintenance, preventive maintenance, or alteration to be performed such that the affected product complies with the applicable requirements of 14 CFR part 36.

a) These are the same regulations that a U.S.-CRS must follow. Section 43.17(e)(1) requires the AMO to approve the article for return to service after performing maintenance. Section 43.17(d) states that the AMO must perform and record the work in accordance with part 43. The Canadian form, Transport Canada Civil Aviation (TCCA) Form One, Authorized Release Certificate, is similar to FAA Form 8130-3, Authorized Release Certificate, Airworthiness Approval Tag, and meets the recording requirements when filled out properly.

b) Although not FAA-CRSs, Canadian AMOs performing work per § 43.17 comply with the same requirements that U.S. repair stations must when performing maintenance, preventive maintenance, or alterations. Part 43 authorizes a certificated mechanic to provide approval for return to service after performing maintenance, preventive maintenance, or alterations. The same performance requirements as the repair station also hold for this person. The mechanic approves the article for return to service by providing documentation that complies with § 43.9. The repair station would have no requirement to conduct an on-site inspection of the mechanic's facilities.

F. Maintenance Performed at Another Location. A repair station may perform work away from its fixed location for a one-time special circumstance or on a recurring basis. Section 145.203(a) states that the FAA determines these special circumstances.

1) A repair station may perform maintenance away from its fixed location for special circumstance, such as an aircraft on the ground or in preparation for a ferry flight. (OpSpec D100 is not required.)

a) If the repair station does not include a procedure in its manual for work away from station for emergency repairs, then it must submit each request to the PI for evaluation on a case-by-case basis. The PI will make a determination and inform the repair station of any parameters that it must follow to perform the requested maintenance. The repair station may elect to put a procedure in its manual to cover special circumstances for emergency repair (aircraft on ground, preparation for special flight permit, etc.).

b) The CHDO will review the manual procedure to verify it contains information on how the repair station will notify the PI when it must perform work away from station. The PI must verify this procedure is for emergency purposes only and not on a recurring basis or extended work away from station.

2) A repair station may perform maintenance away from its fixed location for extended periods of time if it meets certain criteria. Section 145.203(a) states that the FAA determines these special circumstances. Additionally, this type of operation does not constitute the establishment of another repair station or a satellite repair station because it is temporary in nature. After completion of the contracted maintenance, the repair station must transport its tools, equipment, and personnel back to its fixed location. The repair station must submit this request to the PI for evaluation on a case-by-case basis. The PI will keep a copy of the request, the repair station's procedure, and the PI's approval document in the repair station file. (OpSpec D100 is not required.) The repair station must meet the following criteria to provide maintenance away from its fixed location for extended periods of time:

a) Extended contracted work away from station must not exceed one year.

b) The repair station must furnish its own tools and equipment unless it has procedures for leasing or contracting tools and equipment that comply with the regulations and the procedures in the RSM.

c) The repair station must ensure its personnel understand that they must follow repair station procedures when performing maintenance away from station.

d) The repair station must have all required data to complete the contracted maintenance at the location.

e) The request to the CHDO must include the aircraft (make/model/series (M/M/S)), the project to accomplish, the duration of the maintenance, the location of the maintenance, and a statement that the temporary facilities are suitable for the repair station's maintenance.

f) Housing that is suitable for one repair station's use may not automatically be suitable for the purposes and scope of maintenance for another repair station's ratings, privileges, or limitations. The repair station requesting to provide maintenance away from its fixed location

for extended periods of time must evaluate the housing and facilities where the maintenance will take place to ensure the location meets the requirements of the rule.

3) As stated in § 145.203(b), a repair station may perform maintenance away from its fixed location on a recurring basis when necessary, such as to perform mobile field services. This will allow maintenance away from the repair station's fixed location as a part of everyday business rather than under special circumstances only. (OpSpec D100 is required.)

a) If the repair station intends to perform maintenance on a recurring basis at places other than its fixed location, the manual must include procedures for accomplishing the maintenance, preventive maintenance, alterations, or specialized services.

b) The procedures must address issues related to transportation, tools, equipment, personnel, technical data, and records. These procedures should ensure the repair station at the remote location remains in compliance with part 145 and its manual, just as if it performed the maintenance at the repair station's fixed location.

c) Should the repair station elect to use mobile repair units, the RSM must have clear procedures on:

1. How it will control the work away from station and will be clear in that the mobile units will bring no work into them;

2. Identifying where the PI may find each unit, should the PI need to provide surveillance on them and spot check the work they perform;

3. Providing a contact person for each unit, along with contact information (telephone/e-mail);

4. How it will control all calibrated equipment and technical data in each unit;

5. How often the repair station will audit each unit and make the findings available to the PI. The repair station should provide the PI with a schedule of audits so the PI may accompany an audit as part of the surveillance program; and

6. Any other requirement the PI deems necessary for the type of operation requested.

G. Transfer of a Part 145 Certificate From One CHDO to Another. Part 145 prescribes that the FAA must approve, in writing, any change of a repair station location, housing, or facilities.

1) The application for change of location is FAA Form 8310-3, Application for Repair Station Certificate and/or Rating. The applicant will complete FAA Form 8310-3 and select "Change in Location or Housing and Facilities," located in block 2, Reason for Submission.

2) The PI or the PI's representative at the office from which the certificate holder is leaving (losing office) will coordinate the repair station change in location with the Regional Office (RO). The RO will further coordinate with the office to which the certificate holder is transferring (gaining office if in the same region). If the gaining office is in a different region, the losing RO will coordinate with the gaining RO. The FAA encourages direct communication between the two field offices (FO).

