U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
National Policy

ORDER 8110.54A

10/23/2010

SUBJ: Instructions for Continued Airworthiness Responsibilities, Requirements, and Contents

This order provides guidance on responsibilities, requirements, and content for instructions for continued airworthiness (ICA) as required by Title 14 of the Code of Federal Regulations (14 CFR) § 21.50 and the various airworthiness standards.

This revision does not contain guidance on electrical wiring interconnection systems (EWIS) (14 CFR 25 subpart H), or continued airworthiness and safety improvements for transport category airplanes (14 CFR part 26). We will introduce these programs in a separate document due to differing requirements.

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Chapter 1. General Information

1. Purpose of this Order.

a. We, the Federal Aviation Administration or FAA, wrote this order, in part, to rescind previous policy on interpretation of 14 CFR § 21.50(b) dated August 3, 1982 and August 8, 1983. Additionally, in this order we show aircraft certification office (ACO), engine certification office (ECO) (from now on both referred to as "ACO") and aircraft evaluation group (AEG) staffs how to review instructions for continued airworthiness (ICA) and find their provisions acceptable, or approved, as appropriate. We also include their individual responsibilities for these tasks.

b. This order supplements 14 CFR §§ 21.50(b), 23.1529, 25.1529, 27.1529, 29.1529, 31.82, 33.4, 35.4, and their referenced appendixes. From now on, we refer to these 14 CFR sections and appendixes as the "applicable airworthiness regulations."

2. Audience. This order is for personnel in the Aircraft Certification Service (AIR) and the Flight Standards Service's (AFS) aircraft evaluation groups and flight standards district offices (FSDO) that review then accept ICA as required by the regulations and related policy.

3. Where to Find This Order. You can find this order at MYFAA Employee website: https://employees.faa.gov/tools_resources/orders_notices and on the Regulatory and Guidance Library (RGL) website: http://rgl.faa.gov.

4. Cancellation. This order cancels FAA Order 8110.54, *Instructions for Continued Airworthiness Responsibilities, Requirements and Contents.*

5. Explanation of Policy Changes. This order makes or incorporates the following significant changes:

a. Clarifies responsibilities and related procedures for affected parties, and

b. Addresses the responsibilities, requirements, and content for ICA for foreign validation and certification projects

6. Effective Date. This order is effective when signed. Compliance date of this order is 30 days after the order is signed.

Chapter 2. Regulatory Requirements for ICA

1. Requirements for ICA. Requirements for ICA were published and made effective in 14 CFR in 1980. These requirements provided a universal and standardized model for aircraft, aircraft engine, and propeller maintenance data, replacing various maintenance manual data standards previously in effect. These regulations require the applicant for a design approval, or change to a design approval, to develop ICA to the applicable content standard, then furnish ICA on delivery of the affected aircraft or issuance of the aircraft's first standard airworthiness certificate, whichever occurs later. They must also make those instructions available to any person required to comply with any of the terms of those instructions. The applicable airworthiness regulations also require that ICA be acceptable to the FAA, and certain portions of the ICA must be approved, such as the Airworthiness Limitations Section (ALS). The design approval holder (DAH) is responsible for ensuring there is enough information in the ICA to maintain the continued airworthiness of the product. For the purposes of this order DAHs and their associated design approval types are defined in this chapter, paragraph 3.

a. 14 CFR § 21.50(b) requires ICA for design approvals, applied for after January 28, 1981 (Amendment 21-51A). The airworthiness standards have required ICA for new design approvals since October 14, 1980 (Amendments 23-26, 25-54, 27-18, 29-20, 31-82, 33-9, and 35-5) Also, additional retroactive ICA requirements have been imposed for certain types of aircraft in specific kinds of operations (e.g. large transport airplanes in air carrier operation). We do not use the original certification basis to determine if ICA are required. We use the date of the application for design approval. For example, in 1965 we required applicants for a type certificate (TC) with a certification basis of Civil Air Regulation part 4b, *Airplane Airworthiness Transport Categories*, dated December 31, 1953, to develop maintenance instructions. However, we did not require them to furnish the instructions to product owners. Today, DAHs of a supplemental type certificate (STC) or amended TC for this same product must furnish ICA for the areas changed on the product that meet the applicable airworthiness regulations per 14 CFR § 21.50(b). They must do this even though it was not required by the original certification basis.

b. We will not retroactively require DAHs to develop, or change, ICA on any previous design approvals unless there is a specific need. However, we will require ICA for these approvals if the ACO and/or AEG determine there isn't enough information to maintain the product's airworthiness, or we may issue new regulations requiring ICA (such as SFAR 88 and 14 CFR part 26). We may find these ICA deficiencies during such activities as investigations of airworthiness concerns, assessments of potential unsafe conditions, or special certification reviews.

2. Purpose of ICA. ICA provide a way to keep products airworthy. ICA provide documentation of recommended methods, inspections, processes, and procedures. The ICA must contain information on each item or part, as appropriate, installed on the product.

3. Design Approvals Needing ICA. As stated in paragraph 1 of this chapter, we require DAHs to furnish acceptable ICA to product owners per 14 CFR § 21.50(b). We also require that they make the ICA available to any persons required to comply with the ICA. We classify all the following as design approvals for the purposes of this order:

a. Type certificates;

b. Changes to type design, with or without amendment of the certificate, regardless of process of approval (14 CFR §§ 21.95, 21.97, 21.99, etc.);

c. Supplemental type certificates;

d. Changes to STC type design, with or without amendment of the certificate, regardless of the process of approval;

e. Parts manufacturer approvals (PMA);

f. Technical standard order authorizations (TSOA);

g. Letter of TSO design approval (LODA);

h. Major repairs and alterations, regardless of the method of approval; including:

(1) Field approvals; and

(2) Approved data (one or more FAA Forms 8110-3, *Statement of Compliance with the Federal Aviation Regulations Aircraft or Aircraft Component Identification*, and/or FAA Forms 8100-9, *Statement of Compliance with Airworthiness Standards*).

4. Supplementary ICA and Subsequent Use of Existing ICA. Products are subject to parts replacement from various sources, repairs, and alterations through their operational life. These activities will have approval through the various means in the preceding paragraph, and each action has the potential to create new ICA applicable to a given product. This is particularly true for STCs, PMAs, and major repairs and major alterations. ICA from separate actions has the potential to "layer," requiring maintenance providers to research the available ICA to determine the appropriate data for a given configuration.

a. Each person applying for a design approval, including a repair or alteration approval is responsible for developing and providing ICA for the actions they propose. The applicant must assess existing ICA and then:

(1) Develop and propose any necessary changes as supplementary instructions. He would then be responsible for furnishing, or making-available, these supplementary instructions in accordance with 14 CFR 21.50(b); or,

(2) State that it remains adequate. He would then be responsible for furnishing, or making-available, a statement to this effect to comply with 14 CFR 21.50(b).

b. Design approval holders creating supplementary ICA are responsible for the continued applicability of the ICA they prepare. This is to ensure that any changes to ICA that were the basis for their supplementary ICA do not invalidate the supplementary ICA. Two methods to accomplish this could be:

(1) Specify the relevant documents and revision levels on which the assessment is based; or,

(2) Continue monitoring the relevant documents on which the assessment is based and provide revised supplemental ICA as necessary.

c. The methods above comply with both the development and distribution requirements of 14 CFR § 21.50(b). The documentation burden on maintainers, and owner and operators, in maintaining their products is minimized when existing ICA is utilized to the maximum extent possible. A DAH may not prohibit the application of its ICA to subsequent design approvals if the FAA has determined that existing ICA is acceptable.

