U.S. Department of Transportation
Federal Aviation Administration

Advisory Circular

Subject: Standardized Procedures for Obtaining Approval of Data Used in the Performance of Major Repairs and Major Alterations

Date: 6/23/26 **AC No:** 43-210A
Initiated by: AFS-300 **Change:** 2

1. PURPOSE OF THIS ADVISORY CIRCULAR (AC). This AC describes a standardized procedure for requesting approval of technical data associated with major repairs/major alterations. This AC also provides information that can help determine if a proposed repair/alteration requires approved data, guidance, and standardized procedures for obtaining field approval (or approval by other means) of data, and instructions for completing the field approval checklist.

2. PRINCIPAL CHANGES. This change adds regulatory and statutory reference citations to the guidance contained in this document, updates language to align with guidance policy, updates hyperlinks to references, and makes other editorial changes.

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Executive Director, Flight Standards Service

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Initiated by: AFS-300 **Change:**

This advisory circular (AC) describes a standardized procedure for requesting approval of technical data associated with major repairs/major alterations. This AC also provides information that can help determine if a proposed repair/alteration requires approved data, guidance, and standardized procedures for obtaining field approval (or approval by other means) of data, and instructions for completing the field approval checklist. This is a guidance document. Its content is not legally binding in its own right and will not be relied upon by the Department as a separate basis for affirmative enforcement action or other administrative penalty. Conformity with the guidance document is voluntary only. Nonconformity will not affect rights and obligations under existing statutes and regulations. This AC does not change regulatory requirements and does not authorize changes in, or deviations from, regulatory requirements. This AC establishes an acceptable means, but not the only means, of compliance. Since the guidance material presented in this AC is not regulatory, terms having a mandatory definition, such as "shall" and "must," etc., as used in this AC, apply either to the reiteration of a regulation itself, or to an applicant who chooses to follow a prescribed method of compliance without deviation.

> **Note:** As a result of the 2023 Aircraft Certification Service (AIR) reorganization, Aircraft Certification Offices (ACO) are now Certification Branches. For more information, refer to https://www.faa.gov/about/office_org/headquarters_offices/avs/offices/air/field_office.

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1 INTRODUCTION.

1.1 Purpose of This Advisory Circular (AC). This AC describes a standardized procedure for requesting approval of technical data associated with major repairs/major alterations. This AC also provides:

1. Information that can help determine if a proposed repair/alteration requires approved data;
2. Guidance and standardized procedures for obtaining field approval, or approval by other means, of data; and
3. Instructions for completing the field approval checklist (see Appendix A, Instructions for Completing the Field Approval Checklist).

1.2 Audience. This AC applies to applicants who request data approval for a major repair or major alteration.

1.3 Where You Can Find This AC. You can find this AC on the Federal Aviation Administration's (FAA) website at https://www.faa.gov/regulations_policies/advisory_circulars and the Dynamic Regulatory System (DRS) at https://drs.faa.gov.

1.4 What This AC Cancels. This AC cancels AC 43-210, Standardized Procedures for Requesting Field Approval of Data, Major Alterations, and Repairs, dated February 17, 2004.

1.5 Regulatory Basis. Title 14 of the Code of Federal Regulations (14 CFR) § 43.7 specifies persons authorized to approve an aircraft or aircraft component for return to service after maintenance, preventative maintenance, rebuilding, or alteration. For major repairs or major alterations, the work must be done in accordance with technical data approved by the Administrator. The following CFR references require the use of this data:

1. Title 14 CFR §§ 43.7(d) and 43.17(e)(2);
2. Title 14 CFR § 65.95(a)(1);
3. Title 14 CFR § 121.379(b);
4. Title 14 CFR § 135.437(b); and
5. Title 14 CFR § 145.201(c)(2).

Title 14 CFR § 1.1 defines major repairs and major alterations. In addition, 14 CFR part 43 appendix A, paragraph (a) further defines what constitutes a major alteration. In a similar manner, 14 CFR part 43 appendix A, paragraph (b) further defines what constitutes a major repair. Title 14 CFR § 1.1 provides that a minor alteration is an alteration that is not major and, likewise, a minor repair is one that is not a major repair.

1.6 Repair and Alteration Classification.

1.6.1 Only those persons with 14 CFR § 43.7 authorization may approve an aircraft, airframe, engine, propeller, appliance, or component part for return to service after the performance of a repair or alteration. You must perform major repairs and major alterations using technical data approved by the Administrator. You may perform minor repairs and alterations using technical data acceptable to the Administrator. This AC includes flowcharts (Figures 3-1, Field Approval Process, and 3-2, Determination of Major or Minor Alteration or Repair) to help classify a repair/alteration.

1.6.2 For assistance, you may use the Major Repair and Alteration Data Approval (MRADA) Job Aid at https://drs.faa.gov/browse/OTHER_JOB_AIDS/doctypeDetails. The job aid lists types of alterations and how applicants typically classify them.

1.7 Responsibility for Obtaining Data. It is the responsibility of the person intending on performing the major repair/major alteration to obtain, organize, and submit data to the approving authority for review and approval.

1.8 General Information. For the purpose of this AC, the use of the term "aviation safety inspector (ASI)" includes Flight Standards Designated Airworthiness Representatives—Maintenance (DAR-T) authorized to issue data approvals in support of a major repair or alteration when performing work in accordance with FAA Order 8000.95, Designee Management Policy. Also, for the purposes of this guidance, Aircraft Flight Manual Supplement (AFMS) includes Rotorcraft Flight Manual Supplement (RFMS) and Supplemental Aircraft Flight Manual (SAFM).

2 DATA.

2.1 Definition of Data as it Relates to a Repair or Alteration. In its broadest sense, data is recorded information. Data supporting a repair or alteration consists of drawings and specifications, including a list of drawings and specifications, which define configuration and design features of a particular article, repair, or alteration. Data may be classified relative to its type or its approval status.

2.2 Classification of Technical Data.

2.2.1 Types of Data.

2.2.1.1 Descriptive Data. Descriptive data describes the design of the repair or alteration. It should include references to installation methods, materials, fabrication processes, dimensions, and tolerances. It may also include function and how the alteration is appropriate to the aircraft. Descriptive data typically includes:

1. Drawings and specifications.

Note: We accept sketches, photos, or pictures as descriptive data when it is appropriate, such as for certain one-time approvals.

2. Information on dimensions, materials, and processes.
3. Airworthiness limitations (AL), if applicable.
4. Documents required by the airworthiness requirements such as instructions for continued airworthiness (ICA) and airplane or Rotorcraft Flight Manuals (RFM).

2.2.1.2 Substantiating Data. Substantiating data shows that the design complies with the applicable regulations and that all appropriate technical considerations have been addressed. Examples of substantiating data can be: test results, computations, and other information necessary to show that descriptive data meets the applicable requirements. Such substantiating data, when approved, forms the basis of declaring conformity to the type design or applicable airworthiness standards.

2.2.2 Approval Status.

2.2.2.1 Approved Data. Approved data is data approved by the FAA. The term "approved" is based on 14 CFR § 1.1, which states, "Approved, unless used with reference to another person, means approved by the FAA or any person to whom the FAA has delegated its authority in the matter concerned, or approved under the provisions of a bilateral agreement between the United States and a foreign country or jurisdiction." For the FAA ASI, "approved" or "approved by" means the item (e.g., data; methods, techniques, and practices; manual contents; tools; materials; equipment) is required to be and has been reviewed and formally approved by the FAA or appropriate Civil Aviation Authority (CAA). Approvals are granted only by letter, by a stamp of approval, by the issuance of operations specifications (OpSpecs), or by other official means. All data used to substantiate a major repair or major alteration, regardless of the source, must be approved before being used.

2.2.2.2 Acceptable Data.

2.2.2.2.1 Acceptable data means data acceptable to the FAA. The terms "acceptable to the Administrator" and "acceptable to the FAA" appear numerous times in the maintenance regulations. They refer to any item addressed in the regulation (e.g., data; methods, techniques, and practices; manual contents; tools; materials; equipment; etc.) that must meet regulatory standards. If the regulation requires only that an item must be "acceptable to," it does not necessarily follow that the FAA requires the item to have specific FAA review and acceptance before it may be used. The person deciding if an item is "acceptable to" the agency must ensure the item addresses specific applicable section(s) of the regulations.