3) After regional coordination, the current CHDO will approve or deny in writing, a decision on the repair station's request for change of location, and provide it to the repair station as required by § 145.105. If the CHDO denies the request, further activity supporting the change of location ceases until the RO is satisfied with the resolution of the issues causing the denial.

4) The PI at the losing office will identify items in that office pertaining to the repair station that he or she must close, revise, transfer, archive, or otherwise administer in block 6 of the applicant's submitted FAA Form 8310-3 (or in a separate document). Note the completion of each of the required activities for those items. Once the transfer is complete, the losing office will provide all affected FAA offices with a copy noting all completed actions.

5) If the repair station intends to operate during the change in location, it will present the losing office a transition plan to identify and address potential gaps in the repair station's quality system. The PI at the losing office will coordinate with the gaining office, provide a copy of the transition plan, and note in block 6 any conditions or limitations under which the repair station must operate. The PI must provide a copy of the limitations to the repair station, which must acknowledge its receipt. The PI at the losing office or the PI's representative will provide oversight for compliance with those conditions or limitations applicable to the repair station at the original location.

6) The gaining office will assign a PI to provide oversight of the repair station change in location activity. The new office PI or the PI's representative will identify in block 6 of the applicant's submitted FAA Form 8310-3 (or in a separate document) those items in the gaining office that pertain to the repair station that he or she must open, revise, transfer, or otherwise administer. Note when the required activities for those items are complete. Upon the completion of all items, the PI will provide a copy of the document to affected ROs.

7) If the repair station intends to operate during the change in location, the gaining office PI or the PI's representative will provide oversight for compliance with any conditions or limitations under which the repair station must operate at the new location.

8) The procedures for transferring a certificate will include assurances of consideration of at least the following:

a) Coordinating with any affected RO (losing and gaining field and ROs).

b) Transferring of current and complete office files (losing office).

c) Ensuring updating of the eVID (losing office).

d) Administering any open required surveillance tasks in accordance with SAS.

e) Ensuring placement of appropriate conditions and limitations on the repair station during the relocation (losing office coordinating with the gaining office).

f) Inspecting the new housing and associated facilities, equipment, materials, and data (gaining office).

g) Ensuring that appropriate ratings and OpSpecs continue, or receive amendments as necessary. Concerns regarding ratings held should be coordinated with the losing office before being presented to the operator (gaining office coordinating with losing office).

h) Ensuring the repair station certifies, in writing, compliance with the hazardous materials (hazmat) requirements of § 145.53(c) or (d), as appropriate. A previous compliance statement may continue to be valid (gaining office).

i) Reviewing repair station and quality manuals for revisions, if necessary (gaining office).

j) Updating all necessary repair station file documents with current information, paying particular attention to the Air Agency Certificate, OpSpecs, eVID, and repairmen certificates (gaining office).

k) Establishing normal surveillance in accordance with SAS guidance.

H. Taking Corrective Actions on Deficiencies. Section 145.211(c)(1)(ix) states that the QCM must include procedures used for taking corrective action on deficiencies. A corrective action is an action to remedy an undesirable situation. The correction of deficiencies is normally an integral part of a repair station's improvement process, and could include revisions to procedures that were not working properly. (For additional guidance, refer to the current edition of Advisory Circular (AC) 145-9, Guide for Developing and Evaluating Repair Station and Quality Control Manuals.)

NOTE: The FAA does not require the repair station, at this time, to have an Internal Evaluation Program (IEP), quality assurance (QA) program, or a continuous improvement program.

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

2) Upon detection of a deficiency before the article receives approval for return to service, the repair station should follow its procedures describing how to accomplish the corrective work. Upon detection of a deficiency after the article has received approval for return to service, the repair station should follow its procedures to notify the CHDO and the owner/operator of any potential problems and recall any unairworthy article. The objective of the investigation into the cause of the deficiency, and the corrective actions taken, is to prevent a recurrence of the same or similar problems.

3) The procedures in the QCM should include a system for documenting any deficiencies and the corrective actions taken to prevent a recurrence. The system should provide the ability to track any open corrective action requests and the date the corrective action is due. The program should also include audits of the corrective action(s) taken to ensure effectiveness. The program should also track these audits to ensure their completion in a timely fashion.

2-1183 COORDINATION REQUIREMENTS.

A. Coordination. These tasks require coordination among the ASIs (maintenance and avionics) and may require regional coordination.

B. Electronic Media. Air agencies that elect to use electronic media (CD-ROM, local area network (LAN)-based, or internet-based systems) must be allowed to use those systems without interference or extra procedures. The air agency is responsible for ensuring equipment of its CHDO for the media it selects to ensure that delays or other hindrances do not occur. Transmittal documents will replace the requirement for signing the title page or revision page to ensure a consistent approach to document and manual submissions and revisions.

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

1) Repair stations and applicants must follow this procedure for the remaining submissions discussed in this section.

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

3) PIs will approve or reject, if necessary, submissions using a transmittal document with the information mentioned in the note below.

NOTE: A transmittal document describing the submission and signed by the appropriate manager must accompany the repair station document submissions. PIs will receive submissions using a transmittal document indicating the date, document, manual, or revision number. The PI will provide approval or rejection (if required) after review. Additionally, PIs will, if the document is rejected, reject a certificate holder’s submission using a transmittal document that indicates the date, document, manual, or revision number, and a detailed explanation of the noted discrepancies or nonconformance. Maintain office copies of correspondence transmittals in the certificate holder’s folder or electronically, if equipped.

4) PIs will accept or reject document submissions using the information mentioned in the note below.