5. ICA for Parts Manufacturer Approvals. A PMA is a design and production approval for a replacement or modification part for a product. Installation of a PMA part can affect the product's ICA. An applicant can either show the current ICA are still valid or can provide a supplemental ICA for any differences. See FAA Order 8110.42, *Parts Manufacturer Approval Procedures*, for more details.

6. ICA for TSOA and Letter of Technical Standard Order Design Approval. ICA is required of applicants for TSOA and LODA only if the related TSO(s) requires ICA or maintenance instructions. If so, we must review the ICA and determine if it is acceptable. For example, refer to TSO-C77, *Gas Turbine Auxiliary Power Units*, Appendix 4. In it, applicants must provide ICA similar to that required in 14 CFR § 33.4, Appendix A. Refer to FAA Order 8150.1, *Technical Standard Order Program*, for further information.

7. Major Repairs and Alterations May Change ICA. Products must continue to meet their appropriate airworthiness, noise, and emissions standards after any repairs and alterations have been incorporated, regardless of the process of data creation and acceptance, or, approval. Major repairs and alterations must be accomplished using data approved by the FAA. Two sources of these data are field approvals, issued by a qualified Flight Standards Service inspector, and "approved data," which is data that has been approved using FAA Form 8110-3 or FAA Form 8100-9 by qualified designated engineering representative(s) (DER) or an organization designation authorization (ODA).

a. Major Repairs May Change ICA. Because a major repair can change existing maintenance practices or inspection intervals we require the developer of the repair to assess the impact of the major repair for changes to the ICA or existing maintenance practices. For example, major structural repairs may need more inspection. Repairs on static aircraft engine

components could even influence the life limits on critical rotating parts.

b. Major Alterations May Change ICA. Because a major alteration can also change existing maintenance practices or inspection intervals we require the developer of the alteration to assess the impact of the major alteration for changes to the ICA or existing maintenance practices.

c. Use of Delegation. Delegation authority limitations may prevent individual designees and delegated organizations from being able to accept all aspects of additional or changed ICA. In these instances the appropriate ACO, and possibly AEG, must become involved to the extent necessary for ICA review and acceptance/approval.

d. Responsibility for Documentation. The person holding the inspection authorization or authority to approve the return to service is responsible for verifying that ICA have been addressed in the approval process. Then, that person must ensure the revised ICA are furnished to the owner or operator. For more information on the requirements for ICA for major repairs and alterations refer to chapter 5 of this order and FAA Order 8900.1, *Flight Standards Information Management Systems* (FSIMS).

8. ICA in Manufacturer's Service Documents. Service documents are not a preferred method of changing type design within a DAHs design control system. They are an acceptable method of transmitting approved information regarding product improvement, economics, operational and/or maintenance practices, and safety, including ICA.

a. When these documents do change the type design, the publications constitute design approval, and are subject to the applicable airworthiness requirements and 14 CFR § 21.50(b). Consequently, we expect the TC holder/manufacturer to assess the change to type design and provide all necessary information to correctly maintain the product throughout its operational life with the service document incorporated.

b. Manufacturers/TC holders can use their service documents as the method of making changes to ICA available if:

(1) The documents contain all required information for the change to type design;

(2) They furnish the documents to the FAA and all owners of the product per the program identified in chapter 5, paragraphs 1 k. and l. of this order; and

(3) They are incorporated or referenced into the ICA manual, or manuals, in a timely manner.

(c) Typical publications include; service bulletins, all-operators letters, service newsletters, service digests, and magazines. They do not include publications required for FAA type certification or approval such as flight manuals and certain maintenance manuals. Refer to FAA Advisory Circular (AC) 20-114, *Manufacturer's Service Documents*, for more information.

9. ICA for Special Classes of Aircraft. Title 14 CFR § 21.17(b) covers special classes of aircraft, and can include the aircraft engines and propellers installed on them. This class of aircraft includes gliders, airships, and other non-conventional aircraft for which airworthiness standards do not exist. In these instances, the content of a "complete set" of ICA depends on which airworthiness standards the FAA determines to be appropriate. To determine content, the applicant must use appendixes from the applicable airworthiness regulations as determined by the FAA.

10. ICA for Former Military (Surplus) Aircraft.

a. Title 14 CFR § 21.25(a)(2) provides for restricted category type certification of aircraft manufactured to meet the requirements of, and accepted for use by, one of the U.S. Armed Forces and are later modified for a special purpose. Before we issue a TC under this category, we require ICA for the aircraft, aircraft engines, and alterations for the special purpose or purposes. The applicant should submit enough data to the FAA to show these ICA are technically valid for the aircraft's intended civil use. The baseline ICA or maintenance instructions for a restricted category aircraft and its aircraft engines and propellers are those instructions approved and used by the U.S. military in the maintenance of the aircraft and its components, or, a civil counterpart that is type certificated. These data include:

(1) Identification of the parts of the military technical publications that are not used for the restricted category special purpose such as instructions on uniquely military equipment, weapons, armor, and military avionics. These parts are removed for civil certification.

(2) ICA for equipment that replaces the existing products and appliances, and installation of new products and appliances for the special purpose.

b. Title 14 CFR § 21.27 provides for normal, utility, acrobatic, commuter, or transport category certification, as appropriate, for certain surplus aircraft of the U.S. Armed Forces. When seeking a TC under 14 CFR § 21.27 for military surplus aircraft with a previously type certificated civil counterpart, applicants must provide ICA if:

(1) The regulations required ICA when the aircraft was accepted for operational use by the armed forces; or

(2) The civil counterpart TC was applied for after January 28, 1981. The ICA should contain the information required by the applicable airworthiness standards for the aircraft type and category (14 CFR 23, 25, 27, 29).

11. ICA for Imported Products and Articles.

a. ICA are required for each imported aircraft, aircraft engine, and propeller. Approval is required for the airworthiness limitations section (ALS) of the ICA, and certification maintenance requirements (CMR) may be involved and approved as well. The balance of the ICA must be accepted. The sections that require approval are defined in 14 CFR §§ 23.1529, 25.1529, 27.1529, 29.1529, and 31.82 for aircraft, 14 CFR § 33.4 for aircraft engines, in

14 CFR § 35.4 for propellers, and referenced appendixes.

b. ICA are required for each TSO article produced under a LODA, if, the article's TSO(s) requires ICA or other maintenance data.

c. Refer to chapter 5 of this order for procedural and technical responsibility information. A directorate organization may have some of the roles and responsibilities of an ACO depending on the specifics of the project and country(ies) involved.

12. Use of Delegation. Delegation authority limitations may prevent individual designees and delegated organizations from being able to accept all aspects of additional or changed ICA. In these instances the appropriate ACO, and possibly AEG, must become involved to the extent necessary for ICA review and acceptance.