2.2.2.2.2 Items required by regulation to be "acceptable to" the FAA or to the Administrator (unless otherwise required by regulation to be approved) do not necessarily require FAA review and acceptance prior to a person using the

item. The person using an item that must be acceptable to the FAA should be able to demonstrate that the item meets all applicable regulatory requirements. If, however, upon subsequent review of the item, the FAA believes the item is not acceptable, the agency has the burden of demonstrating its unacceptability in any related enforcement matter. In any event, if an ASI finds an item unacceptable to the FAA, the ASI must immediately inform the maintenance provider/certificate holder (CH), in writing, of the potential noncompliance and request compliance.

2.2.3 Previously Approved Data. This term refers to data that was approved for a specific purpose, such as a Supplemental Type Certificate (STC) or major alteration on an aircraft, powerplant, propeller, or appliance. All previously approved data submitted is applicable to the requested major repair or major alteration. It is essential that all differences, deviations, inclusions, and exclusions between the original use of the data and the current one be considered before the data can be approved for use. Figure 2-1, Possible Resources for Approved Data Relevant to Major Repairs or Major Alterations, lists typical sources by which you can obtain previously approved data. Not all this data may be readily available. It is the applicant's responsibility to review all data that is available. Applicants should consider the following items when evaluating previously approved data:

2.2.3.1 **Product Certification Basis.** If the certification basis applicable to the product to be altered or repaired is different from the basis the previously approved data was developed for, the applicant should make a comparison of the two and address the differences in making a determination of applicability for use of the previously approved data.

2.2.3.2 **Special Conditions.** As per 14 CFR § 11.19, a special condition is a regulation that applies to a particular aircraft design. The FAA issues special conditions when the airworthiness regulations for an aircraft, aircraft engine, or propeller design do not contain adequate or appropriate safety standards, because of a novel or unusual design feature. If special conditions are required to show compliance, representative data must be specifically approved for the product or appliance intended for alteration or repair by the FAA under 14 CFR § 11.38. One example where a special condition may be needed would be the display of Synthetic Vision System (SVS) video on a Head-Up Display (HUD) to provide a level of safety equivalent to 14 CFR § 25.773.

Note: New and novel processes like Additive Manufacturing (AM)/3-D printing used to fabricate replacement parts may require much more substantiation than parts produced by traditional methods to determine equivalency to the original (design) or properly altered condition due to the different material properties, especially for a metal AM replacement part when compared to the original certification basis.

2.2.3.3 Equivalent Level of Safety (ELOS) Findings. If ELOS are used to show compliance, the FAA must find that an ELOS is achieved, which includes approving the underlying data for the specific product or appliance intended for alteration. Refer to 14 CFR § 21.21.

2.2.3.4 Exemptions. If data was developed and approved for a product design based on an exemption to an airworthiness standard, the applicant should consider the exemption impact and any deviation which may have been granted to the approved product or appliance. Such exemption or deviation may require independent approval by the FAA. An appropriately authorized Designated Engineering Representative (DER) or Organization Designation Authorization (ODA) may evaluate and recommend approval of an exemption as a part of the exemption request package.

2.2.3.5 Applicability. The applicant should review the data to determine applicability to intended use. If any data is not appropriate to the repair or alteration, it should not be referenced as supporting data.

Figure 2-1. Possible Resources for Approved Data Relevant to Major Repairs or Major Alterations

Type Certificate Data Sheet (TCDS). Refer to FAA Order 8620.2, Applicability and Enforcement of Manufacturer's Data, for guidance.
Repair data from AC 43.13-1, Acceptable Methods, Techniques, and Practices—Aircraft Inspection and Repair, as approved data for non-pressurized areas of civil aircraft (list the AC chapter, page, and paragraph in block 8 of FAA Form 337, Major Repair and Alteration (Airframe, Powerplant, Propeller, or Appliance)), when the applicant has determined that it is: • Appropriate to the product that is to be repaired; • Directly applicable to the repair being made; and • Not contrary to the airframe, engine, propeller, or appliance manufacturers' repair data or instructions.
Alteration data from AC 43.13-2, Acceptable Methods, Techniques, and Practices—Aircraft Alterations, as approved data for major alterations for non-pressurized areas of civil aircraft (list the AC chapter, page, and paragraph are listed in block 8 of FAA Form 337), when the user has determined that it is: • Appropriate to the product to be altered; • Directly applicable to the alteration being made; and • Not contrary to the airframe, engine, propeller, product, or appliance manufacturers' data.
Airworthiness Directives (AD).
Appliance manufacturer's manuals or instructions, unless specifically not approved by the FAA, may be used as approved data for major repairs.
Data describing an article used in an FAA-approved alteration under a Parts Manufacturer Approval (PMA).
Designated Engineering Representative (DER)-approved data, including repair specifications, within limitations on the DER's authorization.
Organization Designation Authorization (ODA)-approved data, within limitations in the ODA holder's procedures manual.
FAA-approved portions of Structural Repair Manuals (SRM).
FAA-approved Service Bulletins (SB) and Service Letters (SL) or similar documents as documented in AC 20-77, Use of Manufacturers' Maintenance Manuals.
Foreign bulletins, for use on U.S.-certificated foreign-designed aircraft, when approved by the foreign authority within the provisions of a bilateral agreement with the United States or as listed in TCDS notes.
Original aircraft manufacturer's service and repair data in accordance with current regulations, for major repairs on elements of non-pressurized airplanes, 12,500 pounds or less maximum certificated takeoff weight provided the person intending to perform such repair determines that: • Data is appropriate and applicable for the specific make, model, and type of product being repaired; and • The repair does not deviate from the manufacturer's methods, techniques, and practices.
United States Department of Commerce, Form ACA-337 dated prior to October 1, 1955, provided the data is appropriate, directly applicable, and not contrary to regulatory requirements.
Supplemental Type Certificate (STC) data may substantiate a major alteration on a different aircraft, provided such alteration is applicable to specifically listed make, model, and type appropriate to the certification basis and applicable amendments.

3 FIELD APPROVAL PROCESS AND DATA APPROVAL.

3.1 General Information. As discussed in paragraph 1.5 above, an applicant must use approved technical data to accomplish a major alteration or major repair on a product and approve the product for return to service. An applicant should perform three major steps when performing a major repair or major alteration: (1) conduct research, (2) evaluate the data, and (3) perform the repair or alteration.

Note: You should not start work until all data is approved. Inspectors may not be able to complete the approval as requested. If an applicant starts work before the approval is finalized, that work may not conform to the repair or alteration as approved.

3.2 Conduct Research.

3.2.1 Plan the Repair or Alteration. You should review the repair or alteration to be performed to determine whether certain aspects of the alteration or repair can be accomplished using acceptable data and/or whether other aspects of the alteration or repair require approved data. You must ensure that the performance of the alteration or repair meets the applicable airworthiness standards, and the product can be restored to its original or proper condition and is safe for operation. You need to determine the certification basis of the product, including all applicable amendments, to ascertain if the alteration or repair can be accomplished using the field approval process admissible as a minor change to the type design. You also need to determine if the intended alteration or repair is significant enough to warrant seeking an STC, as performing such an alteration or repair results in a major change to the type design. Typical data may include analysis, drawings, photographs, specifications, or test data as required. Refer to 14 CFR § 21.93 and the MRADA Job Aid associated with FAA Order 8300.16, Major Repair and Alteration Data Approval.

Note: Some aspects of the alteration or repair of a product may be performed using the field approval process. Whereas other aspects may be determined significant such that one or more certificated properties of the product are exceeded, thus requiring a new certification basis be established.

3.2.2 Determine the Repair or Alteration Classification. Determine if the repair/alteration is a minor change in type design (as defined in 14 CFR § 21.93) to the product's type design; and if so, is it a major or a minor repair/alteration. To determine if a repair/alteration is major or minor, refer to part 43 appendix A. Figure 3-2, Determination of Major or Minor Alteration or Repair, is a flowchart of the field approval evaluation process based on part 43 appendix A.