NOTE: Regulatory language defines certain document submittals by an air agency. RSM, QCM, CL and others must be acceptable to the FAA. The FAA, unless it provides a list of discrepancies to the air agency explaining the

unacceptability of the submitted correspondence, considers a document, manual, or revision acceptable. The FAA has no requirement to acknowledge receipt of or initiate a formal letter of acceptance upon review of the submitted correspondence. A transmittal document that indicates the date, document, manual, or revision number, and a detailed explanation of the discrepancies, may initiate a rejection of a certificate holder's submission. Maintain office copies of correspondence transmittals in the certificate holder's file or electronically, if equipped.

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

2-1184 CL.

A. Review the Air Agency's CL.

1) Review the CL to verify the repair station has ratings for the articles identified on the list.

2) Review the RSM procedure for:

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

3) Review the self-evaluation process for:

- Records of training of persons performing the self-evaluations;
- Performance of the self-evaluation before modifying the CL; and
- Adequate identification of the tools, equipment, materials, technical data, adequate housing and facilities, and qualified personnel that are available before modifying the CL.

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

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

2) If in electronic format, replace the outdated disk or file with the current CL or revised pages in the certificate holder's office file.

C. Reject the CL. If the submission or revision is not acceptable, the ASI will:

1) Initiate a transmittal document indicating the date, document, and revision number of the rejected CL or revision.

2) Return all copies to the applicant with an explanation of discrepancies requiring correction and instructions for resubmitting the documents.

2-1185 ADDITIONAL FIXED LOCATIONS.

A. Submit Application. A repair station may request the addition of additional fixed locations to its OpSpecs by submitting the request on Form 8310-3. The repair station must:

1) List the physical address of all additional fixed locations for addition to its OpSpecs.

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

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

B. Review Application. The PI receives the application, manual revisions, and any other information necessary to determine the appropriateness of the request. The inspector must:

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

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

3) Inspect the additional location to verify that:

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

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

2-1186 CONTRACT MAINTENANCE.

NOTE: The removal of appendix A from part 145, also removed the prohibition against limited-rated repair stations contracting out work. However, the FAA does not intend to allow "virtual repair stations" that provide only the approval for return to service. This means that ASIs must be attentive to the maintenance functions they are approving for each facility. Although a list such as appendix A

was a convenient way to maintain certain levels of maintenance for each repair station, it was impossible to maintain it in a current status without this rule being in constant revision. A limited rating for specialized service requires processes or functions of a specialized nature. Since the rating is based on this special function or process it would not be appropriate to allow it to be contracted. No function of a limited rating for specialized service may be contracted out.

A. Maintenance Functions. A repair station can submit its maintenance functions in any manner acceptable to the FAA. A CRS may contract a maintenance function pertaining to an article to an outside source provided the FAA approves the maintenance function to be contracted to an outside source. RSMs must contain a procedure that describes how the repair station will submit its maintenance functions to the CHDO. The RSM must also describe how the repair station will revise the list of maintenance functions. The repair station rating must cover each approved function.

1) Repair stations will submit the list of maintenance functions for approval to the CHDO with a transmittal document that describes the submitted document and shows the date and/or revision number of the document. The repair station may also wish to provide a method for adding a maintenance function to its FAA-approved list on an emergency basis. ASIs should verify the procedure in the RSM, regarding these emergency procedures, sufficiently addresses how to add the maintenance function, and how to obtain FAA approval in a short period of time.

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

- Initiating a transmittal document identifying the document, date, revision number, and stating either approval or rejection of the function.
- Filing a copy of the transmittal in the repair station folder and providing a copy to the CRS by mail or electronic media.

NOTE: Regulatory language defines certain document submittals by a repair station (e.g., RSM, QCM, CL and others) and must be acceptable to the FAA. The FAA, unless it provides a list of discrepancies to the repair station explaining the unacceptability of the submitted correspondence, considers a document, manual or revision acceptable. The FAA has no requirement to acknowledge receipt of or initiate a formal letter of acceptance upon review of the submitted correspondence. A transmittal document that indicates the date, document, manual, or revision number and a detailed explanation of the discrepancies may initiate a rejection of a certificate holder's submission. Maintain office copies of correspondence transmittals in the certificate holder's file or electronically, if equipped.

3) To assist repair stations in determining which functions to allow, ASIs should provide a reason for rejecting the maintenance functions. Some reasons for rejecting maintenance functions include:

- Too much contracting out of "core business," leaving the repair station to provide little, if any, actual maintenance on the articles for which it holds ratings to work on;
- Continually using contracting out as a means to keep staffing below adequate levels for the work the repair station is obligated to accomplish; and
- Contracting out a maintenance function without prior approval.

NOTE: A repair station should not use contracting out maintenance functions to replace the need for adequately staffed and trained maintenance personnel. ASIs should be cautious of repair stations that constantly revise the maintenance function list on an emergency basis in order to complete work in a timely manner. ASIs should verify a repair station has the necessary trained personnel for the scope and complexity of the ratings it holds.

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

NOTE: A repair station with a limited rating for specialized services may not contract out any function required in the specification listed in the OpSpec.

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

2) To approve or reject a list of contracted maintenance functions, the ASI must determine:

- That the RSM has adequate procedures that dictate how the maintenance functions will be submitted and revised,
- How the repair station will qualify and/or inspect noncertificated contractors, and
- How the repair station will apply approval for return to service once an article returns from a contractor's facility.

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

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

2-1187 MAINTENANCE PERFORMED AT ANOTHER LOCATION. Repair stations may:

- Elect not to perform maintenance away from the main base station.
- Need to perform maintenance away from station for special circumstances.
- Need to perform maintenance on a recurring basis away from station.

NOTE: The PI should consider the need of the repair station carefully.