Chapter 3. ICA Format and Types of Data

1. ICA Requirements for Design Approval Holders. The design approval applicant should list the documents that will constitute a complete set of ICA for its design as early as practical in the project and submit that list to the FAA for concurrence. The submittal must include the applicant's program showing how it plans to distribute changes to the ICA it has made, as the DAH, or by the manufacturers of installed products and appliances. Examples of these changes must include a list of effective pages, revision levels, revision bars, and date changes.

a. ICA for each aircraft must include:

(1) ICA for each aircraft engine, propeller, and appliance required by the applicable airworthiness regulations; and

(2) Any required information about the interface of those aircraft engines, propellers, and appliances with the aircraft.

b. If the ICA are not supplied by the manufacturer of an aircraft engine, propeller or appliance installed in the aircraft, then the ICA for the aircraft must include the information essential to the aircraft's continued airworthiness.

c. As required by the regulations, the ALS of the ICA must include:

(1) Each mandatory replacement time, structural inspection interval, and related structural inspection procedure(s); and

(2) For affected transport category airplanes the ALS must also include each mandatory replacement time, inspection interval, related inspection procedure, and all critical design configuration control limitations (CDCCL) approved for the fuel tank system under 14 CFR § 25.981 for the fuel tank system.

d. In the case of airframe structure, the FAA recognizes that DAHs may not be able to complete development of structural inspection procedures or other ICA procedures needed to support maintenance requirements for the entire design life of the aircraft by the delivery of the first new aircraft, or return to service of modified aircraft or at the time of TC issuance. Under these circumstances, the DAH can establish an operational limit for the first inspection for which the data is not available. The operational limit must be clearly stated in the ALS of the ICA, and no aircraft may be operated beyond this limit. As the data becomes available, the ALS can be revised to extend or eliminate the operational limit.

2. How to Format the ICA.

a. If you are in an ACO tell applicants to prepare ICA as a manual, or manuals, depending on how much data is necessary to provide complete ICA. The manual(s) and included data must be in English. The manuals need to be easy to read and follow. Each chapter or section should give

detailed instructions for completing a task. All manuals must have a method of recording updates to their content, such as a list of effective pages and a record of revisions. The applicant should propose the format or standard, and media, to be used for FAA concurrence prior to developing ICA. You can refer applicants to sample formats in:

(1) The Air Transport Association's (ATA) iSpec 2200, *Information Standards for Aviation Maintenance*, latest edition,

(2) General Aviation Manufacturers Association (GAMA), Specification No. 2, *Manufacturer's Maintenance Data*, latest edition, or

(3) Aerospace and Defence Industries Association of Europe (ASD), ASD-S1000D, *International Specification for Technical Publications Utilizing a Common Source Data Base*, latest edition.

b. If there are multiple manuals, there should be a principal manual that describes the other manuals and how to apply them. It should also have a table of contents of all other manuals. The principal manual is the one used for day-to-day maintenance of the aircraft, aircraft engine, or propeller. Overhaul manuals, component maintenance manuals (CMM), maintenance review board (MRB) reports, and service bulletins do not offer this information.

c. If previous ICA or maintenance documents do not exist, or were developed before January 28, 1981, the ICA submitted for a subsequent design change (after January 28, 1981) should follow the format requirements in the applicable airworthiness regulations. Regardless of the format, you should review any submittal of ICA to ensure it contains the essential information for acceptability.

3. ICA Content for Specific Design Approvals.

a. The appendixes in the applicable airworthiness regulations specify what must be in the ICA. In addition to the information in paragraphs 3.b. through 3.e., all ICA submitted to you:

(1) Must be specific to the product, not general. It's been our experience that applicants rely too much on "standard practices" or other general guidance as the only installation and maintenance details. Often, type design data packages refer to AC 43.13-1, *Acceptable Methods, Techniques, and Practices – Aircraft Inspection and Repair*, for installation and maintenance instructions. That guidance is general, in that it is acceptable only when there are no manufacturer repair or maintenance instructions. It allows an owner, operator, or installer to choose many options for installation or maintenance. Although some standard practice manuals are acceptable for use on a specific task, they are not acceptable as the "complete set" of ICA. We must have product-specific ICA to find that the configuration complies with criteria set by the certification basis. Applicants should substantiate any use of standard practices documents applicable to the configuration being certified.

(2) Must contain the ALS statement shown in the applicable airworthiness regulations even when the design approval does not affect the ALS. We require this to document that the ALS has been reviewed and the applicant addressed any changes or impacts.

b. New TC. ICA for a new TC must have all information required by the appendix of the applicable airworthiness regulations, as shown in chapter 4 of this order. For example, for a new aircraft being type certificated to 14 CFR part 25, the applicant's ICA should include all items marked in this order as "(Aircraft)." An aircraft engine TC project should include all information marked "(Engine)." The maintenance manual is marked for both "(Aircraft) and (Engine)," because the regulations require maintenance manuals for both the aircraft and aircraft engine.

c. Change in Type Design. ICA for a TC change in type design (amended TC) that designates a new model product must include all required information in the appendix of the applicable regulations, as shown in chapter 4 of this order.

(1) Applicants can use ICA from the baseline product where the processes and procedures are identical with the new model. Applicants must develop new ICA to cover differences between the earlier version and the new product.

(2) If the design change does not affect or change the existing ICA or maintenance documentation, the applicant can submit an impact assessment to the ACO showing there is no change to the ICA and that the existing ICA is acceptable. The assessment must show that the amended TC project does not change any information, procedures, process, requirements, or limitations in the current ICA or maintenance documentation.

d. New or Changed STC. ICA for an STC or changed STC (amended STC) should cover only the items changed or affected by the design change for which application is made. This includes other systems, parts, or areas of the aircraft. For example, if an STC describes how to install a global positioning system (GPS), it will not affect – and doesn't need to address – ICA for the aircraft engine.

(1) However, the submitted ICA must include all applicable items from the regulations for the installation. Also, the ICA must include any appropriate information about the GPS antenna and its installation. If the GPS is critical to operations, requirements for periodic performance checks must also be in the ICA. We consider ICA that cover only the affected design change as complete under 14 CFR § 21.50(b) for STCs.

(2) If the design change does not affect or change the existing ICA or maintenance documentation, the applicant can submit an impact assessment of the need for ICA to the ACO. The assessment must show that the STC project does not change any information, procedures, process, requirements, or limitations in the current ICA or maintenance documentation. Therefore, the original design approval holder's ICA still applies. After completing the assessment, the applicant must submit either recommended changes or a statement that the existing ICA applies to the ACO.

e. Other Changes to Products. ICA for All Other Changes to Products must cover the systems, parts, or areas of the aircraft affected or changed by the design change for which application is made. Other product changes include changes to type design approved under 14 CFR §§ 21.97, 21.99 and 21.305, PMAs, and major repairs or alterations. Managing ACOs, AEGs, and FSDOs will help an applicant determine the final content requirements. PMA ICA will be reviewed by the appropriate AEG office.

(1) If the design change does not affect or change the existing ICA or maintenance documentation, the applicant can perform and submit to the ACO an impact assessment showing no need for ICA changes and a statement to that effect. This satisfies the "complete set" requirement. The assessment must show that the certification project did not change any information, procedures, process, requirements, or limitations in the current ICA or maintenance documentation.