3.2.2.1 Minor Repair or Minor Alteration. If you are properly authorized, you may perform a minor repair/alteration using acceptable data, and without approved data. You may document the alteration or repair in the product's logbook per 14 CFR § 43.9 indicating return to service.

3.2.2.2 Major Repair or Major Alteration. You must perform a major repair or major alteration using approved data. If some substantiating data is not obtainable or cannot be approved by FAA designees or the ASI, then such data needs to be developed for those aspects of the major repair or major alteration to be performed and the request for such data approval be elevated to the appropriate Aircraft Certification Service (AIR) Certification Branch for approval. Your ASI can assist in such elevation and should assure timely review and approval by the AIR Certification Branch. After such data is reviewed and approved by the AIR Certification Branch, then the alteration or repair may be accomplished, using such substantiating data, as applicable. The field approval process is not available for all major repairs/major alterations, and some aircraft are not eligible for field approvals. Major repairs and major alterations that have all the necessary DER or ODA-approved technical data do not require further approval. See paragraphs 3.3.2 and 3.3.3 for more information.

Note 1: AM-fabricated parts may require a classification of "major," even for Category 3 fabricated parts, either as an alteration or repair due to the 14 CFR § 1.1 definition criteria of: "That is not done according to accepted practices or cannot be done by elementary operations." This is due to AM not being considered an elementary operation and standards for methods, techniques, or practices acceptable to the Administrator having not yet been established.

Note 2: Aircraft operating under 14 CFR part 121 are eligible for field approvals under certain circumstances. If you are a 14 CFR part 121 operator, check with the ASI before beginning a repair or alteration. Persons holding delegation by the Administrator are not authorized to issue field approvals for aircraft operated by air carriers certificated under 14 CFR part 121.

3.2.2.3 Major Changes to Type Design. Pursuant to 14 CFR § 21.113(a), major alterations that are major changes to type design require an STC or an amended type certificate (TC). The field approval process is not available in these cases. AC 21-40, Guide for Obtaining a Supplemental Type Certificate, details the STC application process for a broad audience, while FAA Order 8110.4, Type Certification, provides that same detail for ASIs. Personnel may also find useful the MRADA Job Aid associated with Order 8300.16. This job aid lists alterations governed by Order 8300.16 and alterations that should be processed as major changes in the approved type design.

3.2.3 Gather Data. Gather and organize data describing and substantiating the proposed repair/alteration. Review paragraph 2 for data types you might use.

3.2.4 Prepare the Data Package. To organize project data and standardize the field approval process, we recommend using a data package. A typical data package might include the following items:

1. Field approval checklist;
2. Copies of any substantiating data;
3. FAA Form 337, Major Repair or Alteration (Airframe, Powerplant, Propeller, or Appliance);
4. Compliance checklist;
5. Maintenance information; and
6. Draft proposed AFMS or RFMS.

Note: Review and approval of an AFMS, RFMS, or SAFM is independent of the review and acceptance of approved data (or approval of technical data). The approval is indicated on the AFMS, RFMS, or SAFM, so you do not need a separate FAA Form 337. See paragraph 4 for further AFMS information.

3.2.4.1 Complete the Field Approval Checklist (recommended). The checklist and instructions in Appendix A can be used to organize data and information before requesting a field approval. It is a tool to ensure your submission is complete.

3.2.4.2 Substantiate Applicable Requirements. Indicate the specific applicable airworthiness requirements to show compliance, including the amendment level of the regulation and other requirements, except that you should not use general references, such as "part 25." As shown in Appendix B, Instructions for Completing the Compliance Checklist, you may reference a compliance checklist specific to descriptive data instead of listing regulatory requirements.

3.2.4.3 Complete FAA Form 337. Complete FAA Form 337, except for dates and signatures in blocks 6 and 7. You should enter dated signatures after completing the repair/alteration and inspecting for conformance. AC 43.9-1, Instructions for Completion of FAA Form 337, provides guidance on how to complete this form.

3.3 Evaluate the Data. Review the data to determine (1) if the package is complete and inclusive, and (2) if applicable data has been approved. There are several methods to obtain all the approved data. We sometimes use the field approval process, with an authorized ASI, to approve technical data. Another alternative is approval of all the data by a DER or ODA. In some cases, you might need multiple DERs when the repair/alteration deals with several disciplines, such as systems and structures.

3.3.1 The Field Approval Process. Field approvals are a method by which the FAA approves technical data for a major repair/major alteration on a single aircraft and gives operational approval by reviewing and approving an AFMS (RFMS or SAFM). A field approval may

constitute an approval for the alteration or repair and is a one-time approval for the product or appliance to which it applies. The overall process is illustrated in Figure 3-1, Field Approval Process, and is explained in paragraphs 3.3.1.1 through 3.3.1.3 below. Field approvals are a method by which we approve technical data for a major repair/major alteration on a single aircraft.

A field approval may require engineering assistance or coordination with an AIR Certification Branch. You may use the field approval process to obtain approval of acceptable data in certain cases.

Note 1: The information and process steps are provided in Figure 3-1 in a specific order to show a logical progression through the repair/alteration. We are not implying that one step must follow another in the order presented. Several actions may take place concurrently or in a different order. The goal is that you address all necessary concerns and regulatory considerations when performing a major repair/major alteration.

Note 2: The paragraph numbers next to blocks in the figure correspond to associated paragraph numbers in this order, which provide information in more detail.

3.3.1.1 Contact the ASI. Contact a local FAA office and speak with an ASI who has field approval authority. Discuss the repair or alteration with the ASI and determine if you need to meet to review the request. Be as specific as possible about the needs, and especially about the schedule. In some cases, you may contact DARs delegated with the authority to perform data approvals in support of a major repair or alteration.

3.3.1.2 Provide Data Package to the ASI. Send a complete data package to the ASI. Using the checklist in Appendix B is one way to organize data and may help prevent omissions.

3.3.1.3 ASI Review Procedures.

3.3.1.3.1 When the ASI receives the package, the ASI will review it to determine if the field approval request is appropriate.

1. Confirm that the applicant, in accordance with 14 CFR § 1.1 and part 43 appendix A, properly determined that the repair or alteration is major. Minor alterations/repairs do not require approved data. ASIs who deny data approval requests for alterations or repairs that do not require approval must explain to the applicant the reason for the denial and, if requested, provide a written explanation in letter or electronic form.
2. Once the repair/alteration is confirmed to be a major, the ASI or designee should refer to the MRADA Job Aid in order to confirm that the project is within the scope of a field approval. The ASI should examine the data and

determine if all the data for the project has been approved. If all the required data is approved, then a field approval or STC is not required.

3. If all the required technical data is not approved, then additional approvals (e.g., DER-approved data) or a field approval are necessary. If it is determined that the alteration requires an STC, inform the applicant to apply for an STC or amended TC (if the applicant is the design approval holder (DAH)).

3.3.1.3.2 After the ASI has reviewed the data package and/or inspected the aircraft, and can approve the repair/alteration, the ASI may (1) approve the data package only, or (2) approve the repair/alteration on FAA Form 337 by physical inspection. The ASI will sign and date block 3 indicating approval. The ASI enters one of two statements:

1. First statement: "The data identified herein complies with the applicable airworthiness requirements and is approved for the above-described aircraft, subject to conformity inspection by a person authorized in § 43.7."

Note: This statement is entered on block 3 of FAA Form 337 when the ASI reviews a data package and completes data approval.

2. Second statement: "Approval by Physical Inspection, Demonstration, Testing, etc. One Aircraft: The repair or alteration identified herein complies with the applicable airworthiness requirements and is approved for the above-described aircraft, subject to conformity inspection by a person authorized in § 43.7."

Note: This statement is entered on block 3 of FAA Form 337 when the ASI makes a physical inspection of the aircraft, or the applicant satisfactorily performs a demonstration or other type of test and the ASI completes an installation or repair approval.