A. No Maintenance Away From Main Base Station. Should the repair station determine it never has a need to perform maintenance away from the main base station, it would not need the requirements for a procedure in its manual and OpSpec D100. However, the PI should inform the repair station that if a need arises, the repair station must notify the CHDO and wait for a determination from the PI.

B. Maintenance Away From Main Base Station Due to Special Circumstances. If the repair station determines it needs to perform maintenance away from the main base station for special circumstances, it may put a procedure in its manual for the types of special circumstances that it may need to perform, stating how it will control the work, material, equipment, personnel, data inspection procedure, etc., and stating how it will notify the PI.

1) If the PI determines these procedures meet the requirements of § 145.203(a), the repair station would not have to wait for a reply from the PI before performing the work.

2) The PI will send the repair station a letter stating that the procedure meets the requirements of § 145.203(a). The CHDO will keep a copy of the letter in the repair station file.

C. Extended Maintenance Away From Main Base Station. If the repair station should have a special circumstance such as a need to perform maintenance for an extended period of time, then it must present this request to the PI for determination. (OpSpec D100 is not required.) The repair station must present to the PI a plan, for review, on how the repair station will control the maintenance. The PI will verify the following:

1) That the repair station request clearly states the time required to complete the project. If it needs additional time, the repair station must apply for an extension. Granting of the extension should only be for the time necessary for completion.

2) That the repair station furnishes its own tools and equipment, unless it has procedures for leasing or contracting tools and equipment that comply with the regulations and with the procedures in the RSM.

3) How the repair station will assure that its personnel understand that they must follow the repair station procedures when performing maintenance away from station.

4) How the repair station will have all required data to complete the contracted maintenance at the location.

5) That the request to the CHDO includes the aircraft (make/model/series (M/M/S)), the project to accomplish, the duration of the maintenance, the location of the maintenance, and a statement that the temporary facilities are suitable.

6) That the repair station can perform the work requested. The PI will send the repair station a letter stating the procedure meets the requirements of § 145.203(a). The CHDO will keep a copy of the letter in the repair station file.

D. Recurring Maintenance Away From Main Base Station. If the repair station is performing maintenance away from the main base station on a recurring basis (part of everyday business rather than under special circumstances) there must be a procedure in the manual on how the repair station controls the work away from station. This type of work could include fuel cell repair, Nondestructive Testing (NDT), etc. where most, if not all, of the work is completed away from the base station. (OpSpec D100 is required.)

2-1188 AIRFRAME RATINGS AND CLASSIFICATIONS UNDER § 145.59.

NOTE: Any product that is non-TC'd or used on a non-TC'd aircraft, such as certain military aircraft, need not receive ratings. Section 145.57(a) requires a repair station to perform maintenance in accordance with part 43. Section 43.1(a) states, in part, that "This part prescribes rules governing the maintenance, preventive maintenance, rebuilding, and alterations of any aircraft having a U.S. airworthiness certificate."

NOTE: Section 145.59 defines ratings. Adding or removing an aircraft, engine, or component to a rating is an amendment to the rating, not an added rating. The addition or removal of an aircraft, engine, or component is a change to the limitations under the rating.

A. Airframe Maintenance or Alteration.

1) Repair stations require an appropriate airframe rating when performing maintenance or alterations on articles (see Table 2-19, Airframe Ratings and Classifications Under § 145.59) such as:

- Seats,
- Seat belts,
- Berths,
- Galleys,
- Lavatories,
- Cabinetry,
- Cabin/cockpit interior foam and fabric upholstered parts,
- Dividers,
- Curtains,
- Windows, and
- Any other interior structure.

2) Additionally, repair stations require an appropriate airframe rating when performing maintenance or alterations on external aircraft structures or fuselage articles such as:

- Aircraft composite components,
- Aircraft painting,
- Electrical wiring harnesses,
- Landing gear removal and installation,
- Doors and the attaching components,
- Fuselage repairs or alterations, or
- Flight controls and attaching hardware.

3) Similarly, articles of all-cargo configured aircraft are considered part of the airframe and require an appropriate airframe rating. These include:

- Unit loading devices (ULD),
- Cargo pallets or containers,
- Bulkheads,
- Ball mats,
- Floor roller tracks, and
- Floor or side locks.

4) Performing maintenance or alterations on articles associated with an emergency medical support installation, such as stretchers, litters, and supporting hardware or structures also require an appropriate airframe rating.

5) Repair stations performing a similar maintenance function, but using different processes, could conceivably hold different limited ratings. See Table 2-24, Authorized Repair Station Ratings for §§ 91.411 and 91.413 Testing, for examples of ratings and limited ratings that would authorize a repair station to complete §§ 91.411 and 91.413 testing.

B. Ratings. A revised or amended rating is not an added rating. If the repair station desires to add an additional aircraft under the present rating, it will be an amendment to the rating and will not require a reissue of the certificate. If the repair station uses a CL as authorized by § 145.215, then the CHDO will receive a copy of the change, and the OpSpecs will not need changing. If the repair station does not use the provisions of § 145.215, then an amendment to the rating will require submission of Form 8310-3 and changing of the OpSpecs to add the aircraft. Whenever there is a change to the rating in the OpSpecs, the repair station must submit a new Form 8310-3. For example:

1) A repair station currently holds a limited airframe rating, limited to Cessna 150 series aircraft. They would like to add Piper PA-28 series aircraft. The repair station does not use a CL.

a) The repair station submits Form 8310-3 to the CHDO with the request to add the Piper aircraft.

b) The ASI verifies that the repair station meets all of the applicable requirements and then adds the Piper PA-28 series aircraft to the OpSpecs. The Air Agency Certificate would not change.