(2) In the situation above, the original DAHs ICA still apply.

(3) After completing the assessment, if ICA changes are necessary, the applicant must submit the recommended changes to the ACO for acceptance.

f. Use appendixes A-G of this order to ensure completeness. These are checklists for each specific product and should be a basis for review. There may be design features or product mission considerations that need specific ICA that are not on the checklists. Therefore, do not view the checklists as all-inclusive. The engineer and AEG inspector should always use their best judgment when determining the completeness of an ICA.

Chapter 4. Required Manuals or Sections

1. Airworthiness Limitations Section.

a. For an aircraft, aircraft engine, or propeller, there must be a separate and distinguishable ICA section, called Airworthiness Limitations Section. The ALS must prominently display the statement regarding FAA-approval as shown in the appendix of the applicable airworthiness regulations. The applicable airworthiness regulations require the applicant set forth the following in the ALS:

(1) Approved mandatory replacement times for type certification,

(2) Approved mandatory inspection times for type certification,

(3) Inspection procedures for those approved mandatory times, and

(4) Critical design configuration control limitations (CDCCL).

b. If the ICA consists of multiple manuals, we require applicants to include the ALS in the "principal manual." Coordinate with the applicant to identify the principal manual. In general, the principal manual will be the document used for maintenance. However, it may also be the document used for scheduled maintenance to ensure all required inspections and associated limitations are contained within a single document. ICA complexity and the type of product will determine assignment of the principal manual.

c. We consider the above paragraphs, 1.a.(1) through (4), critical. The product's airworthiness could be compromised if an aircraft, aircraft engine, or propeller does not comply with the inspection and replacement times and procedures in those paragraphs. Applicants typically identify these items when they perform safety assessments on the product's structure and systems.

d. The ALS information contained in the principal manual must contain, at a minimum, the times (thresholds and/or intervals) for the required maintenance or replacement actions and a description of the tasks to be performed. To avoid duplication the specific detailed instructions for performing the associated maintenance, including inspection methods to be used, may be contained in the maintenance instructions portion of the ICA. If the applicant elects to do this the referenced information must be sufficiently identified and protected to prevent unauthorized or inadvertent change, and confusion as to the mandatory nature of the inspection methods and details.

e. Examples of items required for type certification are structural inspections per 14 CFR §§ 23.571, 23.572, 23.573, 25.571, 27.571, and 29.571, and fuel system requirements per 14 CFR § 25.981.

f. For specific regulatory requirements, refer to:

- 14 CFR § 23.1529, Appendix G, § G23.4,
- 14 CFR § 25.1529, Appendix H, § H25.4,
- 14 CFR § 27.1529, Appendix A, § A27.4,
- 14 CFR § 29.1529, Appendix A, § A29.4,
- 14 CFR § 31.82, Appendix A, A § 31.4,
- 14 CFR § 33.4, Appendix A, § A33.4, and
- 14 CFR § 35.4, Appendix A, § A35.4.

2. Certification Maintenance Requirements. These are required inspections or maintenance tasks used primarily for transport category airplanes. They apply to equipment, systems, and powerplant installations. They are performed at certain times to detect and correct safety-significant latent failures (failures not known to the flight or ground crew). CMRs are required by the type design and to maintain a product's airworthiness. CMRs are equal to limitations and are required as part of the ALS. Refer to FAA AC 25-19, *Certification Maintenance Requirements*, for more information.

3. Airplane/Rotorcraft Maintenance Manual. These manuals or sections must explain aircraft/rotorcraft features, and give information to the extent necessary to conduct aircraft/rotorcraft maintenance or preventive maintenance, including:

a. Description of all systems and installations, including aircraft engines, propellers, and appliances (for aircraft/rotorcraft) and accessories (for aircraft engines);

b. Removal and installation instructions for parts, including any required equipment and precautions;

c. Description of how the aircraft components, installed appliances, and systems operate and are controlled, including special procedures and limitations;

d. Servicing information; including:

(1) Servicing points (location and access), including capacities of tanks and reservoirs and the types of fluid used;

(2) Pressures applicable to the various systems, and any required equipment and precautions,

(3) Location of access panels for inspection and servicing;

(4) Location of lubrication points and lubricants to use, including any required equipment, and precautions;

(5) Aircraft towing instructions, including any required equipment, precautions, and limitations;

(6) Aircraft jacking, mooring, and leveling instructions, including any required equipment, precautions, and limitations;

(7) Lifting and shoring instructions, including required equipment and precautions;

(8) Weight and balance instructions to determine the center of gravity; and

(9) A method for parts configuration control (eg. illustrated parts catalog (IPC), master drawing list (MDL)) is not required, but encouraged if properly maintained and controlled.

e. For regulatory requirements, refer to:

- 14 CFR § 23.1529, Appendix G, G23.3(a),
- 14 CFR § 25.1529, Appendix H, H25.3(a),
- 14 CFR § 27.1529, Appendix A, A27.3(a), and
- 14 CFR § 29.1529, Appendix A, A29.3(a).

4. Airplane/Rotorcraft Maintenance Instructions.

a. These manuals and sections must include:

(1) Scheduling information for each item of the aircraft, its engines, auxiliary power units, propellers, accessories, instruments, and equipment.

(a) This information should give recommended times for cleaning, inspecting, testing, lubricating, and adjusting each part.

(b) Include the degree of inspection required, the wear tolerances, and work recommended.

(c) Applicants can refer to an accessory, instrument, or equipment manufacturer as the source of this information. They can do this only if they show that the item has an exceptionally high degree of complexity requiring specialized maintenance techniques, test equipment, or expertise.

(d) Applicants must provide information on these techniques, test equipment, or expertise to the FAA for review. The FAA understands that the DAHs may determine that

component level maintenance data are not appropriate for some items. In this case the requirement for "complete ICA" can be met by providing the necessary instructions to determine the item(s) are unairworthy (or otherwise unserviceable), remove the item from the product, replace the item with an airworthy unit, and perform the necessary checks to be able to return the affected product to service;

(2) The recommended overhaul periods that show when to overhaul the product, accessories, instruments, or equipment. Information on overhaul periods should include the necessary cross-reference to the ALS if the overhaul time is a limitation as discussed in paragraph 1 of this chapter. If the ICA gives an overhaul time, then the ICA must include the necessary overhaul information or refer to an overhaul manual, which becomes incorporated into the ICA by reference. The applicant must provide the information or manual to the FAA for review;

(3) An inspection program consisting of the thresholds for inspection, inspection intervals, type of inspection required, and the extent of inspections necessary to ensure continued airworthiness;

(4) Troubleshooting information describing probable malfunctions, and how to recognize and correct them;

(5) Information describing the order and method of removing and replacing products and parts, with any necessary precautions to be taken;

(6) Descriptions of how to adjust and test the systems; including flight control systems functional checkout procedures after maintenance, and any required equipment and precautions;

(7) Diagram of structural access plates, and how to gain access when access plates are not provided;

(8) Details for applying special inspection techniques, including specific procedures where these techniques are specified;

(9) Identification of primary structure and recommended inspection times, locations, and inspection methods such as ultrasonic, and eddy current;

(10) All data on structural fasteners, such as identification, discard recommendations, and torque values; and

(11) A list of special tools needed to accomplish recommended maintenance.

b. The applicant can choose to utilize a maintenance review board. The resulting MRB report can be included by the DAH as part of the ICA. Inclusion of the MRB report in the ICA is required only when one was developed and subsequently requested by the owner or operator. The MRB report is intended for air carriers. This report contains the initial minimum scheduled maintenance and inspection requirements for a particular transport category aircraft and on-wing

aircraft engine program. Air carriers can use the MRB report, and its associated requirements, to develop maintenance programs. Refer to AC 121-22, *Maintenance Review Board Procedures*, for additional information.

c. For regulatory requirements, refer to:

- 14 CFR § 23.1529, Appendix G, § G23.3(b);
- 14 CFR § 25.1529, Appendix H, § H25.3(b);
- 14 CFR § 27.1529, Appendix A, §A27.3(b); and
- 14 CFR § 29.1529, Appendix A, § A29.3(b).