3.3.2 DER Data Approval.

3.3.2.1 A properly authorized DER is a designee of the FAA whom an applicant may employ to provide approved technical data to support a major repair/major alteration. A DER's authority is limited to specific functions, and data from more than one DER may be necessary. If an applicant has determined that a single DER has, or multiple DERs have, provided necessary approved data for the repair/alteration before involving the ASI, then no field approval is required.

3.3.2.2 A DER may approve descriptive and/or substantiating data, if specifically authorized, to support a major repair or major alteration. However, this DER-approved data may not be adequate to cover every aspect of the repair or alteration. Repairs or alterations involving flight manual supplements, ALs,

ground and flight test plans, ground and flight tests, compliance inspections, alterations to critical structure or life-limited parts, ICA, special conditions, noise findings, and ELOS findings may require data that a DER is not normally authorized to approve. If the repair or alteration requires approval of data beyond the DER's authority, then additional approval, such as an FAA field approval or managing office approval, is required.

3.3.2.3 In order to help the repair or alteration installer, DERs will provide a statement on their approval to indicate whether the data being approved does (or does not) constitute all the data necessary to substantiate compliance of the repair or alteration with all applicable airworthiness regulations. In order to help the installer and Flight Standards District Office (FSDO) involved, the DER must add the following note to the "List of Data" block on FAA Form 8110-3, Determination of Compliance with Airworthiness Standards:

"This approval is for engineering design data only. It indicates the data listed above demonstrates compliance only with the regulations specified by paragraph and subparagraph listed below as 'Applicable Requirements.'

This form (does/does not) approve all data necessary for the installer to reference in the approval for return to service."

3.3.2.4 We have referenced DER authorizations and limitations in FAA Order 8110.37, Designated Engineering Representative (DER) Handbook. This reference includes Repair Specification DER (RS-DER) authorizations and limitations, and general guidance on approving data for major repairs/major alterations. A list of current DERs and their appointed functions and authorizations is available at https://www.faa.gov/other_visit/aviation_industry/designees_delegations/find_designees.

Note: Although DERs are not authorized to approve block 3 of FAA Form 337, you may use DER-approved data as a basis for a repair/alteration in support of FAA Form 337. However, when you have obtained sufficient DER-approved data that addresses requirements in 14 CFR parts 21 and 43, the approval process applicable to the alteration is complete. The person performing the alteration, not the DER, is then responsible for a conformity inspection and for return to service approval of the installation.

3.3.3 ODA Data Approval. You may employ an ODA holder to provide approved technical data to support a major repair/major alteration. If the applicant employs a DER or ODA to provide approved technical data to support a major repair or major alteration, then the applicant is responsible for ensuring that the DER or ODA is authorized to approve such technical data, as applicable to the repair or alteration. If the data, as approved, addresses the entire repair or alteration, and all of the requirements of 14 CFR parts 21 and 43 are met, there is no requirement for any further approval by the ASI. If the repair or alteration

data is approved solely by the DER, ODA, or DAR, but necessitates maintenance instructions, the maintenance instructions should be prepared by the applicant and recorded in block 8 of FAA Form 337.

3.3.3.1 TC/STC ODA Holder With Specific Authority. A TC/STC ODA holder with specific authority for major repairs/major alterations may approve data within its authority and limitations. The data approved by an ODA holder may not adequately cover every aspect of the repair/alteration.

1. If a major repair, alteration, and airworthiness (MRA) ODA holder approves all aspects of the major repair/major alteration data, then no field approval is necessary.
2. If an MRA ODA holder (or holders) does not approve all aspects of the major repair/major alteration data, then a field approval is necessary.

3.3.3.2 ODA Authorizations and Limitations. For ODA authorizations and limitations and general guidance on approving data for major repairs/major alterations, refer to FAA Order 8100.15, Organization Designation Authorization Procedures. A list of authorized ODA holders is available on the FAA Designees and Delegations web page: https://www.faa.gov/other_visit/aviation_industry/designees_delegations/find_designees/oda-directory.

Note: The person performing the alteration, not the ODA, conforms and approves the installation from ODA-approved data. ODA data does not constitute a field approval, but is approved data that, like other approved data, can be used for major repairs/major alterations without further approval if the data addresses the entire repair/alteration. In this case, the applicant does not need to request a field approval.

3.4 Perform Repair or Alteration. After the repair or alteration data is approved, an applicant can alter or repair the aircraft or one of its components. When the work is complete, you should review the requirements of 14 CFR § 91.407 and determine if a flight check is required. Complete FAA Form 337 and follow procedures in 14 CFR part 43 appendix B.

