

Federal Aviation Administration

Advisory Circular

AC 43-210 DATE: 2/17/04

STANDARDIZED PROCEDURES FOR REQUESTING FIELD APPROVAL OF DATA, MAJOR ALTERATIONS, AND REPAIRS

Initiated by: AFS-340

PREFACE

This advisory circular (AC) describes standardized procedures for requesting field approvals for certificated products. It describes the field approval process, data that supports making an alteration or repair, and the purpose and uses of the Aircraft Flight Manual Supplements (AFMS) and Instructions for Continued Airworthiness (ICA). This AC also gives instructions for completing the Field Approval Checklist and shows a sample Compliance Checklist format.

This material is not regulatory, nor does it establish minimum standards. However, where terms such as "must," "shall," and "will" are used in this AC, such use reflects actual regulatory requirements.

/s/ John Allen for James J. Ballough Director, Flight Standards Service

CONTENTS

Paragraph	<u>Page</u>
CHAPTER 1. INTRODUCTION	1
100. What is the purpose of this AC?	
101. To whom does this AC apply?	
102. What steps do I take to obtain approval of technical data?	1
103. Who will perform the field approval and work with me during the approval process?	2
104. What do I need to prepare when requesting a field approval?	
105. What are the two ways that an ASI may approve an alteration or repair?	
106. How will the alteration or repair affect the product?	
CHAPTER 2. DATA	5
200. Who is responsible for gathering data to support making	
an alteration or repair?	5
201. What types of data may be used?	
202. What is the DER's role in field approvals?	
CHAPTER 3. THE FIELD APPROVAL PROCESS	9
300. What are the three major steps in the field approval process?	9
301. Before requesting a field approval, what research should I conduct?	
302. What alterations and repairs do not require a field approval?	
303. How do I create the data package?	10
304. What should I do when I am ready to submit the data package?	
305. What is the ACO's role in the field approval process?	11
306. What will the ASI do after determining that the alteration or repair	
can be approved?	
307. What may I do after I have my <i>data</i> field approval?	
308. What may I do after I have my <i>installation</i> field approval?	12
CHAPTER 4. AIRCRAFT FLIGHT MANUAL SUPPLEMENTS (AFMS)	13
400. What is the purpose of an AFMS and under what circumstances do I need to create one?	12
401. How do I create an AFMS?	
401. How do refeate an AFMS?	
403. How do I determine whether the dates are correct in the AFMS	15
and FAA Form 337?	14
404. Where should copies of the AFMS be distributed?	
1	

Page

CHAPTER 5. INSTRUCTIONS FOR CONTINUED

AIRWORTHINESS (ICA)	15
500. Why does my alteration need ICAs?	15
501. What value does an ICA have for my alteration?	
502. What needs to be in the ICAs?	
503. Does the FAA approve ICAs?	15
504. What are the requirements for an ICA?	16
505. What do I do with the ICA after the FAA has accepted it?	16
506. What are the requirements for ICAs for aircraft originally	
certificated under the CAR?	16
507. Are there circumstances under which field-approved equipment	
does not need to be operational?	16
508. When should an ICA be revised?	17
509. May I use the ICA Checklist (Figure 1) for all types of	
major alterations?	17
Figure 1. Instructions for Continued Airworthiness (ICA) Checklist	19
CHAPTER 6. ADMINISTRATIVE MATTERS	21
600. What are the related regulations?	
601. What are the definitions of frequently-used terms and acronyms	
in this AC?	21
602. What FAA publications are related to this topic?	
603. How can I get copies of this AC and other FAA publications?	
APPENDIX 1. INSTRUCTIONS FOR COMPLETING THE FIELD	
APPROVAL CHECKLIST FORM and the FIELD APPROVAL	
CHECKLIST (4 pages)	1

APPENDIX 2. SAMPLE COMPLIANCE CHECKLIST FORMAT (1 page)......1

CHAPTER 1. INTRODUCTION

100. What is the purpose of this AC?

This Advisory Circular (AC) describes a standardized procedure, which is one means, but not the only means, for requesting field approvals for certificated products. This AC also introduces and provides instructions for completing the field approval checklist (see Appendix 1).

101. To whom does this AC apply?

Aircraft owners, operators, and aviation maintenance technicians, (henceforth collectively referred to as "you") have asked the Federal Aviation Administration (FAA) to clarify and standardize policies and procedures concerning the request and issuance of FAA field approvals. This AC contains information that can help you determine if a proposed alteration is eligible for a field approval. Additionally, this AC has guidance and standardized procedures for you to follow to efficiently obtain a field approval.

102. What steps do I take to obtain approval of technical data?

a. Title 14 of the Code of Federal Regulations (14 CFR) part 43, section 43.7 specifies persons authorized to approve an aircraft or aircraft component for return to service after maintenance, preventative maintenance, rebuilding, or alteration. The use of technical data approved by the Administrator for major alterations or major repairs to type certificated (TC) products is required by the following 14 CFR parts:

- Part 43, sections 43.7(d) and 43.17(e)(2)
- Part 65, section 65.95(a)(1)
- Part 121, section 121.379(b)
- Part 135, section 135.437(b)
- Part 145, section 145.51(d)(3)

b. If you want to perform a major alteration or perform a major repair to an aircraft but lack approved data, you should do the following:

(1) Create a data package using the instructions in this AC.

(2) Submit the data package to an authorized FAA aviation safety inspector (ASI) at your local Flight Standards district office (FSDO). After receiving the field approval request, the ASI who evaluates the data can do one of the following:

- Request additional data or information from you, if the data is insufficient or inadequate
- Forward the request to another ASI
- Request assistance from another ASI
- Request engineering assistance from an FAA Aircraft Certification Office (ACO)

- Approve the data or installation
- Deny the request
- c. Your field approval request may be denied due to the following reasons:

NOTE: If your field approval request is denied, the ASI will provide a written response stating the reasons for the denial.

(1) The alteration or repair is a minor alteration or repair and requires acceptable data, but does not need approved data.

(2) The alteration or repair is beyond the scope of a field approval.

(3) Some major alterations do not qualify for field approvals. The effect of these alterations on a TC'd product may be so extensive that you would have to apply for a new TC, amend the original TC, or apply for a Supplemental Type Certificate (STC).

(4) The alteration or repair will result in an unsafe product.

d. After data approval has been issued or the ASI has indicated that the alteration is going to be approved, an appropriately-rated person or agency can perform the alteration or repair.