5. Manned Free Balloon Instructions.

a. These manuals or sections must explain the balloon's features and provide information to the extent necessary to conduct maintenance or preventive maintenance. They include:

(1) Description of the balloon, its systems, and installations. This description should include, but is not limited to, the controls, basket structure, fuel systems, and heating assembly;

(2) Description of how the systems operate and are controlled, including special procedures and limitations;

(3) Servicing information that covers balloon components, including burner nozzles, fuel tanks, valves during operation, and any required equipment and precautions;

(4) Maintenance information for each part of the balloon and its envelope, controls, basket structure, fuel systems, instruments, and heater assembly that provides recommended times for cleaning, inspecting, testing, lubricating, and adjusting the balloon and its components. Include the degree of inspection required, the wear tolerances, and work recommended. Applicants may refer to an accessory, instrument, or equipment manufacturer as the source of this information if they show that the item has an exceptionally high degree of complexity requiring specialized maintenance techniques, test equipment, or expertise;

(5) The recommended overhaul periods that show when to overhaul the product, accessories, instruments, or equipment. Information on overhaul periods should include the necessary cross-reference to the ALS if the overhaul time is a limitation identified in paragraph 4-1 of this order. If the ICA gives an overhaul time, then the ICA must include the overhaul information or refer to an overhaul manual. The applicant must provide the information or manual to the FAA for review;

(6) An inspection program consisting of the thresholds for inspection, inspection intervals, type of inspection required, and the extent of inspections necessary to ensure continued airworthiness;

(7) Troubleshooting information describing probable malfunctions, and how to recognize and correct them;

(8) Hard landing inspection items and procedures;

(9) Balloon storage preparation and limits;

(10) Description of how to repair the balloon envelope, its basket, or trapeze;

(11) Description of how to inflate and deflate the balloon envelope;

(12) A method for parts configuration control (e.g. IPC, MDL) is not required, but encouraged if properly maintained and controlled.

b. Refer to 14 CFR § 31.82, Appendix A, A31.3 for the regulatory requirements.

6. Aircraft Engine Instructions. These manuals or sections must explain aircraft engine features, and provide information to the extent necessary to conduct aircraft engine maintenance or preventive maintenance.

a. The Engine Maintenance Manual or Section must provide:

(1) A detailed description of the aircraft engine and its components, systems, and installations;

(2) Installation instructions, including proper procedures for uncrating, deinhibiting, acceptance checking, lifting, and attaching accessories. Include any necessary checks, warnings, cautions, and notes that are part of the aircraft engine type design in these instructions;

(3) Description of how the aircraft engine components, systems, and installations operate. Applicants should also describe how to start, run, test, and stop the aircraft engine and its parts. These descriptions must include any special procedures and limitations;

(4) Servicing information, including servicing points (location and access), capacities of tanks and reservoirs, types of fluid used, and pressures applicable to the various systems. It includes any required equipment and precautions;

(5) Scheduling information for each part of the aircraft engine that provides recommended times for cleaning, inspecting, testing, lubricating, and adjusting the aircraft engine. It includes the degree of inspection required, the wear tolerances, and work recommended. Applicants can refer to an accessory, instrument, or equipment manufacturer as the source of this information. They can do this only if they show that the item has an exceptionally high degree of complexity requiring specialized maintenance techniques, test equipment, or expertise;

(6) The recommended overhaul periods that show when to overhaul the product, accessories, instruments, or equipment. Information on overhaul periods should include the necessary cross-reference to the ALS if the overhaul time is a limitation identified in paragraph 1 of this order;

(7) An inspection program consisting of the thresholds for inspection, inspection intervals, type of inspection required, and the extent of inspections necessary to ensure the continued airworthiness;

(8) Troubleshooting information describing probable malfunctions, how to recognize and correct them, and precautions;

(9) Information describing the order and method of removing and installing the aircraft engine and its parts and accessories. These instructions must include any warnings, cautions, and notes that are part of the aircraft engine type design;

(10) List of tools and equipment necessary for maintenance and directions as to their method of use;

(11) A method for parts configuration control (e.g., IPC, MDL) is not required, but encouraged if properly maintained and controlled;

(12) Refer to 14 CFR §§ 33.4 and A33.3(a) for the regulatory requirements.

b. The Engine Overhaul Manual or Section. This manual or section offers the owner information on inspection, repair, or replacement information necessary to restore the airworthiness of the product. It covers aircraft engine disassembly, overhaul, reassembly, and necessary cautions or warnings. The manual or section also gives:

(1) Cleaning and inspection instructions that cover the materials and apparatus to use, and methods and precautions to take during overhaul. It must include methods of overhaul inspection;

(2) Details on all fits and clearances of the aircraft engine and components, and structural integrity and functionality for new and worn parts;

(3) Details of repair methods for worn or otherwise substandard parts and components along with information necessary to determine when replacement is necessary;

(4) Instructions for testing an aircraft engine after overhaul, including test acceptance criteria.

(5) Instructions for storing aircraft engines. These instructions identify special containers and required equipment or tools. The ICA should also include environmental restrictions for storage and storage limits;

(6) List of tools and equipment necessary for overhaul, and directions as to their method of use; and

(7) Refer to 14 CFR §§ 33.4 and A33.3(b) for the regulatory requirements.