Figure 3-1. Field Approval Process

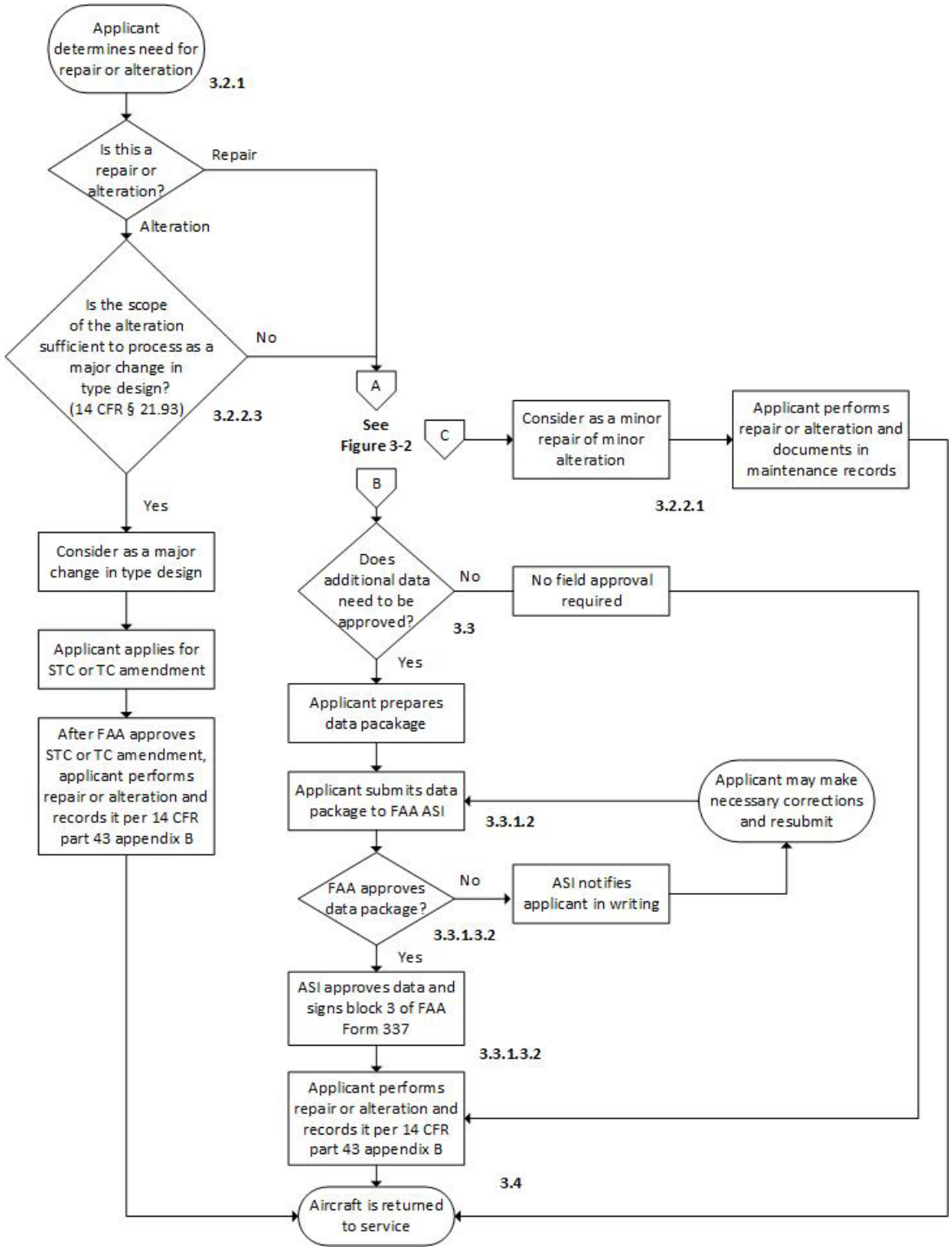
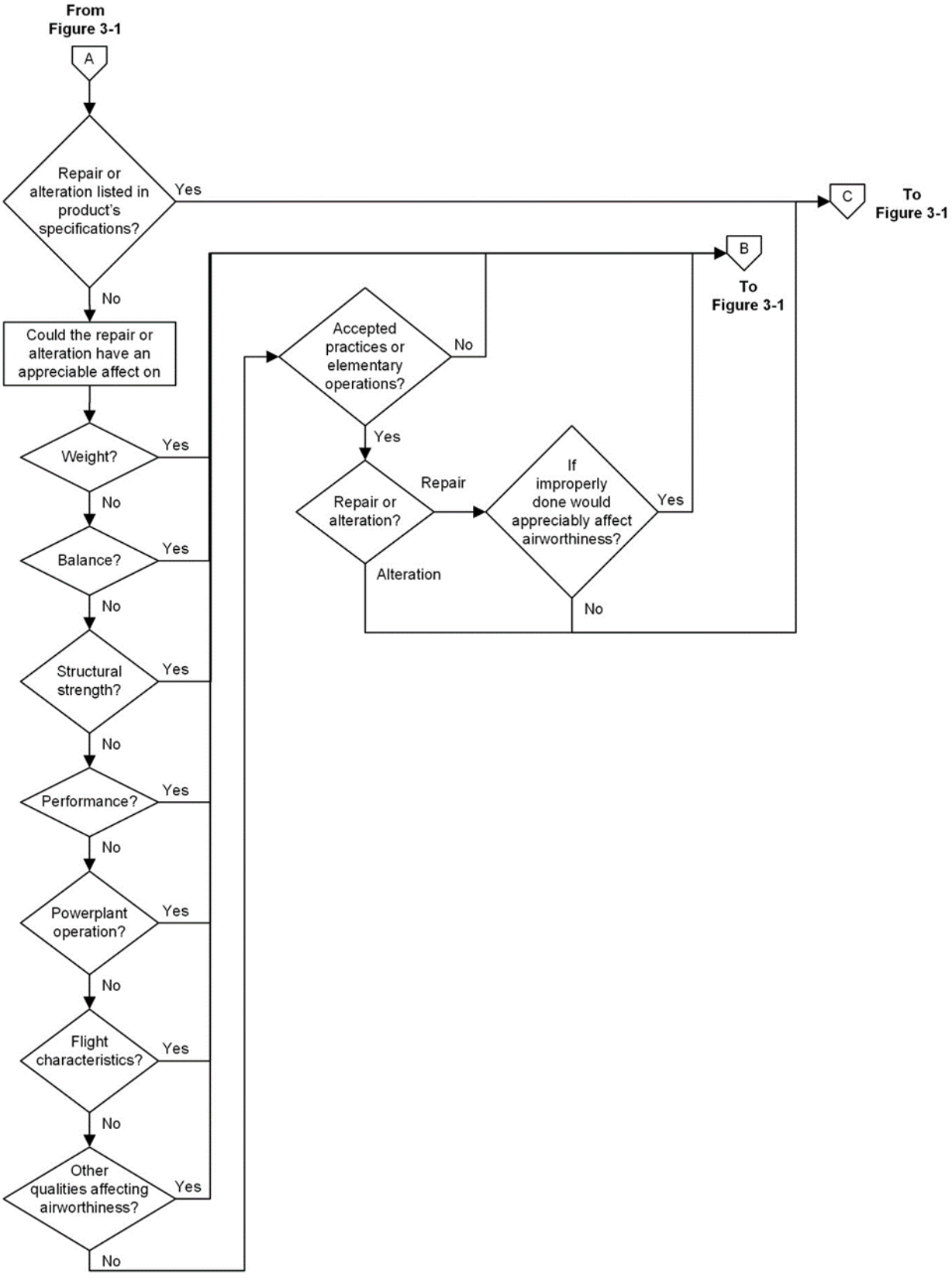


Figure 3-2. Determination of Major or Minor Alteration or Repair



4 FLIGHT MANUAL SUPPLEMENTS.

4.1 General Information. Alterations that result in a change to limitations, procedures, performance, or loading information from a current Aircraft Flight Manual (AFM) or placards, require an applicant to develop revised or supplemental information as addressed in paragraph 4.3.

4.2 AFMs. Aircraft operating procedures and performance limitations are typically provided as:

1. AFMs, including either Airplane Flight Manuals or RFMs;
2. Markings or placards; or
3. Combinations of the above.

4.3 Manual Supplements. Supplemental information should be provided by one of the following methods:

1. If the aircraft has an AFM, the supplemental information must appear in an AFMS or RFMS. Refer to 14 CFR § 23.2620(a).
2. If the aircraft does not have an AFM, the applicant should create an SAFM so necessary information is available to the pilot. An SAFM complements a pilot's operating handbook (POH), which may not have specific FAA approval. Procedures for creating and approving an SAFM are the same as those for an AFMS.
3. You may present the supplemental information either as modified, or as additional markings and placards in aircraft type certificated before AFMs were required.

4.3.1 If you substantiate a major alteration based on data from a previous approval, you must include a flight manual supplement if the previous approval had one. For the purposes of this guidance, AFMSs include RFMSs and SAFMs, as well. Refer to 14 CFR § 23.2620.

4.4 Format and Content. The AFMS or placards must contain any new or changed limitations, emergency or abnormal operating procedures, normal operating procedures, performance, and system operating instructions. The supplement should be consistent with the format of the basic AFM and must be applicable to the specific installation configuration for the installed equipment and systems. ASI approvals of AFMSs should not contain conditional operation descriptions and need to be explicit for the configuration of the targeted aircraft. AC 23-8, Flight Test Guide for Certification of Part 23 Airplanes, and AC 25.1581-1, Airplane Flight Manual, provide guidance on what is recommended in an AFMS for aircraft. Refer to 14 CFR §§ 23.2610 and 23.2620.

4.4.1 The AFMS should include:

1. The aircraft manufacturer's name;
2. Model number;

3. Serial number; and
4. Registration number.

4.4.2 You should include the following information, as applicable to the altered conditions:

1. Abnormal or emergency procedures;
2. Normal operating procedures;
3. Aircraft performance;
4. Aircraft Weight and Balance (W&B); and
5. Loading information.

4.4.3 You must install placards in clear view of the pilot and, as applicable, in proximity to affected equipment. Refer to 14 CFR § 25.1541, § 27.1541, or § 29.1541.

4.5 Supplement Information Approval. Responsibility for approval of the supplement (including placards) depends on the supplement type.

1. Alterations that change the operating limits of the aircraft, aircraft engine, or propeller would require coordination with an appropriate AIR Certification Branch for approval of the supplement or placard that stipulates limitations to the operation of the aircraft. See paragraph 4.6 for details.
2. ASIs with field approval authorization, and (1) authorized specifically by Flight Standards (FS) policy, or (2) are delegated by an AIR Certification Branch to review and approve certain AFMSs.
3. An authorized DER/ODA can approve an AFMS or placards.

4.5.1 Repairs or alterations that do not result in a change to limitations, procedures, performance, or loading information may not require a supplement, or the supplemental information may consist of system operating instructions only.

4.5.2 An ASI with field approval authorization may review and grant field approval of an appropriately affixed placard characterizing operating limitations or information about certain equipment and systems. Refer to 14 CFR § 25.1541, § 27.1541, or § 29.1541. For examples of such placards—"Not For IFR" or "VFR Only"—refer to the "Kinds of Operations" paragraph in 14 CFR § 25.1525, § 27.1525, or § 29.1525.

4.6 AIR Certification Branch Approval Process.

1. If an ASI or designee is not authorized to approve the AFMS, the ASI must forward the alteration data package, including proposed AFMS, to the AIR Certification Branch.
2. The ASI may route the AFMS to AIR Certification Branch flight-test personnel for review.