103. Who will perform the field approval and work with me during the approval process?

a. The most important step you can take to get a field approval is to establish clear lines of communication with the FAA. After determining that you need a field approval, contact your local FSDO and an ASI will be assigned to your project. Let the ASI know what you are planning to do and your proposed schedule to complete the alteration or repair. Have as much information available as possible during this first contact or visit with the ASI. Do not cut metal, string wire, or install equipment until the field approval is granted. If you need frequent field approvals, discuss establishing set procedures for future approvals with the ASI.

b. FAA ASIs are the only persons who can perform field approvals. However, not all FAA ASIs are authorized to perform field approvals, or their approval authority may be limited. If the ASI you are working with cannot assist you with your project, he or she may contact another ASI to help you. This ASI may be at his or her office, at another FSDO, or at a FSDO in another FAA region. Also review Chapter 2, paragraph 202 to see how Designated Engineering Representatives (DER) can help support your field approval request.

104. What do I need to prepare when requesting a field approval?

a. To standardize the process for field approval requests, the FAA recommends using a Standard Data Package, or SDP. The SDP is comprised of the following:

(1) Field Approval Checklist (see Appendix 1).

(2) Copies of any data describing the alteration or repair.

(3) FAA Form 337, Major Repair or Alteration (Airframe, Powerplant, Propeller, or Appliance). This form should be completed with sufficient information, including references to all supporting data, but should not be signed and dated in blocks 6 and 7.

b. The SDP is not the only way to organize and present data to the FAA when requesting a field approval, but should help speed up the process. See Appendix 1 for a copy of the Field Approval Checklist and instructions for completing it.

105. What are the two ways that an ASI may approve an alteration or repair?

a. Examination of data only (one aircraft). This is the most common kind of field approval. The applicant submits data that is acceptable to the Administrator (e.g., drawings, photographs, a previously approved FAA Form 337, maintenance manuals, and so forth) that are relevant to that major repair or major alteration. The ASI reviews the data package. If it is found appropriate, the ASI signs block 3 of the applicable FAA Form 337, declaring that the attached data is approved. The approving inspector may need to inspect the aircraft to evaluate the appropriateness of the data.

b. Physical inspection, demonstration, and testing (one aircraft). This field approval is typically used when:

(1) A major alteration or major repair has been made to the aircraft by a person or persons unknown and no substantiating approved data or maintenance record exists; or

NOTE: When an alteration or repair is made by person(s) unknown and without substantiating data, the mechanic or repair station may correct this discrepancy by creating a data package based on the installation and equipment already installed in the aircraft and submitting it to the ASI for approval. When it is approved, the ASI may inspect the aircraft. If the data package is acceptable, the ASI will sign in block 3 of FAA Form 337, approving the installation or repair based on his or her inspection or testing of the alteration or repair. If an alteration or repair is made that can be approved by a physical inspection or demonstration and testing, rather than just data, or if creating a data package is not practical, the ASI will perform the inspection and then sign off in block 3 of FAA Form 337.

(2) An alteration is installed, tested, and the ASI witnesses that test.

106. How will the alteration or repair affect the product?

a. Repairs are intended to return the product to its original or properly altered condition. However, an alteration, by its very nature, alters the TC'd product. It is essential that you understand the scope of a proposed alteration and the effects that the alteration will have on the TC'd product. You must also ensure that the alteration or repair will result in a safe product.

b. The evaluation of the effect of the proposed alteration to the TC'd product requires a top-down approach.

(1) If the proposed alteration changes the TC'd product so that a substantial reevaluation of the TC is required, then you must apply for a new TC (14 CFR part 21, section 21.19).

(2) If the proposed alteration has an appreciable affect on the weight, balance, structural strength, reliability, operational characteristics, or other characteristics affecting the airworthiness of the product, then you must apply for an STC or an amended TC.

(3) All other alterations are approved provided that the provisions of sections 43.7 and 65.95 have been met.

c. The degree of the effect of the alteration on the TC'd product will dictate the type of data needed for the alteration.

(1) If the proposed alteration is determined to be a minor alteration, then acceptable data is sufficient.

(2) All other alterations require the use of data that has been approved by the Administrator.

(3) If the FAA has determined that the alteration(s) is outside the authority of the ASI to approve, the alteration data must be acquired from another source(s). FAA Order 8300.10, Airworthiness Inspector's Handbook, Volume 2, Chapter 1, Perform Field Approvals of Major Repairs and Major Alterations, has a list of common alterations and indicates how they may be approved.

d. Changes to products that require STCs are covered in part 21, subpart D, Changes to Type Certificates, and subpart E, Supplemental Type Certificates.

CHAPTER 2. DATA

200. Who is responsible for gathering data to support making an alteration or repair?

You, the applicant, are responsible for obtaining, organizing, and submitting data to the FAA for review and approval. ASIs are not expected to obtain or provide data for the alteration or repair. Source, cost, and other matters associated with your data are your concern alone. The data in your field approval request must demonstrate that the alteration or repair to the product complies with the appropriate regulations (Civil Air Regulations (CAR) and/or CFRs).

201. What types of data may be used?

The data in your field approval request should demonstrate that the alteration to the product complies with the appropriate regulations (CARs and/or CFRs). Data can take many forms, and generally falls into one of three categories: approved data, acceptable data, and other. Approved and acceptable data are used in the substantiation of alterations or repairs to aircraft.

a. Approved Data. Approved data can be used to substantiate major alterations/repairs and can be derived from:

- (1) Type Certificate Data Sheet (TCDS).
- (2) STC data, if it specifically applies to the item being repaired/altered.

NOTE: The Federal Aviation Reauthorization Act of 1996 (Public Law 104-264), specifically section 403, STC, contains specific requirements concerning the use of STCs. It requires that the installer obtain permission from the STC holder to use the STC.

- (3) Airworthiness Directives (AD).
- (4) Alternate Means of Compliance (AMOC) approved by the FAA for an existing
- AD.

(5) Airframe, engine, and propeller manufacturers' service manuals/documents *if they are specifically FAA-approved*. Many of these documents are not approved by FAA, or only specific sections are approved. Manufacturers often publish service documents such as bulletins, instructions, letters, and so forth, to inform users of product improvements or other service information. If this data is approved (rather than accepted), it will state this in the document.

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

(7) Civil Aviation Authority (CAA) Form 337, dated prior to 10/1/55.

(8) Previously field-approved FAA Form 337s that were approved for duplication on identical aircraft make, model, and altered configuration when accomplished by the original modifier. The FAA no longer makes approvals for duplication; field approvals are now one-time approvals for specific aircraft.

(9) Structural Repair Manuals (SRM), but only as a source of approved data for a major repair *when the SRM is identified as an FAA-approved document*. Data in an SRM that is not FAA-approved can be used on a case-by-case basis if prior FAA approval is granted for that repair.