7. Propeller Maintenance Instructions. These manuals or sections must explain propeller features, and provide information to the extent necessary to conduct propeller maintenance or preventive maintenance.

a. The propeller maintenance manual section includes:

(1) A detailed description of the propeller and its systems and installations;

(2) A description of how the propeller components, systems, and installations are controlled and operated, including any special procedures and limitations;

(3) Installation instructions, including proper procedures for uncrating, acceptance checking, and lifting. They should also include any necessary checks, warnings, cautions, and notes that are part of the propeller type design;

(4) Scheduling information for each part of the propellers that provides recommended times for cleaning, inspecting, testing, lubricating, and adjusting the propellers. It includes the degree of inspection required, the wear tolerances, and work recommended. Applicants can refer to an accessory, instrument, or equipment manufacturer as the source of this information. They can do this only if they show that the item has an exceptionally high degree of complexity requiring specialized maintenance techniques, test equipment, or expertise;

(5) The recommended overhaul periods that show when to overhaul the product, accessories, instruments, or equipment. Information on overhaul periods should include the necessary cross-reference to the ALS if the overhaul time is a limitation identified in paragraph 4-1 of this order;

(6) An inspection program consisting of the thresholds for inspection, inspection intervals, type of inspection required, and the extent of inspections necessary to ensure the continued airworthiness;

(7) Troubleshooting information describing probable malfunctions, how to recognize and correct them, and precautions;

(8) Information describing the order and method of removing and installing the propeller and its parts and accessories. It includes warnings, cautions, and notes that are part of the propeller type design;

(9) List of tools and equipment necessary for maintenance, and directions as to their method of use;

(10) A method for parts configuration control (e.g., IPC, MDL) is not required, but encouraged if properly maintained and controlled; and

(11) Refer to 14 CFR §§ 35.4 and A35.3(a) for the regulatory requirements.

b. The Propeller Overhaul Section manual or section includes:

(1) Propeller disassembly, overhaul, and reassembly. It must include any necessary cautions or warnings;

(2) Cleaning and inspection instructions that cover the materials and apparatus to use, and methods and precautions to take during overhaul. These instructions must also include methods of overhaul inspection;

(3) Details on all fits and clearances for the propeller and components relative to overhaul;

(4) Details of repair methods for worn or otherwise substandard parts and components, along with information necessary to determine when replacement is necessary;

(5) Description of how to test the propeller after overhaul, including test acceptance criteria;

(6) Instructions for storing propellers. These instructions identify special containers and required equipment or tools. The ICA should also include the environmental restrictions for storage and storage limits;

(7) List of tools and equipment necessary for overhaul, and directions as to their method of use; and

(8) Refer to 14 CFR §§ 35.4 and A35.3(b) for the regulatory requirements.

8. System Wiring Diagrams. For aircraft, aircraft engines, and propellers, these diagrams cover the aircraft's electrical or electronic circuits. They must include wire routing information detailed enough to enable maintenance personnel to troubleshoot, repair, and service the electrical system. These diagrams must also include a method of determining connector type, wire type, and wire size. We consider the system wiring diagrams as descriptive data of the systems used on the product, and part of the ICA.

9. Component Maintenance Manual or Section. If the aircraft, aircraft engine, or propeller maintenance information references the use of a CMM as the appropriate location for the ICA, those applicable instructions are incorporated by reference and become part of the complete set of the ICA. If CMM information was developed to comply with 14 CFR § 21.50 then the CMM, or referenced section(s) are part of the ICA). As part of the ICA, they must be furnished to the owner and made available to any other person required to comply with those instructions per 14 CFR § 21.50. The CMM must also contain the following information:

a. Manuals or sections explaining the article's features, and provide information to the extent necessary on how to conduct maintenance or preventive maintenance;

b. A description of the control and operation of the article's components and systems. The description should provide enough detail to perform the maintenance at the levels specified;

c. Complete installation instructions for those parts and accessories that are part of the approved design. The instructions should include minimum interface instructions and any appropriate specifications, warnings, or cautions for those areas on which articles that are not part of the approved design could later be installed on the type certificated product;

d. Recommended times for cleaning, inspecting, testing, lubricating, and adjusting the article and its components and systems. This scheduling information must include the depth of inspection required, the wear tolerances, and tasks performed. It should ensure the continued airworthiness of the article. Although the applicant does not have to provide specific scheduling information for each part, the lack of such information on any part should not adversely affect continued airworthiness of the article

e. An inspection program to ensure the continued airworthiness of the article. Certification tests, analyses, and service experience, if available, are useful when developing the inspection program for parts, assemblies, sub-assemblies, or modules;

f. Troubleshooting information to address potential malfunctions and provide procedures to correct them or replace the affected part or component before continued operation;

g. A means to ensure configuration control during maintenance is not required, but encouraged if properly maintained and controlled. This ensures that the proper parts, components, and combinations of parts and components are identified and conform to the approved design. For example an IPC or MDL;

h. Location of access panels for inspection and servicing. This includes a diagram of structural access plates, and how to gain access when access plates are not provided;

i. Instructions for storing parts and components and identifying special containers and any equipment or tools. The ICA should also include environmental restrictions for storage and storage limits; and

k. A list of tools and equipment necessary for maintenance and directions as to their method of use.

10. Component Overhaul Manual or Section. If the aircraft, aircraft engine, or propeller maintenance information references the use of a component overhaul manual, or specific section of a CMM, as the appropriate location for the ICA, those applicable instructions are incorporated by reference and become part of the complete set of ICA. If component overhaul manual information was developed to comply with 14 CFR § 21.50 then the component overhaul manual, or referenced section(s) are part of the ICA. As part of the ICA, it must be furnished to the owner and made available to any other person required to comply with those instructions per 14 CFR § 21.50. This manual or section must contain the following information:

a. Cleaning and inspection instructions that cover the materials and apparatus to use and methods and precautions to take during overhaul. These instructions must include methods of overhaul inspection;

b. Details on all fits and clearances for the component relative to overhaul;

c. Details of repair methods for worn or otherwise substandard parts with information necessary to determine when to replace parts;

d. Instructions for testing the article after overhaul. This should include test acceptance criteria;

e. Instructions for storage that identify special containers and required equipment or tools. The ICA should also include the environmental restrictions for storage and storage limits; and

f. A list of tools and equipment necessary for maintenance and directions as to their method of use.

11. Non-Destructive Test (NDT) and Inspection (NDI). For aircraft, aircraft engines, and propellers, this manual or section covers testing techniques, instructions, and required equipment for all required NDT/NDI identified in the maintenance and inspection programs. Applicants can write the manual or section specifically for the product, or they can refer to a standard practices/procedures document.

Chapter 5. ACO and AEG Responsibilities

1. What ACOs and Directorate Offices Responsible for TC, STC, PMA, TSOA and Other Design Approvals Must Do. If you are in an ACO or directorate office responsible for design approval activity you are the primary connection with the applicant for design approvals. You are also responsible for approving the ALS of the ICA, and CMRs if applicable, with support from the AEG in review of associated maintenance procedures. You must determine if the remainder of the ICA is acceptable with concurrence from the AEG on maintenance requirements. Also, you must advise all applicants that they have to develop ICA for every design approval application. After you receive an application, you:

a. Can delegate findings of acceptability only to an authorized designee or delegated organization. For ICA delegation qualifications and authorization refer to:

- FAA Order 8100.8, *Designee Management Handbook*,
- FAA Order 8100.15, *Organization Designation Authorization Procedures*, and
- Related policy memos.

b. Will coordinate with the responsible AEG individual(s) (Refer to FAA Order 8110.4, *Type Certification*, Appendix 8) at the start of each program to give them information, and notify them that you need their concurrence of the ICA. The ACO will use a certification project notification (CPN) to notify the AEG. The AEG will determine the level of involvement for ICA review and notify the ACO. If it is determined the ICA must be reviewed by the AEG, the ACO will forward or otherwise verify the transmission of the document(s) to the AEG for review and concurrence.