3. After review and approval of the AFMS/RFMS/SAFM or limitations placard, the applicant should record the approval date, document name, and number on FAA Form 337, Block 8, Description of Work Accomplished. Indicate on such entries that the AFMS/RFMS/SAFM is inserted or affixed to the AFM or POH. Refer to 14 CFR § 43.9 and part 43 appendix B, and AC 43.9-1.
4. The ASI will advise you that equipment upgrades, such as changes to the operating system software or hardware, may invalidate the existing FAA-approved AFMS and trigger a subsequent review and approval of the AFMS.

4.7 Additional AFMS Considerations.

4.7.1 Operating procedures for a newly installed appliance or system are frequently provided in an AFMS. Alternatively, you may incorporate equipment manufacturer operating manuals by reference into the AFMS.

4.7.2 Manufacturer operating instructions included/referenced in the AFMS for systems or equipment, such as those for navigation systems, do not require specific approval, but if included in an AFMS, the AFMS itself must be approved. Refer to 14 CFR § 23.2620.

4.7.3 If all of the following conditions are met, an AFMS is not required (refer to 14 CFR § 23.2620):

1. Does not restrict, displace, or limit the use of required equipment;
2. All new limitations can be addressed via placards;
3. The aircraft performance is not negatively affected;
4. Does not require a placard per TC or STC;
5. Visual flight rules (VFR) use only; and
6. Is nonrequired equipment.

4.7.4 For equipment limited to VFR, you must install a readable placard, in clear view of the pilot, stating that the equipment is only for VFR operations. If the equipment automatically displays this message on start-up and the pilot must clear the message, an AFMS or RFMS is unnecessary, since the placard or display contains the equipment limitation. Refer to 14 CFR § 23.2610.

5 MAINTENANCE INFORMATION.

5.1 Purpose of Maintenance Information for a Major Repair or Major Alteration.

Maintenance information provides adequate instructions to maintain the repaired or altered product in an airworthy condition. For this AC, major repair and major alteration maintenance information can include:

1. Additional maintenance instructions;
2. Supplemental information for the product's maintenance manual or Illustrated Parts Catalog (IPC);

3. Supplemental information for the product's ICAs;
4. Supplemental information for articles or appliance maintenance manuals or IPC; and
5. Any other information required to maintain the product in an airworthy condition.

5.2 Benefits of Providing Maintenance Information for a Major Repair or Major Alteration.

5.2.1 When the owner/operator references maintenance information in block 8 of FAA Form 337, this gives the aircraft owner or operator the following advantages:

1. One document can reference or contain maintenance information about a major repair/major alteration;
2. The maintenance information becomes a permanent aircraft record as required by 14 CFR § 91.417(a)(2)(vi); and
3. The owner or operator can contact the FAA registry for a replacement FAA Form 337 if the maintenance information is lost or destroyed.

Note: The owner or operator may also forward a previously completed FAA Form 337 and associated maintenance information if the FAA Form 337 is not currently in the registry.

5.2.2 The additional reference to maintenance information as part of a major repair/major alteration in the aircraft's maintenance entry will ensure that maintenance personnel appropriately address maintenance of the major repair/major alteration during future inspections.

5.3 Maintenance Information as Part of the Major Repair or Major Alteration Data Package. The FAA has determined that, as per 14 CFR § 21.50, a major repair/major alteration data package must address how the major repair or major alteration affects continued airworthiness. You must develop maintenance information if a major repair/major alteration affects the continued airworthiness, or must also state that a major repair or major alteration does not affect continued airworthiness. If a major repair or major alteration affects the Airworthiness Limitations Section (ALS) of the ICA or a part of the ICA that requires FAA approval, such as described in 14 CFR part 26 ICA requirements, approval of maintenance information for the major repair or major alteration comes from an AIR Certification Branch/ODA. The maintenance information checklist is a guide for an applicant to develop maintenance information using methods, techniques, and practices acceptable to the FAA. See Figure 5-1, Major Repair or Major Alteration Maintenance Information Checklist.

5.4 Maintenance Information Under the Civil Air Regulations (CAR). For field-approved major alterations to CAR-certificated aircraft, engines, and propellers, maintenance information must meet the requirements of the original certification basis. In cases where the major alteration adds new items the CAR requirements did not address, the major alteration must meet applicable 14 CFR requirements. Figure 5-1 lists acceptable

guidance for these installations, and for inspections not covered by the Original Equipment Manufacturer (OEM) instructions.

5.5 Maintenance Information Development.

5.5.1 Major alterations needing maintenance or inspections not covered by the OEM instructions must have maintenance information prepared in accordance with methods, techniques, and practices acceptable to the FAA, as required by 14 CFR § 43.13. The applicant should reference maintenance information as an attachment on block 8 of FAA Form 337. The entry, required by 14 CFR § 43.9, must refer to the maintenance information and be identified by the approval date of the FAA Form 337, as per 14 CFR §§ 43.5 and 43.11. The applicant must keep the form in the aircraft's permanent records per 14 CFR § 91.417(a)(2)(vi). Refer to AC 43.9-1. Maintenance information referenced in block 8 of FAA Form 337 is considered acceptable to the FAA and will not be approved unless specifically required by regulation, as with changes to the ALS or 14 CFR part 26 requirements. Applicants should use Figure 5-1 as a guide to help ensure they meet all applicable requirements.

Note: Maintenance information is required to be acceptable to the FAA, as per 14 CFR §§ 43.9 and 43.13; therefore, it should be referenced as a separate document on block 8 of FAA Form 337. Block 8 of FAA Form 337 is for data that is approved by the FAA.

5.5.2 If the repair or alteration data is approved solely by the DER, ODA, or Designated Airworthiness Representative (DAR), but necessitates maintenance instructions, the maintenance instructions should be prepared by the applicant and referenced in block 8 of FAA Form 337.

5.6 Maintenance Information Content. Refer generally to the relevant appendices to 14 CFR parts 23, 25, 27, 29, 31, 33, and 35 addressing ICA. Maintenance information must include specific instructions describing how to maintain affected areas for continued airworthiness, as per 14 CFR § 43.13. For example, maintenance information might include a new requirement for a special inspection during 100-hour or annual inspections. Such maintenance information must also include installed appliances that may impact maintainability of the product, or require periodic maintenance to ensure continued performance. When appropriate, maintenance information must also include specific instructions for determining excessive wear, distortion, or deterioration; troubleshooting information; and installation and removal procedures, including operational checks, as per 14 CFR part 43 appendix D. You must also include servicing requirements, as per 14 CFR part 43 appendix A, such as recommended fluid change intervals or lubrication schedules. In the instances that a repair/alteration must meet 14 CFR part 26 requirements, only the AIR Certification Branch may approve the maintenance information developed. The maintenance information must contain:

1. Inspection tasks and task intervals;
2. Instructions and procedures in the aircraft maintenance manual to accomplish the tasks; and

3. Precautions, protective procedures, and information in the standard wiring practices for transport category aircraft, as per 14 CFR part 25 subpart H.