(10) Parts Manufacturer Authorization (PMA) is an FAA approval for design, manufacturing, and direct replacement for a TC'd product only.

(11) Technical Standard Order Authorization (TSOA).

(12) Delegation Option Authorization (DOA)-produced FAA-approved data.

(13) DER-approved data with FAA Form 8110-3, Statement of Compliance with the Federal Aviation Regulations, but only within authorized limitations assigned to the DER.

(14) Designated Alteration Station (DAS) FAA-approved data.

(15) Repair data under Special Federal Aviation Regulation (SFAR) 36.

(16) Foreign data in the form of service bulletins, for use on U.S.-certificated foreignmanufactured aircraft, when approved by the foreign authority of the country of design in accordance with a bilateral agreement.

(17) The FAA and Transport Canada Civil Aviation (TCCA) have agreed in a Memo of Understanding (MOU) that certain TCCA and TCCA delegate repair design approvals are considered to be FAA-approved data. The MOU should be reviewed if additional guidance is required. It is available at <u>http://www.tc.gc.ca/aviation/regserv/carac/cars/a513s10e.htm</u>.

(18) Service bulletins and letters or similar documents that are *specifically approved* by the Administrator (under a Technical Standard Order (TSO), PMA, or other TC'd basis).

(19) Foreign bulletins as applied for use on a U.S.-certificated product made by a foreign manufacturer (who is located within a country with whom a bilateral agreement is in place) and by letter of specific authorization issued by the foreign civil air authority of the country of design.

(20) Other data approved by the Administrator.

(21) AC 43.13-1, Acceptable Methods, Techniques, and Practices—Aircraft Inspection and Repair, as amended, for repairs. This AC may be used as approved data, but only if the following three prerequisites identified on the AC's signature page are met.

- The user determines that it is appropriate to the product being repaired.
- The user determines that it is directly applicable to the repair being made.
- The user determines that it is not contrary to manufacturers' data.

b. Acceptable Data. Acceptable data that may be used on an individual basis to obtain approval are:

(1) ACs 43.13-1 and 43.13-2, Acceptable Methods, Techniques, and Practices— Aircraft Alterations, as amended. Under certain circumstances, AC 43.13-1 may be used as approved data. See paragraph 201a(21) above. (2) Manufacturers' technical information, unless it has been approved by the FAA (manuals, bulletins, kits, and so forth).

(3) Military Specifications (Mil Specs).

(4) SRMs when they are not identified as FAA-approved documents.

(5) Previously accomplished FAA field approvals for similar installations on comparable makes and models.

c. Other. Any other data that is not listed in paragraphs 201a or b may *not* be used for field approvals. Much of the information available to mechanics has not been evaluated in terms of acceptability or approval. Examples of such information are manufacturers' parts lists, illustrated parts catalogues or brochures, newsletters, magazines, etc., and are not acceptable or approved. This information has not been tested and does not meet established standards. Some installed alterations appear safe and well-tested, but have not approached the edge of the aircraft safe operating envelope and have not had the effects of the alteration evaluated. Previous approvals that do not contain adequate data to prove that they are safe and meet certification standards will not be used as the basis for new approvals. Some field approvals that were performed in accordance with previous guidance are no longer performed due to changes in policy. Refer to FAA Order 8300.10, volume 2, chapter 1 for further guidance.

202. What is the DER's role in field approvals?

DERs are representatives (designees) of the Administrator who may approve or recommend approval to the FAA of data that complies with the Title 14 CFR or the CARs. A DER's authority is limited to specific functions. If a DER is limited to a specific area, data from more than one DER may be necessary. AC 183.29-1, Designated Engineering Representatives Consultant Directory, as amended, provides a list of DERs. Designees are not employees of the FAA. As private individuals, they set their own rates. A DER can provide you with approved data by using FAA Form 8110-3. If you are employing an appropriately-rated DER to support your field approval request, you should coordinate with both the DER and the FAA inspector. FAA Order 8110.45, Use of Data Approved by Designated Engineering Representatives to Support Major Alterations, provides guidance on when the data approved by a DER(s) can be used to support major alterations. FAA Order 8110.37, Designated Engineering Representative (DER) Guidance Handbook, as amended, provides guidance on the use of DERs and their limitations. The FAA recommends reviewing this document, which is available on the FAA Web site. *Communication between you, the DER, and the FAA inspector is critical.*

a. The DER may be limited to technical areas that do not fully cover the entire project. The FAA must evaluate any area not covered by this approval and, if appropriate, approve that data.

b. By virtue of their delegation, DERs *do not* have authority to:

- (1) Grant field approvals or otherwise sign off on FAA Form 337;
- (2) Issue STCs; or
- (3) Grant data approvals by signing logbooks or other similar documents.

NOTE: FAA Order 8110.37 addresses field approvals by reinforcing that DERs are not authorized to perform them. It also recommends including

a note in the body of FAA Form 8110-3 that states, "This approval is for engineering design data only and is not an installation approval." This does not prevent the data from being used as the basis for a major alteration or repair. When sufficient DER data has been obtained, the approval process applicable to the alteration is complete; the product can then be inspected for conformity and approved for return to service. The person performing the alteration, rather than the DER, is then responsible for conforming and approving the installation. DER data is not a field approval, but is approved data that, like other approved data, can be used in the performance of major alterations or repairs without further approval if the data addresses the entire alteration or repair. In this case, you do not need to request a field approval from the FAA. FAA Order 8110.45 provides guidance on this subject and is available at http://www.airweb.faa.gov/rgl.

CHAPTER 3. THE FIELD APPROVAL PROCESS

300. What are the three major steps in the field approval process?

- a. Research.
- **b.** Submitting the data package. (SDP format is optional).
- c. Performing the alteration or repair.

301. Before requesting a field approval, what research should I conduct?

a. Plan and document the alteration or repair. Begin by getting a clear picture of the alteration or repair that you want to perform (e.g., an antenna installation). Make sure that your final product will be safe and airworthy. Determine which certification rules apply to the intended alteration. Next, determine what data you will need to describe the alteration or repair and to ensure that the aircraft still meets its certification basis. This data may be drawings, photographs, test data, and so forth. In block 8 of FAA Form 337, describe your proposed alteration or repair, including the Instructions for Continued Airworthiness (ICA) that are required for any major alteration and any flight manual supplements that may be needed. If you have questions, a telephone call to the local FSDO may be helpful and save you time in the long run.

b. Determine eligibility. First, determine if your alteration or repair is major or minor. (Review the definitions in paragraphs 301b(3) and 601, if needed.) If minor, then a standard logbook entry of the alteration or repair that meets part 43, section 43.9 is all that is required. If major, next determine if the alteration or repair is eligible for a field approval. Not all alterations or repairs can be field-approved (see paragraph 302), and not all aircraft are eligible for field approvals. Aircraft that are operated under part 121 are eligible for field approvals under certain circumstances. If you are a part 121 operator, check with your ASI before beginning your project.