2) A repair station currently holds a limited airframe rating and would like to add a limited powerplant rating.

a) The repair station submits Form 8310-3 to the CHDO with the request to add the limited powerplant rating.

b) After the ASI verifies that the repair station meets all of the applicable requirements, the certificate will receive a change to add the limited powerplant rating and the OpSpecs will receive an amendment to add limited powerplant.

C. Limited Ratings.

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

2) The current OpSpecs allow the proper identification of the limitation of make and models, as well as maintenance functions in the "Limitations" section. Limitations must not be vague and undefined. It is important that the repair station clearly understand its privileges and any associated limitations. When issuing a limited rating, the PI must adequately describe the scope of the rating and any associated limitations in a clearly understood manner. Vague or misunderstood OpSpecs could lead to operations outside the intended scope of the certificate. When necessary, use of the limitations column may further limit the intended scope of the rating. If additional limitations are not necessary to adequately describe the intended scope, the PI should enter "None." The PI should use good judgment and carefully consider possible unintended consequences of not specifying limitations. If painting, for instance, is the only maintenance function a repair station intends to perform, the limitation should read, "Limited to painting airframe structure and components on Boeing 737 series aircraft," or similar language. If the repair station's limitation is performing maintenance on only a certain part of the airframe, that language should specify the manufacturer, make, and model of the component, and describe exactly what the repair station is limited to do.

NOTE: Painting of aircraft may also involve other maintenance functions such as balancing of flight controls. The repair station should have the ability or be authorized to contract out those functions.

3) OpSpecs should identify the manufacturer and the make/model. In certain rare occasions, the term "all" may be appropriate when identifying the make/model. When using "all" to denote the make/model, the PI must use good judgment and carefully consider potential unintended consequences. If the inspector is not careful, use of the word "all" could inadvertently authorize work beyond the desired intent. For example, use of the word "all" may

seem appropriate to authorize structural repairs on all models of aircraft manufactured by Mooney. However, unless the PI excludes several early production models, this authorization may inadvertently allow structural repairs on both wood and metal primary structures. The use of "all" provides that the rating will include any future products that may be developed that fall within the listed limitation as well as all past products.

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

NOTE: Limited ratings may incorporate a CL if the repair station has elected to employ one. For example, a repair station without a CL might receive a limited airframe rating for the performance of transponder (TXPDR) testing on a specific make/model aircraft, in accordance with part 43 appendix F. A repair station that employs a CL when the TXPDR make/model and aircraft make/model are listed on the CL (the holder of a limited radio rating would not have removal/reinstallation privileges) could receive a limited airframe or a limited radio rating for the performance of TXPDR testing.

4) A repair station may apply for and receive a repair station certificate and rating for a limited airframe for line maintenance.

a) The performance of inspections and minor flight line repairs to air carrier aircraft needs the limited airframe. The OpSpecs should list all the aircraft, the airlines which contracted the repair station to perform line maintenance, and the locations where line maintenance is to take place.

NOTE: A repair station must not perform line maintenance on articles that are outside the scope of its repair station certificate and ratings. Additionally, a repair station that has certification to perform line maintenance must not operate at a location that its OpSpecs do not list.

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

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

maintenance a repair station has certification to perform, the repair station must still meet the housing and all other requirements of part 145.

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

NOTE: Repair stations and applicants are receiving requests from air carriers, Department of Defense (DOD) maintenance contractors, or other repair stations to obtain part 145 certification. Although these requests may seem reasonable, part 145 certification is not necessary and does not apply to public aircraft operated by Federal, State, or local governments. Also, air carriers are requesting part 145 certification for the performance of certain functions on articles where part 43 does not apply using Engineering Orders (EO) or other documents as "approved data." Although the operator may carry on or use these items in its aircraft during revenue flights, this does not mean these items meet the part 43 applicability requirements. These items may include galley utensils/items, portable medical oxygen bottles, and so forth.

E. Line Maintenance Authorization.

1) A repair station may apply for and, if it meets the eligibility requirements for the rule, receive a line maintenance authorization within the scope of their airframe or powerplant rating. A repair station must have an airframe or engine class rating, or a limited airframe or engine rating for the complete aircraft or engine make and model (Boeing B737 or P&W JT8D) to perform inspections and minor flight line repairs to aircraft listed on its OpSpecs.

2) The repair station must have a rating for the aircraft or engine on their OpSpec A003 and may only have authorization for line maintenance for those makes and models listed. The line maintenance authorization allows the repair station to inspect powerplants installed on aircraft and to install powerplants, but does not authorize maintenance that exceeds the scope of its ratings.

3) OpSpec D107 should list all aircraft makes and/or models, the operators which contracted the repair station to perform line maintenance, and the location(s) where the line maintenance is to take place.

NOTE: A repair station must not perform line maintenance on articles that are outside the capabilities of its ratings or the limitations listed in its OpSpecs. Additionally, a repair station certificated to perform line maintenance can only do so at the main base or those locations listed on OpSpec D107.

a) Inspectors should not rely solely on manual procedures to detail a repair station's privileges and limitations. The appropriate sections of the repair station's OpSpecs

should include privileges and limitations detailed enough to identify the capabilities of the certificate holder.

b) Inspectors should review the maintenance or inspection cards to verify the requirements that the repair station must meet are within the scope and definition of line maintenance. For example, some repair stations have submitted requests to perform "B" checks for air carriers under a line maintenance authorization. Some "B" checks are more complex than others and could result in exposure of critical areas of the airframe to the environment or other contamination if the repair station has no housing or facilities available at the location. Performance of these inspections must be in an enclosed environment to avoid introducing collateral damage into the aircraft, airframe, powerplant, or components.

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

a) The repair station's housing should provide adequate storage for the repair station's tools, equipment, technical data, and any owner/operator spare parts or components for installation on aircraft.