c. Notify applicants early in the program that you require ICA per 14 CFR §§ 23.1529, 25.1529, 27.1529, 29.1529, 31.82, 33.4, or 35.4 (whichever applies) and their associated appendixes. In this notification, state that the review can take up to 30 calendar days after they submit the complete set of ICA (including reference documents). Refer to chapter 3 in this order for more information on content requirements. For a TSOA/LODA, ensure that the applicant addresses all ICA requirements that apply.

d. Give the applicant the names and offices of the AEG airworthiness inspectors who will review the ICA.

e. Invite the AEG airworthiness inspector(s) to the TC board, or other formal meetings with the applicant. This ensures that everyone understands the requirement for ICA and what should be in it.

f. Communicate regularly with the applicant and AEG airworthiness inspector to ensure that the ICA meets the project schedule. Reviewing the ICA can be time-consuming. You, the AEG, and the applicant need to communicate regularly to keep the project on schedule.

g. Review and approve the ALS and CMRs as applicable, and the instructions for installing and operating the aircraft engine, propeller, or both. Contact the AEG and ask for their help with reviewing and finding acceptability of the format and content of the ALS, and CMRs as applicable, before you approve them.

h. Approve a program to ensure the applicant provides a complete set of accepted ICA to the owner before delivery of the first aircraft or issuance of the standard airworthiness certificate, whichever occurs later for new type certificates or change in type design projects requiring a new standard certificate of airworthiness

i. Should not normally issue design approvals before you and the AEG have concurred, where applicable, with the proposed ICA or the assessment showing there is no ICA. If there is a need to issue a design approval without complete ICA coverage, you must approve a program that ensures all ICA requirements will be complete and accepted before the first affected aircraft is operated with a standard airworthiness certificate. The program must at least have:

(1) A list of all parts of the ICA affected or required by the design change or approval;

(2) A detailed schedule for completing and submitting the ICA to the ACO;

(3) A statement saying, "Instructions for Continued Airworthiness are incomplete. The aircraft will be eligible for return to service when the ICA is complete and accepted." You must put this statement in the type certificate data sheet (TCDS) or the "Limitations" section of the STC, as applicable. This means an aircraft can be modified, but cannot return to service until we accept the complete ICA. When we accept the ICA, you can remove the statement; and

(4) A memo to notify the appropriate individual or office (FAA or designee) that a standard airworthiness certificate cannot be issued. When we accept the ICA, rescind the memo. In the case of a TC issue, once a program for completing the ICA is approved, the responsible ACO should inform the affected MIDO of the delay in ICA. As a courtesy, the ACO should also inform the applicant of the delay. After accepting the ICA, inform the MIDO and applicant that a standard airworthiness certificate can be issued. If it's an STC, then the responsible FSDO should be informed of the delay and approval of return to service delayed until completion of the ICA.

j. Place a statement on the design approval document (that is, design approval letter, FAA-approved top drawing, or type certificate data sheet) when the applicant submits an impact assessment showing there are no changes to the existing ICA or maintenance instructions. It shows that supplemental ICA are not required. For an STC, we recommend placing a statement below the "Limitations and Conditions" section. This will show that the FAA reviewed the impact assessment and found that no additional changes to the existing ICA are required.

k. Review and determine (with AEG concurrence) the acceptability of the applicant's program showing how the applicant, or the DAH, is going to distribute the initial ICA and subsequent changes. This program should include the kind of media the applicant will use to distribute the ICA and how soon after a change the applicant will send it.

l. Review and determine (with AEG concurrence) the acceptability of the applicant's program for submitting ICA changes, not associated with a new design approval, to the FAA for review. These changes include manual revisions driven by service bulletins or errors found during operation of the product. The program should allow the applicant to send changes to the owners while sending changes to the FAA for review, with the exception of changes to airworthiness limitations and certification maintenance requirements. This ensures accurate ICA are immediately available to those operating the product. If you and the AEG find errors in the submitted changes, contact the applicant and suspend use of the published changes until the applicant can make the proper corrections. Changes to airworthiness limitations and certification maintenance requirements must be FAA-approved prior to distribution.

m. For aircraft engines and propellers, changes to ICA made by service documents (service bulletins and service letters) must be incorporated into the ICA by reference as described in AC 33.4-1, *Instructions for Continued Airworthiness,* and AC 35.4-1, *Propeller Instructions for Continued Airworthiness*, respectively.

2. What the AEG Must Do. If you are in the AEG, you are a flight standards operations, maintenance, or avionics specialist. The AEG assigns an inspector(s) lending specialized technical experience to the assigned aircraft, aircraft engines, propellers, PMAs or TSOs at the respective ACO. After receiving the CPN or program notification letter (PNL) from the ACO, the AEG will determine the level of involvement for ICA review and acceptance. This includes reviewing, resolving deficiencies and concurring on the acceptance of the maintenance requirements of the ICA. It also includes helping to review the remainder of the ICA and subsequent changes, including the procedures related to the ALS and CMRs.

a. If you are an AEG office and have been assigned an ICA review project, you need to do the following:

(1) Give the requesting ACO project manager the names of the AEG inspector(s) assigned to the project.

(2) Ensure that the project AEG inspector(s) meet or communicate with the ACO project aircraft engineers to coordinate the maintenance requirements for each discipline, particularly those for maintaining the product's continued airworthiness.

(3) Report the ICA status to the ACO project manager during any internal FAA meetings and whenever you think necessary.

b. If you are the AEG inspector, you will:

(1) Meet or communicate with the applicant as often as necessary to monitor the progress of ICA publications.

(2) Advise the applicant, when needed, on how to comply with the operations and maintenance requirements in the airworthiness regulations and their associated appendixes.

(3) Advise the applicant, early in the process, that the ICA must contain information as described in the appendixes of this order. Ensure that the ACO project manager is aware of these communications and any disputed issues and associated corrective action.

(4) Send the ACO project manager written concurrence of acceptance within 30 calendar days of receiving the ICA. Written concurrence means a memo, electronic mail, or an ICA acceptance coordination process developed between the ACO and AEG. If you cannot meet this timeline, you should coordinate a schedule with the ACO. The schedule shows the earliest possible time you can complete your review.

(5) Review and determine (with the ACO project manager) the acceptability of the applicant's program showing how the applicant, or the DAH, is going to distribute ICA changes. It should include the kind of media the applicant will use to distribute changes, and how soon after the change the applicant will send it.

(6) Review and determine (with the ACO project manager) the acceptability of the applicant's program for submitting changes to the ICA for review. The program should allow the applicant to provide changes to the owners while sending changes to the FAA for review, with the exception of changes to airworthiness limitations and certification maintenance requirements. This ensures accurate ICA are immediately available to those operating the product. Changes to airworthiness limitations and certification maintenance requirements must be reviewed and approved prior to distribution.

