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

SECTION 1. BACKGROUND

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

A. Maintenance: 3414, 3416, 3446

B. Avionics: 5414, 5416, 5446

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

5. GENERAL.

A. Definitions.

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

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

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

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

(2) Alter. To change or modify.

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

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

(a) Type Certificate Data Sheets (TCDS).

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

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

(d) Airworthiness Directives (AD).

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

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

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

(g) FAA-approved portions of SRMs.

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

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

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

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

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

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

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

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

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

(p) Other data approved by the Administrator.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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