(1) Major alterations or repairs that are major changes to type design require an amended TC or STC. AC 21-40, Application Guide for Obtaining a Supplemental Type Certificate, provides guidance on the STC application process. FAA Order 8110.4, Type Certification, as amended, offers FAA inspectors guidance on the process.

(2) Certain alterations or repairs are beyond the scope of the field approval process. FAA Order 8300.10, volume 2, chapter 1 has a list that can help you determine if your project is eligible for a field approval. This list is not all-inclusive and each project will be examined on a case-by-case basis. This order is available at http://www.faa.gov/avr/afs/faa/8300/index.cfm.

(3) To determine if your repair is major or minor, first go to appendix A of part 43. The appendix lists the major alterations or repairs for airframes, powerplants, propellers, and appliances. If the alteration or repair you are working on is not listed, then go to the manufacturer of the aircraft for assistance. If the manufacturer is no longer in business, contact the FAA FSDO for guidance.

NOTE: The substitution of solid rivet fasteners with blind rivet fasteners in airframe structures may reduce the structural fatigue life of an airframe. These repairs should be evaluated and, when appropriate, authorized by either the manufacturer or a representative of the FAA.

302. What alterations and repairs do not require a field approval?

a. Some alterations and repairs do not require a field approval, and requests for such unnecessary approvals will be denied. The following alterations and repairs do not require a field approval:

(1) Alterations and repairs that are not "major" do not require a field approval or STC, and such requests for FAA approval are unnecessary.

(2) Alterations and repairs that are fully supported by sufficient previously approved DER-approved data do not require further approval. See FAA Order 8110.45 for additional information.

b. If your alteration or repair does not require a field approval or STC, the ASI will explain that your approval request is not necessary. He or she will also provide you with a letter stating that your alteration or repair does not require FAA approval based on the information provided in your request.

303. How do I create the data package?

a. Gather data. Gather and/or organize the data that describes your proposed alteration or repair. Review Chapter 2 to see what types of data may be used.

b. Complete the Field Approval Checklist (optional). The checklist is one way of organizing your data and information before you request a field approval. It is a tool to ensure that you have everything you need. Appendix 2 has a copy of the checklist and the instructions for completing it.

c. Review FAA Order 8310.6, Airworthiness Compliance Check Sheets Handbook. This order contains a variety of checklists that can help you determine if all of the applicable rules and regulations have been considered. This document does not contain every possible alteration, but includes many common ones. The compliance checklist specifies each certification rule and the method by which compliance is shown (e.g., analysis, structural test, ground test, flight test, and so forth). It provides a concise, easily-reviewed list to help ensure that relevant certification rules and their means of compliance are addressed. For determining design loads, review AC 43.13-2, Chapter 1, Structural Data.

d. Complete FAA Form 337. Complete FAA Form 337, with the exception of the signatures in blocks 6 and 7. (The signatures are entered after the alteration or repair is completed and inspected for conformance. AC 43.9-1, Instructions for Completion of FAA Form 337 (OMB No. 2120-0020), Major Repair and Alteration (Airframe, Powerplant, Propeller, or Appliance), as amended, provides guidance on how to complete this form.) Block 8 documents the alteration/repair and is the permanent record of the alteration/repair. This entry should be as complete as possible and contain all of the data that you have developed to substantiate the alteration or repair.

304. What should I do when I am ready to submit the data package?

a. Contact the FAA ASI. Contact your local FAA office and speak with an ASI who can approve your alteration or repair. Discuss your alteration or repair with the ASI and determine if you need to meet to review your request. Be as specific as possible about your needs and especially your schedule.

b. Send the data package to the ASI. Arrange to get your data package to the ASI. Again, the package needs to be as complete as possible. Using the checklist form will help you give the ASI everything he or she needs; however, the checklist is only one way to organize your data, and the ASI may request additional data or information.

c. Coordinate any further data requirements with the ASI. When the ASI has your data package, he or she will review it for completeness. The ASI may ask for additional information or data. Also, if the alteration or repair is complex, the ASI may need help from an ACO engineer. If this happens, you should expect a delay.

d. Schedule an aircraft inspection (if needed). The ASI may need to inspect the aircraft to perform the approval.

305. What is the ACO's role in the field approval process?

The ASI may need help reviewing the data. If so, an ASI typically will request assistance from an engineer at the ACO. If necessary, the ASI will forward the data package to the ACO. The ACO will review the proposed alteration(s) or repair(s) and concur or recommend changes. If you are including an Aircraft Flight Manual Supplement (AFMS), the ASI may send it to the ACO for approval. The review process can increase the amount of time it takes to get approval. Chapter 4 discusses the AFMS and the process for getting one approved.

306. What will the ASI do after determining that the alteration or repair can be approved?

After the ASI has reviewed your data package and/or inspected the aircraft and determined that he or she can approve the alteration or repair, the ASI will make an entry into block 3 on FAA Form 337. The ASI will sign and date in block 3, indicating approval. One of these two statements is entered:

a. "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 section 43.7."

NOTE: This statement is entered on FAA Form 337 when the data package is reviewed and a data approval is completed.

b. "Approval by Physical Inspection, Demonstration, Testing, etc.—One Aircraft: The alteration or repair 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 section 43.7."

NOTE: This statement is entered on FAA Form 337 when a physical inspection of the aircraft is made or a demonstration or other type of test is satisfactorily performed and an installation approval is completed.

307. What may I do after I have my data field approval?

a. After the alteration or repair data is approved you can proceed to alter or repair the aircraft or one of its component parts.

NOTE: Do not start the work until you have received your approval in block 3 of FAA Form 337. As indicated earlier, some alterations and repairs cannot be approved using the field approval process. Or, the inspector may not be able to complete the approval as requested. If you start the work on the aircraft before the approval is finalized, the work you do may not conform to the alteration or repair as it is approved.

b. When the work is complete, review the requirements of 14 CFR part 91, section 91.407 to see if a flight check should be performed.