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

NOTE: All CRSs must have suitable permanent housing and facilities. Although § 145.205(d) allows some deviation from the housing requirement, the basis of that requirement is upon the repair station having suitable housing at another location that meets the requirements of part 145. The repair station must still meet the housing and all other applicable requirements of part 145. Housing need not be on the airport where the line maintenance takes place, but the repair station's OpSpecs must list the street address.

c) The granting of line maintenance authorization is only to maintain the aircraft of U.S. air carriers certificated under 14 CFR part 121/135 or a foreign air carrier or a foreign person operating a U.S.-registered aircraft in common carriage under part 129. A repair station cannot receive line maintenance authorization to provide maintenance on foreign air carriers that do not have U.S.-registered aircraft. The OpSpec D107 cannot list foreign air carriers and persons operating under part 129 that do not have U.S.-registered aircraft.

NOTE: U.S. domestic repair stations that have received an OpSpec D107 and hold an EASA approval may perform line maintenance in accordance with their EASA RSM supplement.

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

premises and in use during the performance of the work, or the repair station must have a contract that stipulates that the recommended tools are available.

6) Authorizing a repair station to perform line maintenance will follow, as appropriate, the same certification procedures found in the current edition of Order 8900.1, Flight Standards Information Management System (FSIMS), Volume 2, Chapter 11, Section 2.

7) Repair stations that may desire to perform line maintenance at more than one location must apply for, and provide the airport and operator information for each. This is limited to repair stations with authorization to provide maintenance on the complete aircraft.

8) The repair station's OpSpec D107 will list locations where the repair station performs line maintenance.

9) OpSpec D107 authorizes a part 145 repair station to perform line maintenance functions that apply only to the certificate holders conducting operations under parts 121 and 135, and for foreign air carriers or foreign persons operating a U.S.-registered aircraft in common carriage under part 129.

a) The addition to the OpSpecs of authorization of line maintenance can only be for repair stations that provide line maintenance for air carriers as defined in the regulation. General Aviation (GA) operators do not have authorization for line maintenance.

b) The authorization for providing line maintenance through the issuance of OpSpec D107 is not a rating.

c) The OpSpec D107 authorization is a limitation to a rating, and as such, the limitation section must clearly state the types of aircraft the repair station has authorization to maintain and the location of the line station.

d) The ASI must review the scope of work the repair station will provide for each air carrier, which becomes the limitation added to OpSpec D107. Repair stations cannot receive a blanket authorization. The PI must complete the review as required for each location and determine if the repair station can complete the requested maintenance for the air carrier at each location.

e) Repair stations not limited to line maintenance should not receive OpSpec D107 for line maintenance at their home location or airport. However, if they need to perform line maintenance away from the home location, then all of the provisions of the line maintenance apply, and they receive OpSpec D107 listing each location.

f) The PI must complete the review as required for each location and determine if the repair station can complete the requested maintenance for the air carrier at each location.

F. Other Issues.

1) A repair station that is only authorized line maintenance should be carefully evaluated before receiving OpSpec D100. A repair station only receives a line maintenance

authorization based upon a demonstrated ability to perform the scope of work for a specific air carrier at a specified location. It may not be capable of properly performing work away from that location.

2) This does not prevent an appropriately rated repair station from doing work away from station.

3) Additionally, several repair stations had multiple locations for line maintenance all under separate certificates. If a repair station requests to have multiple locations, the rating on OpSpec A003 would remain the same, but OpSpec D107 records the additional location(s) specific to the air carrier and the scope of work for that air carrier.

a) Each location must receive an evaluation to determine if the repair station meets all requirements from the scope of work for each air carrier and the parts, equipment, and personnel to support the requested maintenance for each air carrier at that location.

b) The PI for the parent repair station will assume the responsibility for all certification and surveillance of the additional locations. Certification at each CHDO is not a requirement.

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

Table 2-19. Airframe Ratings and Classifications Under § 145.59

Class	Definitions
Class 1	Composite construction of small aircraft. Gross takeoff weight (GTOW) 12,500 lbs or less which a major portion of the airframe is of composite construction.
Class 2	Composite construction of large aircraft. GTOW more than 12,500 lbs which a major portion of the airframe is constructed of composite material (e.g., Boeing 787, Airbus A380).
Class 3	All-metal construction of small aircraft. GTOW 12,500 or less which a major portion of the airframe is all-metal construction.
Class 4	All-metal construction of large aircraft. GTOW more than 12,500 lbs which a major portion of the airframe is all-metal construction.

NOTE: An airframe rating provides the privilege of performing maintenance and alterations of airframes and airframe components in accordance with part 43 on any article for which it is rated and within the limitations in its OpSpecs. This rating also allows the removal and installation of powerplants, propellers, radios,

instruments, and passenger convenience items (PCE), but not the performance of maintenance to internal sections of these components.

NOTE: Airframe includes: Fuselage, booms, nacelles, cowlings, fairings, airfoil surfaces (including rotors but excluding propellers and rotating airfoils of engines) and landing gear of an aircraft and its accessories and controls.

NOTE: A repair station may maintain and alter any airframe or part thereof for which it has a rating. However, it may not maintain any TC'd products (engine or propeller) installed on the aircraft without the appropriate rating. Nor may it maintain or alter any part thereof unless it has evaluated its capability and assured it has the tool, equipment, data, and personnel to do so. Maintaining powerplants, propellers, radios, and instruments requires additional ratings.

2-1189 POWERPLANT RATINGS AND CLASSIFICATIONS UNDER § 145.59. See Table 2-20, Powerplant Ratings and Classifications Under § 145.59.