Figure 5-1. Major Repair or Major Alteration Maintenance Information Checklist

A/C Make_____	**Model**_____	**S/N**_____	**Reg. # N**_____
Revision:_____	Date:_____	System:_____	

Item	**Subject**
1.	Introduction: This section briefly describes the aircraft, engine, propeller, or component that has been altered or repaired. Include any other information on the content, scope, purpose, arrangement, applicability, definitions, abbreviations, precautions, units of measurement, referenced publications, and distribution of the maintenance information, as applicable.
2.	Description: Describe the major alteration/repair and its functions, including an explanation of its interface with other systems, if any.
3.	Control, operation information or special procedures, if any.
4.	Servicing information, such as types of fluids used, servicing points, and location of access panels, as appropriate.
5.	Maintenance instructions, such as recommended inspection/maintenance periods in which each of the major components are inspected, cleaned, lubricated, adjusted, and tested, including applicable wear tolerances and work recommended at each scheduled maintenance period. This section can refer to the manufacturer's instructions for the equipment installed where appropriate, such as functional checks, repairs, and inspections. It should also include any special notes, cautions, or warnings, as applicable.
6.	Troubleshooting information: Information describing probable malfunctions, how to recognize those malfunctions, and remedial actions to be taken.
7.	Removal and replacement information: This section describes the order and method of removing and replacing products, parts, and any necessary precautions. This section should also describe or refer to such items as manufacturer's instructions to make required tests, trim checks, alignment, calibrations, center of gravity (CG) changes, lifting or shoring, if any.
8.	Diagrams: Access plates and information, if needed, to gain access for inspection.
9.	Special inspection requirements, such as X-ray, ultrasonic testing, or magnetic particle inspection, if required.
10.	Application of protective treatments to the affected area after inspection and/or maintenance, if any.
11.	Data: Relative to structural fasteners such as type, torque, and installation requirements, if any.
12.	List of special tools: Special tools required, if any.
13.	For commuter category aircraft: The following additional information must be furnished, as applicable (refer to 14 CFR part 135 appendix A, § A35): A. Electrical loads. B. Methods of balancing flight controls. C. Identification of primary and secondary structures. D. Special repair methods applicable to the aircraft.
14.	Recommended overhaul periods must be noted on maintenance information when an overhaul period has been set by the manufacturer of a component or equipment. Refer to 14 CFR § 43.2. If there is no overhaul period, the maintenance information for item 14 should state: "No additional overhaul time limitations."
15.	Airworthiness Limitation Section (ALS): Include any approved ALs identified by the manufacturer or Federal Aviation Administration (FAA) Certificate Management AIR Certification Branch. Example: An STC incorporated in a larger field-approved major alteration may have an AL. The FAA inspector will not establish, alter, or cancel ALs without coordinating with the appropriate FAA Certificate Management AIR Certification Branch. If there are no changes to ALs, maintenance information should state for item 15: "No additional ALs" or "Not applicable."
16.	Maintenance information must be acceptable to the FAA. Refer to 14 CFR §§ 43.9 and 43.13. As such, changes should be documented by submitting the revised maintenance information along with the original FAA Form 337 to the Aircraft Registration Branch in Oklahoma City. An entry in the aircraft records should indicate the current revision.

6 ADMINISTRATIVE INFORMATION.

6.1 Acronyms.

1.	14 CFR	Title 14 of the Code of Federal Regulations
2.	A&P	Airframe and Powerplant
3.	AC	Advisory Circular
4.	AD	Airworthiness Directive
5.	AED	Aircraft Evaluation Division
6.	AFM	Aircraft Flight Manual
7.	AFMS	Aircraft Flight Manual Supplement
8.	AIR	Aircraft Certification Service
9.	AL	Airworthiness Limitation
10.	ALS	Airworthiness Limitations Section
11.	AML	Approved Model List
12.	AMT	Aviation Maintenance Technician
13.	ASI	Aviation Safety Inspector
14.	CAA	Civil Aviation Authority
15.	CAR	Civil Air Regulations
16.	CFR	Code of Federal Regulations
17.	CG	Center of Gravity
18.	DAH	Design Approval Holder
19.	DAR	Designated Airworthiness Representative
20.	DAR-T	Designated Airworthiness Representative—Maintenance
21.	DER	Designated Engineering Representative
22.	ELOS	Equivalent Level of Safety
23.	FAA	Federal Aviation Administration
24.	FSDO	Flight Standards District Office
25.	ICA	Instructions for Continued Airworthiness
26.	IFR	Instrument Flight Rules
27.	IPC	Illustrated Parts Catalog
28.	MRA	Major Repair, Alteration, and Airworthiness (a type of ODA)
29.	ODA	Organization Designation Authorization
30.	OEM	Original Equipment Manufacturer

31. OpSpecs Operations Specifications
32. PMA Parts Manufacturer Approval
33. POH Pilot's Operating Handbook
34. RFM Rotorcraft Flight Manual
35. RFMS Rotorcraft Flight Manual Supplement
36. RS-DER Repair Specification Designated Engineering Representative
37. SAFM Supplemental Airplane Flight Manual
38. SB Service Bulletin
39. SL Service Letter
40. SRM Structural Repair Manual
41. STC Supplemental Type Certificate
42. TC Type Certificate
43. TCDS Type Certificate Data Sheet
44. VFR Visual Flight Rules
45. W&B Weight and Balance

6.2 Related FAA Orders and ACs (current editions).

1. FAA Order 8000.95, Designee Management Policy.
2. FAA Order 8100.15, Organization Designation Authorization Procedures.
3. FAA Order 8110.4, Type Certification.
4. FAA Order 8110.37, Designated Engineering Representative (DER) Handbook.
5. FAA Order 8300.16, Major Repair and Alteration Data Approval.
6. AC 20-138, Airworthiness Approval of Positioning and Navigation Systems.
7. AC 20-180, Approved Model List Supplemental Type Certificate (AML-STC).
8. AC 21-40, Guide for Obtaining a Supplemental Type Certificate.
9. AC 23-8, Flight Test Guide for Certification of Part 23 Airplanes.
10. AC 25.1581-1, Airplane Flight Manual.
11. AC 43.9-1, Instructions for Completion of FAA Form 337.
12. AC 43.13-1, Acceptable Methods, Techniques, and Practices—Aircraft Inspection and Repair.
13. AC 43.13-2, Acceptable Methods, Techniques, and Practices—Aircraft Alterations.

6.3 Obtaining Copies of Referenced Documents and This AC.

6.3.1 A list of all ACs is available at https://www.faa.gov/regulations_policies/advisory_circulars/. Applicants can also obtain a copy of current CFRs online at https://www.ecfr.gov.

6.3.2 The MRADA Job Aid is available at https://drs.faa.gov/browse/OTHER_JOB_AIDS/doctypeDetails.

6.4 AC Feedback Form. For your convenience, the AC Feedback Form is the last page of this AC. Note any deficiencies found, clarifications needed, or suggested improvements regarding the contents of this AC on the Feedback Form.

APPENDIX A. INSTRUCTIONS FOR COMPLETING THE FIELD APPROVAL CHECKLIST

When requesting a field approval, you may use the fillable checklist found in Figure A-1, Field Approval Checklist, to provide the requested data, forms, descriptive items, and other information. You can also use an equivalent method for presenting the information and data. The following instructions apply to corresponding items 1 through 12 of the Field Approval Checklist as illustrated in this appendix.

Item 1—Aircraft. The Registration Number is the same as shown on AC Form 8050-3, Certificate of Aircraft Registration. Only U.S.-registered aircraft are eligible for field approvals.

Item 2—Applicant. Enter the applicant's name, address, and telephone number.

Item 3—Type of Product and Certification Basis. On the upper line, enter a check mark in the appropriate box to identify the item being approved. If you check "Other," enter the product's description in the space provided. On the bottom line, check the box that identifies how your aircraft or product was certificated. If you do not know this information, you can find it on the Type Certificate Data Sheet (TCDS) for your aircraft or engine. On the TCDS, look in the section titled Certification Basis.

Item 4—Brief Description of Project. Using the space provided, enter a short summary of the proposed repair or alteration, such as "Installing a GPS in the instrument panel above the right yoke." If you need additional space, attach a continuation page and note that on the form in this area.

Item 5—Schedule for Completion of Project. On the first line, enter the date you need the field approval. On the second line, enter the date you plan to start the work, and on the last line, enter the date you expect to complete the work.

Item 6—Who Will Perform the Repair or Alteration? On the top line, enter the name of the certificated mechanic who will be doing the work. If a repair station is doing the work, leave the mechanic's name blank and enter the name of the repair station. On the second line, enter the mechanic's Airframe and Powerplant (A&P) certificate number, or if a repair station is doing the work, their certificate number.

Also enter a contact name if you are using a repair station. If the aviation safety inspector (ASI) doing the approval has a question and you are not available, this will make it easier for the ASI to find someone knowledgeable about the project. On the third line, give the telephone number of the mechanic or the repair station doing the work. On the bottom line, enter the location where the work will be done. This location information should be as complete as possible.

Item 7—Designees (Designated Airworthiness Representatives (DAR) and Designated Engineering Representatives (DER)). If you are working with any DERs or DARs for this project, include their names and telephone numbers, in case the ASI needs to contact them for additional information or clarification. DERs have authorization limitations; if you are working with a designee, make sure anticipated work is within the designee's authorization.