308. What may I do after I have my *installation* field approval?

After the alteration or repair installation is approved, you can complete any remaining work, finalize your paperwork, and complete FAA Form 337. This type of field approval requires close coordination with the ASI and may include more than one inspection by the ASI. Ensure that the ASI understands your intentions and needs. You should verify that the work you are performing is eligible for a field approval. When the work is complete, review the requirements of section 91.407 to see if a flight check should be performed.

CHAPTER 4. AIRCRAFT FLIGHT MANUAL SUPPLEMENTS (AFMS)

400. What is the purpose of an AFMS and under what circumstances do I need to create one?

a. An aircraft alteration that changes the operating limitations or procedures necessary for safe operation is a major alteration and must include an AFMS if the aircraft has an Aircraft Flight Manual (AFM). Field-approved or STC'd alterations frequently include AFMSs that explain the operating procedures for a newly-installed piece of equipment, even if the basic AFM has less detailed operating information. The equipment manufacturer's operating manual containing detailed instructions may be referenced in the AFMS.

b. AFMS information may be presented as modified or additional markings and placards in the aircraft that were certificated before AFMs were required. If this is not practical, you should create a supplemental flight manual so the necessary information is available to the pilot. Procedures for creating and approving a supplemental flight manual are the same as those for an AFMS.

401. How do I create an AFMS?

a. A sample format for preparing AFMS and Pilot's Operating Handbook Supplements can be found in appendix 5 of AC 23-8, Flight Test Guide for Certification of Part 23 Airplanes, as amended. You should determine early in the modification process whether an AFMS is required. If so, you should prepare and submit a draft AFMS as soon as possible to the FAA office to which the application for field approval is submitted. Since most AMFS are approved by the ACO, not the ASI, the FAA office will probably forward the AFMS to the ACO for approval. (ASIs are specifically authorized to approve some AFMS. Ask your ASI if this applies to your case.)

b. The AFMS needs to correctly describe the operations and limitations of the system or systems on the aircraft already modified, not a generic or future installation. The AFMS should include any operating limitations necessary for safe operation and present basic, normal operating procedures together with any required emergency procedures in their respective sections. If the alteration affects aircraft performance as shown in the basic flight manual, the AFMS should present revised performance information in the supplement performance section. In all cases, the AFMS is a replacement or an addition to the information in the basic flight manual. Continuity with the basic flight manual should be preserved as much as possible (e.g., checklists).

402. What happens during the AFMS approval process?

a. Review. After receiving the AFMS from the applicant, the ASI conducting the field approval will review it for format and content. In certain cases, the FAA has authorized the ASI to approve the AFMS. If this is the case, the inspector will indicate that the AFMS is approved and sign it; if not, it will be forwarded to the ACO for approval.

b. Submittal to ACO. The ASI then submits both the AFMS and a copy of the completed FAA Form 337 (except for blocks 6 and 7) to the ACO.

NOTE: When submitting the AFMS to the ACO for approval, the ASI responsible for the field approval, must advise via memorandum that the system's operation is compatible with instructions in the AFMS. The approving inspector should only forward the AFMS if he or she recommends approval of the AFMS.

c. Review by ACO. The ACO may route the AFMS to the appropriate ACO flight-test personnel who review the document for accuracy, format, and appropriate terminology. In some cases, signature authority for approving the AFMS may be delegated to the inspector making the field approval.

d. Return of AFMS. The approved AFMS is returned to the approving inspector, if appropriate, for return to the applicant so the aircraft can be returned to service. Either the ACO or the inspector will sign the AFMS, indicating approval.

e. FAA Form 337. Block 8 on FAA Form 337 needs to indicate that an AFMS is required and should identify it as a part of the data used to show compliance with the regulations.

403. How do I determine whether the dates are correct in the AFMS and FAA Form 337?

a. For a field approval, the date entered on the title page of the AFMS should be the same as the date of FAA approval in block 3 on FAA Form 337. The AFMS title page should read "FAA Form 337 Approved [insert date from block 3]."

NOTE: Block 3 would not be signed before the AFMS approval is granted.

b. The return to service described in block 7 on FAA Form 337 must be accomplished after all of the FAA approvals have been properly documented. The FAA Form 337 block 7 approval for return to service date should be on the same date as or a later date than the AFMS or block 3 field approval dates.

404. Where should copies of the AFMS be distributed?

a. The original AFMS should be given to the operator and accompany the aircraft.

b. You should reference a copy of the AFMS as an attachment document in block 8 of the FAA Form 337. The ASI will submit the copy with the final Form 337 and the associated ICA for retention in the aircraft's permanent records at FAA Aircraft Registry in Oklahoma. This provides for the replacement of and/or a method of validating the revision status of these critical documents.

CHAPTER 5. INSTRUCTIONS FOR CONTINUED AIRWORTHINESS (ICA)

500. Why does my alteration need ICAs?

a. Part 21, section 21.50 requires the holder of a design approval to provide ICAs on its products developed after January, 1981. Major alterations are considered to be minor design changes, which require FAA approval.

b. Prior to January 30, 1998, FAA policy did not require ICAs for major alterations approved under the field approval process. FAA's initial implementation of the regulation failed to identify that each field approval was considered to be a design approval. The resulting absence of the ICAs created a void in aircraft inspection programs and for the maintenance technicians who are required to perform maintenance in accordance with the manufacturers' recommendations and ICAs. In support of the concerns raised by the industry, the FAA now requires ICAs for all major alterations.

501. What value does an ICA have for my alteration?

ICAs provide instructions for maintenance personnel to maintain and inspect the specific alterations performed on the aircraft. The ICAs provide recommended frequencies for maintenance operations and specific criteria and intervals for inspection. These instructions also provide information on equipment interfaces and methods for testing and troubleshooting. ICAs provide the maintenance support information necessary to ensure that the condition of the alteration remains safe throughout its lifetime.

502. What needs to be in the ICAs?

The FAA has created a checklist (see Figure 1) for you to use in developing ICAs. The checklist is a tool for both you and the ASI to use for review. However, we recommend that you also refer to the ICA appendices in the applicable regulations, as each one may have a subtle difference that may require consideration. They include 14 CFR:

- Part 23, appendix G
- Part 25, appendix H
- Part 27, appendix A
- Part 29, appendix A

503. Does the FAA approve ICAs?

ICAs are required to be FAA-accepted when they meet all of the elements of the applicable certification regulations (see paragraph 502) referenced "Appendix." If an alteration is required to have an Airworthiness Limitation Section within an ICA, that section must be FAA-approved. The FAA must also approve an alteration that changes an existing Airworthiness Limitation Section. The ACO must approve the Airworthiness Limitation Sections of the ICAs. The ASI

will coordinate this approval with the ACO in the same manner as when processing an AFMS for approval.