A. Articles Included. Articles included in the powerplant rating are turbo-superchargers, magnetos, carburetors, appurtenances, and other articles necessary for the proper operation of the powerplant. Although the regulations do not define "powerplant", they do define "aircraft engine."

NOTE: The guidance on limited ratings provided in subparagraph 2-1188C also applies to limited powerplant ratings.

B. Limited Powerplant Ratings. Limited powerplant ratings must identify the powerplant manufacturer and the make/model of the powerplants the repair station intends to maintain. This type of rating, unless it includes limitations, allows complete repair or alteration of the powerplants listed.

1) Powerplant maintenance has also found numerous "niche" businesses that may include the performance of a specific maintenance function on a wide variety of powerplants. In this case, the OpSpecs would identify the manufacturer, but the make/model column could contain "all models" instead of identifying each model. The limitations column would identify any limitations to its maintenance capabilities, such as, "Limited to plasma spray operations on Pratt and Whitney series turbine blades." This rating allows the repair station to plasma spray all Pratt and Whitney turbine blades, regardless of the powerplant model the blades were from. The OpSpecs would also need to list additional manufacturers if the repair station has the technical data, tools, and equipment to perform this maintenance function on those additional powerplants.

2) OpSpecs should identify the manufacturer and make/model authorized. Use of the term "all" may be appropriate when denoting the make/model in certain rare occasions. However, the PI must use good judgment and carefully consider potential unintended consequences. If the inspector is not careful, use of the word "all" could inadvertently authorize work beyond the desired intent. For example, use of the word "all" may be appropriate to authorize maintenance on certain Lycoming engines when used with a qualifier such as "all horizontally opposed reciprocating engines." Without such a qualifier, it is unclear if the PI

intended to authorize maintenance on all Lycoming engines, including Lycoming turbine engines and Lycoming radial engines.

NOTE: Because maintenance procedures, tools, equipment, and technical data may differ between manufacturers, ASIs must verify a repair station obtains the appropriate supporting requirements for the capabilities it is requesting.

C. Auxiliary Power Units (APU). Currently, confusion exists when determining the appropriate rating for APUs. An APU is an accessory by virtue of its function of providing power to the aircraft when the aircraft is not in flight. However, some of the newer models of aircraft also use APUs as powerplants, which further blurs the lines between GA and corporate or commuter aircraft. Until development of a new rating system, ASIs should consider those articles used as the primary means of propulsion for these newer aircraft as powerplants, not APUs, and should rate repair stations appropriately. However, repair stations performing maintenance or alterations on APUs used strictly to produce auxiliary power for transport-category aircraft should obtain an accessory rating.

Table 2-20. Powerplant Ratings and Classifications Under § 145.59

Class	Definitions
Class 1	Reciprocating engines of 400 horsepower or less
Class 2	Reciprocating engines of more than 400 horsepower
Class 3	Turbine engines

NOTE: A powerplant rating provides the privilege of performing maintenance and alterations of powerplants, but not to adjoining airframe or propeller components. Repair stations may remove access panels, doors, and nacelles, as needed, to gain access to the powerplant.

2-1190 PROPELLER RATINGS AND CLASSIFICATIONS UNDER § 145.59. See Table 2-21, Propeller Ratings and Classifications Under § 145.59.

NOTE: The guidance on limited ratings provided in subparagraph 2-1188C also applies to limited propeller ratings.

NOTE: Because maintenance procedures, tools, equipment, and technical data may differ between manufacturers, ASIs must verify repair stations obtain the appropriate supporting requirements for the capabilities that the repair station is requesting.

Table 2-21. Propeller Ratings and Classifications Under § 145.59

Class	Definitions
Class 1	All fixed pitch and ground adjustable propellers of wood, metal, or composite construction
Class 2	All other propellers, by make

NOTE: A propeller rating provides the privilege of performing maintenance and alterations on propellers, but not to adjoining airframe or powerplant components. A propeller, powerplant, or airframe-rated repair station may accomplish installation of propellers.

2-1191 PROPELLER RATINGS. A repair station certificated as a propeller, powerplant, or airframe-rated repair station may install propellers and the attaching hardware. Because the process of installing a propeller does not significantly differ between aircraft and powerplants versus a propeller test bench, repair stations with an airframe, powerplant, or propeller rating with appropriate privileges and limitations may install propeller assemblies.

2-1192 RADIO AND INSTRUMENT RATINGS AND CLASSIFICATIONS UNDER § 145.59.

A. Radio Rating. The radio rating divides into communication, navigation, and radar classes (see Table 2-22, Radio and Instrument Ratings and Classifications Under § 145.59). The basis of the first two classes, communication and navigation, is the intended function in the aircraft, whereas the basis of the radar class is a specific technology or mode of operation. Modern avionics equipment typically integrates communications and navigation functions into a single appliance. Also, radar equipment or a radio that operates using pulse technology also serves communication and/or navigation functions. The combination of functionality and operations of these articles may require the repair station to attain a rating for all three classes, depending on the complexity of the article.

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

NOTE: ASIs must verify that a repair station obtains the appropriate supporting requirements for the capabilities it is requesting.

NOTE: The guidance on limited ratings provided in subparagraph 2-1188C also applies to limited radio and instrument ratings.

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Table 2-22. Radio and Instrument Ratings and Classifications Under § 145.59

Class	Definitions
Radio	
Class 1	Communication equipment: Radio transmitting and/or receiving equipment used in an aircraft to send or receive communications in flight, including auxiliary and related aircraft inter-phone systems, electrical or electronic inter-crew signaling devices, and similar equipment. Does not include equipment for navigating or aiding navigation of aircraft.
Class 2	Navigational equipment: A radio system used in an aircraft for en route or approach navigation. This does not include equipment operated on pulsed radio frequency principles, or equipment used for measuring altitude or terrain clearance.
Class 3	Radar equipment: An aircraft electronic system operated on radar or pulsed radio frequency principles.
Instrument	
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.
Class 2	Electrical: Self-synchronous and electrical indicating instruments and systems, including remote indicating instruments, cylinder head temperature gauges, or similar electrical instruments.
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.
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.