Item 8—Compliance Statement and Compliance Checklist. Before completing the repair/alteration to your aircraft, be aware that the aircraft must still meet its certification basis after alteration/repair. Include an entry in block 8, to include proof or data, as well as your compliance statement, that it still meets its certification basis. The compliance checklist will list affected Title 14 of the Code of Federal Regulations (14 CFR)/Civil Air Regulations (CAR) and indicate how the applicant showed compliance. The person doing the repair or alteration creates this checklist, and should address each section of the regulations applicable to the project. Appendix B, Instructions for Completing the Compliance Checklist, has a sample compliance checklist format.

Item 9—Previous Alterations or Repairs that May be Affected by This Alteration. Review the aircraft's records to determine if there are any modifications, Supplemental Type Certificates (STC), alterations, or repairs that could conflict with the proposed repair/alteration. If the prior applicant completed an FAA Form 337 for repairs/alterations that might be affected, include it. If the prior applicant made a logbook entry concerning the work done, make a copy of that entry and include it in your package. Photographs and drawings of previous alterations/repairs that might be a factor can also be very helpful.

Item 10—Maintenance Information. In this attachment, describe how to maintain the airworthiness of the altered/repaired part of the aircraft. This might include 100-hour or annual inspections. These should be specific instructions, including (1) inspection items, (2) minimum or maximum measurements of parts for wear or deterioration, (3) troubleshooting, (4) functional checks, (5) installation and removal procedures, and (6) servicing requirements, such as fluid change intervals or lubrication schedules. Figure 5-1 provides guidance and a sample checklist for creating maintenance information.

Item 11—Aircraft Flight Manual Supplement (AFMS). If you have an AFMS for your alteration, include a copy of it. Guidance for creating an AFMS is available in Advisory Circular (AC) 23-8, Flight Test Guide for Certification of Part 23 Airplanes. Appendix 5 of AC 23-8 has a sample format that you can use.

Item 12—Data Attached. If the data you are attaching is included on this list, check the appropriate box. If you have data or information not included in this list, check the box labeled "Other" and enter in the space provided a short description of what you are including.

Item 13—For All the Data Submitted. Review all data submitted and determine if the data meets the requirements listed. Check the appropriate box after review.

Item 14—FAA Use Only. Do not write or mark in this area—it is for FAA use only.

Figure A-1. Field Approval Checklist

FIELD APPROVAL CHECKLIST		
Instructions: Print or type all entries. This information should be as complete as possible prior to an initial discussion with the FAA.		
1. Aircraft:	Make	Model
	Registration Number N	Serial Number
2. Applicant:	Name	Address/Telephone Number

3. Type of Product and Certification Basis:

☐ Airframe ☐ Engine ☐ Appliance ☐ Other

For an appliance or "Other" list:

Manufacturer:

Part Number:

Serial Number:

☐ Part 23 ☐ Part 25 ☐ Part 27 ☐ Part 29 ☐ Part 31 ☐ Part 33

☐ CAR 3 ☐ CAR 4(a) ☐ CAR 4(b) ☐ CAR 6 ☐ CAR 7 ☐ CAR 8 ☐ CAR 13

4. Brief Description of Project:

☐ Repair ☐ Alteration

5. Schedule for Completion of Project:

Date when field approval is needed:

Date when work is to begin:

Date for ASI visit (projected):

Projected completion date for project:

6. Who Will Perform the Repair or Alteration?

Mechanic's name: or Repair station:

Certificate no:

Contact person at the facility:

Telephone number:

Location where alteration/repair will be accomplished:

7. Designees (DARs, DERs, or ODAs): ☐ None

Designated Engineering Representatives (DER), Designated Airworthiness Representatives (DAR), or Organization Designation Authorization (ODA):

Name: Telephone number:

Name: Telephone number:

8. Compliance Statement and Compliance Checklist:

Attach the Compliance Checklist you completed.

9. Previous Repairs or Alterations Affected by This Alteration: Is this alteration compatible with previously installed equipment?

10. Maintenance Information and/or Instructions for Continued Airworthiness (ICA):

Maintenance information attached? ☐ Yes ☐ No
Reference these in block 8 of FAA Form 337.

11. Aircraft Flight Manual Supplement (AFMS):

Do you have an AFMS? ☐ Yes ☐ No If yes, attach a copy.

12. Data Attached:

☐ Proposed FAA Form 337
☐ Description of alteration, including drawings, schematics, and diagrams
☐ Material list
☐ Processes
☐ Specifications
☐ Previous field approvals
☐ FAA Form(s) 8110-3
☐ Serviceable tags
☐ Placards
☐ Test data and/or flight test data
☐ Load analysis (electrical and/or structural)
☐ Other:

13. For All the Data Submitted:

Are all applicable airworthiness requirements addressed?	☐ Yes	☐ No	☐ N/A
Are all exemptions addressed?	☐ Yes	☐ No	☐ N/A
Are all special conditions addressed?	☐ Yes	☐ No	☐ N/A
Are the requirements of Part 26 addressed?	☐ Yes	☐ No	☐ N/A
Are all applicable airworthiness directives addressed?	☐ Yes	☐ No	☐ N/A
Are instructions for continued airworthiness addressed?	☐ Yes	☐ No	☐ N/A
Are the applicable noise requirements addressed?	☐ Yes	☐ No	☐ N/A
Are the applicable emission requirements addressed?	☐ Yes	☐ No	☐ N/A
Are all changes to a flight manual addressed?	☐ Yes	☐ No	☐ N/A

14. FAA Use Only:

Date:
Assigned inspector:
FAA office:
Is a field approval appropriate? ☐ Yes ☐ No
If a field approval is not performed, what is the proper method for alteration?
☐ Record entry ☐ STC ☐ Other:
Requires AIR Certification Branch concurrence? ☐ Yes ☐ No
Requires AED ICA review? ☐ Yes ☐ No
Additional information required:

APPENDIX B. INSTRUCTIONS FOR COMPLETING THE COMPLIANCE CHECKLIST

The compliance checklist documents applicable regulations and associated compliance with those regulations.

Note: Optionally, you may list applicable regulatory requirements for which you still need to present substantiation data.

Instructions for completing this sample compliance checklist are as follows:

1. Title 14 of the Code of Federal Regulations (14 CFR) Part/Civil Air Regulations (CAR) Paragraph. You may list specific regulations by number, such as 14 CFR § 23.2525. Also include current amendment level.

2. Subject. You should list the subject or title of applicable 14 CFR part/CAR paragraphs, such as storage battery design and installation.

3. Method of Compliance. The method of compliance may include design drawings (D), analyses (A), tests (T), or other methods (O). Some compliance checklists simply list the letter corresponding to a method of compliance. Other checklists reference specific data by title or number. However you format the method of compliance, you and the aviation safety inspector (ASI) should agree on the format.

4. Documentation Reference. List the documentation, such as a test report number, analysis, or report number that demonstrated compliance to the subject 14 CFR part or CAR paragraph.

Figure B-1. Compliance Checklist Format

14 CFR Part/CAR Paragraph	Subject	Method of Compliance	Documentation Reference

OMB Control Number: 2120-0746
Expiration Date:12/31/2027

Advisory Circular Feedback Form

If you find an error in this Advisory Circular, have recommendations for improving it, or have suggestions for new items/subjects to be added, you may let us know by emailing this form to the Flight Standards Directives Management Officer at 9-AWA-AFB-120-Directives@faa.gov.

Subject: AC 43-210A CHG 2, Standardized Procedures for Obtaining Approval of Data Used in the Performance of Major Repairs and Major Alterations

Date: _____

Please mark all appropriate line items:

☐ An error (procedural or typographical) has been noted in paragraph _____ on page _____.

☐ Recommend paragraph _____ on page _____ be changed as follows:

☐ In a future change to this AC, please cover the following subject:
(Briefly describe what you want added.)

☐ Other comments:

☐ I would like to discuss the above. Please contact me using the information below.

Submitted by: _____ Date: _____