504. What are the requirements for an ICA?

ICAs must be in the form of a manual or manuals, as appropriate, for the quantity of data to be provided. As with other service documents, the ICA should indicate the number of effective pages and the revision level so maintenance technicians can determine whether the aircraft is being maintained in accordance with current information. Most field approvals do not require complex manuals, however, the ICA is required to be in a manual format regardless of the complexity of the document.

505. What do I do with the ICA after the FAA has accepted it?

a. You should give one copy to the aircraft operator.

b. You should reference a copy of the ICA as an attachment to FAA Form 337 block 8. The ASI will submit it with the FAA Form 337 for retention with the aircraft permanent records at FAA Aircraft Registry in Oklahoma. Revisions to the ICAs should be handled in the same manner to ensure the continuity of changes and the availability of the service information.

506. What are the requirements for ICAs for aircraft originally certificated under the CAR?

As previously discussed, an FAA field approval is a design approval for an alteration. Section 21.50(b) requires that the holder of a design approval for which application was made after January 28, 1981 furnish at least one copy of complete ICAs. This requirement applies to the alteration whether the product was previously certificated under the CARs or CFRs. The ICA need only address the specifics of the field-approved alteration.

507. Are there circumstances under which field-approved equipment does not need to be operational?

Field-approved equipment need not be operational in the following situations:

a. When the FAA has approved you to install equipment through a piecemeal installation approval process. The equipment may remain inoperative until the alteration is complete, provided all of the criteria of the piecemeal installation has been met (i.e., inoperative placards installed, circuit breakers banded, etc.).

b. When the equipment has been specifically approved to be inoperative on a Minimum Equipment List issued to the aircraft.

c. When the equipment has been properly deferred in accordance with part 91, section 91.213(d).

NOTE: The equipment must function properly when installed at all other times.

508. When should an ICA be revised?

An ICA should be revised when experience with the product show the way that the product is maintained or inspected needs to be changed.

509. May I use the ICA Checklist (Figure 1) for all types of major alterations?

The checklist was developed as a guide to assist you and the ASI during the certification process. You and the ASI must ensure that the specific requirements listed in the ICA appendix of the regulations (see paragraph 502), which govern the certification basis of the alteration, have been met. Each appendix may have some differences that require consideration when developing an ICA.

FIGURE 1. INSTRUCTIONS FOR CONTINUED AIRWORTHINESS (ICA) CHECKLIST

A/C Make:	Model:	S/N:	Reg. # N:
Revision:	Date:		

System: _____

Item	Subject				
1.	Introduction: Briefly describes the aircraft, engine, propeller, or component that has been				
	altered. Include any other information regarding the content, scope, purpose, arrangement,				
	applicability, definitions, abbreviations, precautions, units of measurement, list of parts used,				
	referenced publications, and distribution of the ICA, as applicable.				
2.	Description: Of the major alteration 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 alteration 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 manufacturers' instructions for the equipment installed				
	where appropriate (e.g., functional checks, repairs, inspections). It should also include any				
	special notes, cautions, or warnings, as applicable.				
6.	Troubleshooting information: Describes probable malfunctions, how to recognize those				
	malfunctions, and the remedial actions to take.				
7.	Removal and replacement information: Describes the order and method of removing and				
	replacing products or parts, and any necessary precautions. This section should also describe or				
	refer to manufacturer's instructions to make required tests, checks, alignment, calibrations,				
0	center of gravity changes, lifting, or shoring, etc., if any.				
8.	Diagrams: Of 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 that are required, if any.				
13.	For commuter category aircraft: Provide the following additional information, as applicable:				
	A. Electrical loads				
	B. Methods of balancing flight controls				
	C. Identification of primary and secondary structures				
	D. Special repair methods applicable to the aircraft				

FIGURE 1. ICA Checklist (Continued)

14.	Recommended overhaul periods: Required to be noted on the ICA when an overhaul period		
	has been established by the manufacturer of a component or equipment. If no overhaul period		
	exists, the ICA should state for item 14, "No additional overhaul time limitations."		
15.	Airworthiness limitation section: Includes any "approved" airworthiness limitations identified		
	by the manufacturer or FAA Type Certificate Holding Office (e.g., An STC incorporated in a		
	larger field-approved major alteration may have an airworthiness limitation). The FAA		
	inspector should not establish, alter, or cancel airworthiness limitations without coordinating		
	with the appropriate FAA Type Certificate Holding Office. If no changes are made to the		
	airworthiness limitations, the ICA should state for item 15, "No additional airworthiness		
	limitations" or "Not Applicable."		
16.	Revision: Includes information on how to revise the ICA. For example, a letter will be		
	submitted to the local FAA Office with a copy of the revised FAA Form 337 and revised ICA.		
	The FAA inspector accepts the change by signing block 3 and including the following statement,		
	"The attached revised/new Instructions for Continued Airworthiness (date) for the above		
	aircraft or component major alteration have been accepted by the FAA, superseding the		
	Instructions for Continued Airworthiness (date)." After the revision has been accepted, a		
	maintenance record entry will be made, identifying the revision, its location, and date on the		
	FAA Form 337.		

CHAPTER 6. ADMINISTRATIVE MATTERS

600. What are the related regulations?

a. Title 14 of the Code of Federal Regulations (14 CFR) parts 1, 21, 23, 25, 27, 29, 31, 33, 34, 35, 36, 39, 43, 65, 91, 121, 135, and 145.

b. Civil Air Regulations (CAR) 3, 4(a), 4(b), 6, 7, 7(a), 8, 13, 14, and 18.

c. Civil Aeronautics Manual (CAM) 3, 4(a), 4(b), 6, 7, 8, 13, 14, and 18.