NOTE: A repair station with a radio rating may install complete radio systems in aircraft. An instrument rated repair station may install instruments. The function of installation includes fabrication of instrument panels and other installation structural components. Radio installation requiring alterations to the aircraft structure must be performed, supervised, and inspected by qualified personnel.

2-1193 ACCESSORIES RATINGS AND CLASSIFICATIONS UNDER § 145.59. The accessory rating divides into mechanical, electrical, and electronic classes, based on an article's principle of operation (see Table 2-23, Accessories Ratings and Classifications Under § 145.59). The combination of functionality and operations of these articles may require the repair station to attain a rating for all three classes, depending on the complexity of the article.

NOTE: ASIs must verify that a repair station obtains the appropriate supporting requirements for the capabilities it is requesting.

NOTE: The guidance on limited ratings provided in subparagraph 2-1188C also applies to limited accessory ratings.

Table 2-23. Accessories Ratings and Classifications Under § 145.59

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

2-1194 LIMITED SPECIALIZED SERVICE RATINGS, § 145.61. An applicant or a CRS that performs unique processes associated with the maintenance, preventive maintenance, or alteration of articles may receive a limited rating for specialized services. Generally, the rating is process based, not article based. If the applicant intends to perform maintenance functions on a specific article, it may be more appropriate to issue a limited rating appropriate to the article and not a limited rating for specialized services. Maintenance performed in accordance with an approved specification need not receive a limited rating for specialized services solely based on the performance of maintenance in accordance with such specification (e.g. repair of a mechanical accessory under an approved specification developed by the applicant in lieu of using manufacturer's instructions would still fall under a limited or class 1 accessory rating).

A. Limited Specialized Service Rating. All repair stations that have a limited rating for specialized services use approved military, civilian, or applicant-developed specifications, when performing maintenance or alterations. However, just because a repair station uses a specification does not mean the repair station needs a limited specialized service rating. It is inappropriate for an ASI to initiate action to alter a repair station's ratings and OpSpecs based solely on the repair station's use of a specification.

B. Processes. The specification must involve a repair process or work scheme that is novel, unique, or unusual in application, which does not use the manufacturer's data for approving an article to its original condition, and that specifies repair limits. The repair station's OpSpecs must contain the specification used in performing that specialized service. The specification could be an FAA-approved military, civil, or applicant-developed specification. Specialized services would include, but not be limited to, welding, heat treating, plating, and plasma spraying.

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

D. Reclassification of Rating. At the onset of the performance of a new, unusual, and unique process a limited specialized service rating may be appropriate if the repair station performs the process as described in subparagraph 2-1194B. The process may eventually become common and more appropriately identified by a rating other than a limited rating for specialized services. In these cases, future repair station ratings will be issued in the more appropriate class. Ratings for currently rated repair stations can only be changed by application from the repair station or as a result of enforcement action. A repair station with a limited rating for specialized services in this circumstance should be advised of the change in classification. The FAA may recommend to the repair station that they apply for a change of rating.

2-1195 RATING EXAMPLE. Specific ratings issued to a repair station are dependent on the equipment, personnel, technical data, and housing and facilities of the repair station. Depending on how a repair station intends to perform a maintenance function, it may require multiple and or different ratings. For example, to perform air traffic control (ATC) TXPDR testing and inspections as described in part 43 appendix F, or altimeter system tests and inspections as described in part 43 appendix E, the following conditions in Table 2-24, Authorized Repair Station Ratings for §§ 91.411 and 91.413 Testing, would prescribe the requirement for different ratings.

Table 2-24. Authorized Repair Station Ratings for §§ 91.411 and 91.413 Testing

	Authorized Repair Station Rating(s)
Condition	**Rating(s)**
§ 91.411	
Component removed or installed by repair station.	Instrument rating Class I. Limited Instrument rating appropriate to appliance (unless limited from this function). Airframe Class (), appropriate to airplane or helicopter tested. Limited Airframe, appropriate to airplane or helicopter tested.
Integrated system tested on aircraft without removal or installation, normal operation of system without disassembly of aircraft.	Instrument rating Class I. Limited Instrument rating appropriate to appliance. Airframe Class (), appropriate to airplane or helicopter tested. Limited Airframe, appropriate to airplane or helicopter tested.
Specific components tested on the bench (may not satisfy all requirements).	Instrument rating Class I. Limited Instrument rating appropriate to appliance. Airframe Class (), appropriate to airplane or helicopter tested. Limited Airframe, appropriate to airplane or helicopter tested.
§ 91.413	
Component removed or installed by repair station.	Radio rating Class III. Limited Radio rating appropriate to appliance (unless limited from this function). Airframe Class (), appropriate to airplane or helicopter tested. Limited Airframe, appropriate to airplane or helicopter tested.
Integrated system tested on aircraft without removal or installation, normal operation of system without disassembly of aircraft.	Radio rating Class III. Limited Radio rating appropriate to appliance. Airframe Class (), appropriate to airplane or helicopter tested. Limited Airframe, appropriate to airplane or helicopter tested.
Specific components tested on the bench (may not satisfy all requirements).	Radio rating Class III. Limited Radio rating appropriate to appliance. Airframe Class (), appropriate to airplane or helicopter tested. Limited Airframe, appropriate to airplane or helicopter tested.

RESERVED. Paragraphs 2-1196 through 2-1210.