601. What are the definitions of frequently-used terms and acronyms in this AC?

For convenience, some definitions in this AC are repeated from other FAA references.

a. 14 CFR. Title 14 of the Code of Federal Regulations. This title has the rules and regulations in a codified format in five volumes that cover the topic Aeronautics and Space. FAA rules are in Title 14, Chapter 1, Subchapters A through O, parts 1-199.

b. AC. Advisory circulars. Documents published by the FAA that provide procedures and/or guidance material, information, and nonregulatory material to the aviation community and to the public.

c. Acceptable Data. Technical data that was examined and accepted by the FAA. It is used for minor or routine maintenance, alterations, or repairs. Data that may be used on an individual basis to obtain approval are ACs 43.13-1 and AC 43.13-2, as amended, manufacturer's technical information (e.g., manuals, service bulletins, etc.), Military Specifications, and FAA field approvals based on data approval and/or physical inspection or testing. (See paragraph 201b for more information.)

d. ACO. Aircraft Certification Office. An FAA ACO provides engineering assistance on request to an aviation safety inspector (ASI) making field approvals, and reviews (and in some cases, approves) a final Aircraft Flight Manual Supplement (AFMS).

e. AFM. Aircraft Flight Manual. As used in this document, AFM is intended to mean Airplane and/or Rotorcraft Flight Manual.

f. AFMS. Aircraft Flight Manual Supplements. Explain the operating procedures for newly installed pieces of equipment. As used in this document, AFMS is intended to mean Airplane and/or Rotorcraft Flight Manual Supplements.

g. Applicable Regulations. Those portions of 14 CFR or CAR that apply to the alteration or repair (also called certification basis).

h. Approved Data. Technical data that was examined and approved (for major alterations and repairs) through applicable FAA authority, and previously approved documents such as FAA-approved manufacturers' service bulletins. This includes, but is not limited to, Type Certificate Data Sheets (TCDS) (aircraft specifications), supplemental type certificates (STC), Airworthiness Directives (AD), manufacturers' FAA-approved data, Designated Engineering Representative (DER)-approved data, and Designated Alteration Station (DAS)-approved data

developed for alterations performed by that station only. (See paragraph 201a for more information.)

i. CAM. Civil Aeronautics Manual. The CAMs contain both the CARs and policies and interpretations issued by the Administrator for various sections of the regulations.

j. CAR. Civil Air Regulations. These were the predecessors of the current CFRs.

k. Certification Basis. Airworthiness requirements with which compliance must be demonstrated before a type certificate (TC), STC, or field approval is granted.

I. CFR. Code of Federal Regulations.

m. Compliance Data. The data necessary to substantiate that the modification or installation complies with the applicable regulations (also called substantiating data).

n. Compliance Inspection. Specification review and physical inspection of hardware to verify that a particular component or modification complies with the requirements of the applicable regulations.

o. Component Testing. Testing of a detail part, component, or subassembly to demonstrate that it functions as required to meet the applicable regulations (also called certification testing).

p. Conformity Inspection. As used in this AC, a physical comparison of the component or modification to the engineering drawings and specifications to verify that component or modification conforms to the data.

q. DAR. Designated Airworthiness Representative. A private person appointed as a representative (designee) of the Administrator, in accordance with 14 CFR part 183, section 183.33.

r. DER. Designated Engineering Representatives. A representative (designee) of the Administrator who may approve or recommend approval to the FAA of data that complies with 14 CFR or CAR.

s. Designee. Individuals authorized by the FAA to approve data, conduct inspections, witness tests, and so forth.

t. Field Approval. Approval by an ASI of a major alteration or repair, documented on a completed FAA Form 337, Major Repair and Alteration (Airframe, Powerplant, Propeller, or Appliance), or equivalent. In lieu of approved data, a field approval may be granted for an alteration or repair by physical inspection or testing.

u. Flight Tests. Testing in flight of the final modification/repair or installation on the aircraft.

v. FSDO. Flight Standards District Office. As used in this AC, this is intended to mean any FSDO, certificate management office (CMO), or international field office (IFO) where ASIs are assigned.

w. Ground Testing. Structural, environmental, fuel flow, or similar tests (other than flight tests) that are performed on the ground on the final modification to or installation on the aircraft, to demonstrate that it complies with the applicable regulations.

x. ICA. Instructions for Continued Airworthiness. Provides instructions on how to maintain aircraft that are altered and appliances that are installed in accordance with a field-approved major alteration. Certain major repairs may also require ICAs.

y. Major Alteration. An alteration that is not listed in the aircraft, engine, or propeller specifications that also fits one or more of the following: An alteration that might appreciably affect airworthiness by changing weight, balance, structural strength, performance, powerplant operation, flight characteristics, or other qualities affecting airworthiness; is not done by accepted practices; or cannot be done by elementary operations.

z. Major Repair. A repair that, if improperly done, might affect weight, balance, structural strength, performance, powerplant operation, flight characteristics, or other qualities affecting airworthiness, or is not done by accepted practices or cannot be done by elementary operations.

aa. Multiple STC. An STC applicable to more than one serial number aircraft, engine, or propeller.

bb. SDP. Standard Data Package. Contains the Field Approval Checklist, copies of any data describing the alteration or repair, and FAA Form 337. (See Appendix 1.)

cc. STC. Supplemental Type Certificate. Issued for major design changes to TC'd products when the change is not so extensive as to require a new TC.

dd. TC. Type Certificate. As defined by part 21, section 21.41, a TC includes the type design, operating limitations, the type certificate data sheet (TCDS), the applicable regulations, and any other conditions or limitations prescribed by the Administrator.

ee. TCDS. Type Certificate Data Sheet. A part of the TC that documents the conditions and limitations necessary to meet the airworthiness requirements of 14 CFR. It provides a concise definition of the configuration of a TC'd product.

ff. TSO. Technical Standard Order. A minimum performance standard issued by the Administrator for specified materials, parts, processes, or appliances used on civil aircraft.

gg. TSOA. Technical Standard Order Authorization. The FAA authorization for a manufacturer to produce parts in accordance with a TSO.

602. What FAA publications are related to this topic?

The current versions of the following publications will provide additional information:

- FAA Order 8110.4, Type Certification
- FAA Order 8110.37, Designated Engineering Representative (DER) Guidance Handbook
- FAA Order 8110.45, Use of Data Approved by Designated Engineering Representatives to Support Major Alterations
- FAA Order 8300.10, Airworthiness Inspector's Handbook, Volume 2, Chapter 1, Perform Field Approval of Major Repairs and Major Alterations
- FAA Order 8310.6, Airworthiness Compliance Check Sheets Handbook

- AC 20-130, Airworthiness Approval of Navigation or Flight Management Systems Integrating Multiple Navigation Sensors
- AC 20-138, Airworthiness Approval of Global Positioning System (GPS) Navigation Equipment for use as a VFR and IFR Supplemental Navigation System
- AC 21-40, Application Guide for Obtaining a Supplemental Type Certificate
- AC 23-8, Flight Test Guide for Certification of Part 23 Airplanes
- AC 23-17, Systems and Equipment Guide for Certification of Part 23 Airplanes
- AC 43.9-1, Instructions for Completion of FAA Form 337 (OMB No. 2120-0020), Major Repair and Alteration (Airframe, Powerplant, Propeller, or Appliance)
- AC 43.13-1, Acceptable Methods, Techniques, and Practices—Aircraft Inspection and Repair
- AC 43.13-2, Acceptable Methods, Techniques, and Practices—Aircraft Alterations

603. How can I get copies of this AC and other FAA publications?

a. You can purchase the CFRs and those ACs for which there is a fee from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. A list of all ACs is available at <u>http://www.airweb.faa.gov/rgl</u>. You can also obtain a copy of current CFRs online at <u>http://www.access.gpo.gov/ecfr/</u>.

b. You can request free ACs from the U.S. Department of Transportation, Subsequent Distribution Office, Ardmore East Business Center, 3341 Q 75th Avenue, Landover, MD 20785.

c. You can be placed on FAA's mailing list for free ACs by contacting the U.S. Department of Transportation, Distribution Requirements Section, SVC-121.21, Washington, D.C. 20590.

APPENDIX 1. INSTRUCTIONS FOR COMPLETING THE FIELD APPROVAL CHECKLIST FORM

When requesting a field approval, you may use this form to provide the requested data, forms, descriptive items, and other information. If you do not use this form, an equivalent method for presenting the information and data may be used. The checklist form (or equivalent), its attachments, Federal Aviation Administration (FAA) Form 337, Major Repair and Alteration (Airframe, Powerplant, Propeller, or Appliance), and the data make up the Standard Data Package (SDP). The following instructions apply to corresponding items 1 through 12 of the form as illustrated in this appendix.

Item 1—Aircraft. Information to complete the Make, Model, and Serial Number blocks will be found on the aircraft manufacturer's identification plate. The Registration Number is the same as shown on AC Form 8050-3, Certificate of Aircraft Registration (the N number).

NOTE: 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 and 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 don't 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 alteration or repair, e.g., "Installing a GPS in the instrument panel above the right yoke." If additional space is needed, attach a continuation page and make a note of that on the form in this area.

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

Item 6—Who Will Perform the Alteration or Repair? 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 A&P certificate number, or if a repair station is doing the work, their certificate. Also enter a contact name if you are using a repair station. If the ASI doing the approval has a question and you are not available, this will make it easier for him or her to find someone knowledgeable about the project. On the third line, give the telephone number for the mechanic or the repair station doing the work. On the bottom line, enter where the work will be done. This should be as complete as possible.

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

with a designee, check with him or her to make sure that the work you want the designee to do is within the scope of his or her authorization.

Item 8—Compliance Statement and Compliance Checklist. Before completing the alteration or repair to your aircraft, be aware that after it has been altered or repaired the aircraft must still meet its certification basis. In block 8 you include the proof (data) that it still does. Your compliance statement should explain how your aircraft still meets its certification basis. For example, if you want to modify the wheels of your small airplane, you would need to ensure that the altered wheels still conform to Title 14 of the Code of Federal Regulations (14 CFR) part 23, section 23.731. The compliance checklist will list each affected 14 CFR/Civil Air Regulation (CAR) and indicate how compliance was shown. This checklist is created by the person doing the alteration or repair and should address each section of the regulations applicable to the project. Appendix 2, has a sample compliance checklist format.

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

Item 10—Instructions for Continued Airworthiness (ICA). In this attachment, describe how you will keep the altered or repaired part of the aircraft airworthy. This might include inspections that need to be done each 100 hours or during the annual inspection. These should be specific instructions that include what should be looked at and minimum or maximum measurements of parts for wear or deterioration. Troubleshooting, functional checks, installation and removal procedures, and servicing requirements, such as fluid change intervals or lubrication schedules, are also items that would be included. Figure 1 provides guidance and a sample checklist for creating ICAs.

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, as amended. Appendix 5 of AC 23-8 has a sample format that can be used.

Item 12—Data Attached. A list of the data that is commonly included in the SDP is available. If the data you are attaching is included on this list, check the appropriate box. If you have data or information that is not included in this list, check the box labeled Other and enter a short description of what you are including in the space provided. Include ICA if aircraft was issued a type certificate (TC) after January 28, 1981.

Item 13—FAA Use Only. Don't write or mark in this area, it is for FAA use only.

FIELD APPROVAL CHECKLIST

FIELD APPROVAL CHECKLIST			
Instructions: Pri FAA.	nt or type all entries. This information should	be as complete as possible prior to your initial discussion with the	
1. Aircraft	Make	Model	
	Registration Number N	Serial Number	
2. Applicant	Name	Address/Telephone Number	
3. Type of Pro	duct and Certification Basis		
□ AIRFRAME	E 🗆 ENGINE 🗆 APPLIANCE	OTHER	
□ 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			
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 P	erform the Alteration or Repair?		
Mechanic's name: or Repair station:			
7. Designees (DARs and DERs)			
Names and telephone numbers of the Designated Engineering Representatives, (DER) and/or Designated Airworthiness Representatives (DAR) who are helping with the project: Name: Telephone number: Name: Telephone number:			

FIELD APPROVAL CHECKLIST (Continued)

8. Compliance Statement and Compliance Checklist
Attack the Convertience Checklick that are converted at
Attach the Compliance Checklist that you completed.
9. Previous Alterations or Repairs That May Be Affected by This Alteration
10. Instructions for Continued Airworthiness (ICA)
□ ICAs attached
Include these in block 8 of the FAA Form 337
11. Aircraft Flight Manual Supplement (AFMS)
Do you have an AFMS? \Box Yes \Box No If yes, attach a copy.
12. Data Attached
□ Proposed FAA Form 337
Description of alteration, including ICA
Drawings, schematics, and diagrams
□ Material list
□ Processes
□ Specifications
Previous field approvals
\Box FAA Form(s) 8110-3
\Box Serviceable tags
\square Placards
□ Test data and/or flight test data
□ Load analysis (electrical and/or structural)
□ Other
13. 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?
\square Record entry \square STC \square Other
\Box . Requires ACO concurrence?
 Requires ACO concurrence? Requires AEG ICA review?
Requires AEG ICA review?
Additional information required:
Autonui informatori requirea.

APPENDIX 2. SAMPLE COMPLIANCE CHECKLIST FORMAT

The compliance checklist documents which regulations are applicable to the requested field approval and how compliance with those regulations was shown. 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. Specific applicable regulations may be listed by number, e.g., 14 CFR part 23, section 23.1353.

2. Subject. The subject or title of the 14 CFR part/CAR applicable paragraphs, e.g., storage battery design and installation, should be listed.

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 the applicable methods of compliance. Other compliance checklists reference specific data by title or number. You and the ASI should agree on the format.

4. Documentation Reference. List the documentation (test report number, analysis report number, and so forth) that demonstrated compliance to the subject 14 CFR part or CAR paragraph.

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

COMPLIANCE CHECKLIST FORMAT