3. The Flight Standards District Office /Certificate Management Office/ Certificate Management Unit Inspector's Role. If you are the inspector, you are the focal point for reviewing and accepting ICA on field approval projects. You must tell applicants that they have to submit ICA when asking for project approval. The ICA must meet the requirements of the applicable airworthiness regulations (refer to Order 8900.1,). If you sign FAA Form 337, *Major Repair and Alteration (Airframe, Powerplant, Propeller, or Appliance)*, Block 7, Approval for Return to Service, you are responsible for review of the changes to the ICA for the alteration or repair. The person returning the product or part to service is responsible for ensuring the end user has access to the supplementary ICA or a statement that the ICA were not affected. Anticipate that individuals with varying degrees of skill will use the ICA, so the ICA needs to be easy to understand.

a. You can accept the proposed ICA if the ICA do not add or change existing requirements in the ALS or CMR. However, if the change affects the ALS or CMR, you must contact the certificating ACO for approval of those changes.

b. Note that ICA are not only used by air carriers operating under 14 CFR part 121, but by operators under 14 CFR part 91. ICA are also the only source of information for maintaining certified products at repair stations when the stations are not performing maintenance for air carriers under 14 CFR § 145.2.

4. ICA for Imported Products and Articles. The requirements for ICA format and content in this order are applicable to import type certification and type validation projects. The certificating, or exporting, authority must furnish to the validating authority (FAA) the ICA for each product. The

FAA must ensure that the type design, including post-type certification/validation design changes, complies with its FAA certification basis and is documented to an acceptable standard. This includes revised ICA. Refer to FAA Order 8110.52, *Validation and Post-Type Validation Procedures,* and FAA AC 21-23, *Airworthiness Certification of Civil Aircraft, Engine, Propellers, and Related Products Imported to the United States.*

a. TSO articles to be imported under a LODA must have acceptable ICA if required by the TSO.

b. The procedures in this order will apply to imported products and articles unless specific agreements with other countries specify otherwise. Because validation is not universally applied, refer to the appropriate bilateral agreement (Bilateral Airworthiness Agreement or Bilateral Aviation Safety Agreement with Implementation Procedures for Airworthiness) for the specific country for any specific differences on how ICA are reviewed and accepted between each certificating authority and FAA.

5. How We Resolve Issues. Because engineering personnel and AEG airworthiness inspectors may disagree, we developed an issue-resolution process. The steps of this process are as follows:

a. AEG and ACO project members review ICA and discuss their concerns and problems with the ICA. If the AEG and ACO project engineers agree, they give the problems and concerns with the ICA to the applicant for correction. For field approvals this deliberation would include the FSDO inspector and the ACO project members, if changes to ALS or CMRs are involved. For repairs and alterations with approved data the ACO interaction is the same as that for design change approval projects.

b. If AEG/FSDO and ACO project members disagree on any item, individuals will give their concerns to their office managers. Remember that we consider AEGs/FSDOs the maintenance and operations experts, while ACOs are design experts.

(1) If AEG/FSDO and ACO managers can't resolve the disagreement, the office raising the issue will send a memo to the other office, explaining its concern, position, and proposed solution.

(2) The office getting the memo responds in writing. The office also sends a copy of its response to the responsible directorate's standards staff and – based on the subject – to Flight Standards' Aircraft Maintenance Division (AFS-300), Air Transportation Division (AFS-200), or General Aviation and Commercial Division (AFS-800). If appropriate, the office sends a copy to the regional counsel for review, comments, and resolution.

(3) The directorate's standards staff and the appropriate flight standards office will coordinate a position based on the recommendations. They will tell the ACO and AEG/FSDO of their decision in writing.

Chapter 6. Distributing ICA and Changes

1. ACOs Review the Program. In this chapter, we discuss how to work with applicants on an acceptable way to distribute new and subsequent changes to ICA. We'll also cover when non-owners or operators (like 14 CFR part 145 repair stations) must have ICA "made available" to them. As was discussed in chapter 5, paragraph 1 of this order, if you're in an ACO you must review and accept the method of distributing ICA.

2. Distributing ICA.

a. The reason for furnishing ICA to the owner upon delivery of the aircraft or issuance of the airworthiness certificate is to ensure that the owner has ICA when operations begin. Most of the time, DAHs will provide the ICA when they deliver the aircraft to the owner. However, there are cases when the owner has possession of the aircraft, but does not have an airworthiness certificate because of changes in the type design. In these cases, we would not require the ICA for the changes in type design until we issue the airworthiness certificate.

b. To comply with 14 CFR § 21.50(b) we require the DAH to furnish a complete set of ICA to the owner of each type aircraft, aircraft engine, or propeller at delivery or issuance of the first standard airworthiness certificate; whichever occurs first. They can furnish it in hard copy (paper), by electronic means, or through web-based access. Regardless of the method, the owner can request a paper copy, which the DAH must furnish. We require this to ensure that owners have a copy of ICA they can use regardless of technology.

3. Changes to ICA. Title 14 CFR § 21.50(b) requires that the DAH make changes to the ICA available to any person required to comply with them. The DAH provides changes following a program they wrote and the ACO and responsible AEG accepted. Or, they can follow previously established procedures acceptable to the FAA. Design approval holders should format the changes to supplement the original ICA. To prevent confusion, they should clearly say what's being changed. You should instruct DAHs that they can distribute changes to ICA using:

a. Paper copies of the changes, sent to all owners on record. Persons receiving changes can request that the changes be distributed to them only in paper format;

b. Electronic format copies, sent to all owners on record; or

c. Web-based access to ICA changes. This option also requires a way of notifying owners on record that a change is available.

4. When DAHs Must Make ICA Available.

a. In accordance with 14 CFR § 21.50(b) DAHs must furnish the owner of a type certificated product at least one set of complete ICA. This rule also requires the DAH to make those instructions available to any person required to comply with the terms of the instructions. The owner or operator is required to maintain the airworthiness of the product. Therefore, if the person requesting the ICA is not the product owner or operator, Conditions 1 and 2 below must

be met, in addition to meeting either Condition 3 or 4 below before we will require the DAH to make the ICA available to them.

(1) Condition 1 – Application for the latest design approval was made after January 28, 1981.

(2) Condition 2 - The latest related certification basis includes 14 CFR § 21.50 as amended September 11, 1980 or later, and 14 CFR §§ 23.1529, 25.1529, 27.1529, 29.1529, 31.82, 33.4 or 35.4 as applicable. Therefore the certificate holder was required to develop and furnish ICA as part of the certification process.

(3) Condition 3 - The requester, a repair station or operating certificate holder, of the ICA is currently rated for the product/part and is required by of 14 CFR, Chapter 1, to comply with ICA for the product/part. Currently rated is defined as either appropriately class rated for the product or part, or, appropriately limited rated for the product or part and the product or part is on the repair station's capability list or operations specifications as applicable. In either case the repair station must meet all other applicable requirements, including 14 CFR §§ 145.109, 145.201, and 145.215.

(4) Condition 4-The requester, an individual, of the ICA is performing work for the product owner or operator under the authority of their mechanic certificate issued under 14 CFR part 65.

b. If the requested ICA data are a CMM or specific repair information, the DAH must have identified the CMM or repair information in its ICA (aircraft, aircraft engine, or propeller ICA) as the source of information for continued airworthiness actions. If the ICA contain "remove and replace" instructions for the components, and don't refer to CMM or specific repair procedures for necessary airworthiness actions, then the aircraft's airworthiness can be maintained by replacement action, and CMM or repair documentation is not part of the ICA for the product.

c. As previously stated meeting Conditions 1 and 2, and either Condition 3 or Condition 4 is necessary to ensure enforcement of 14 CFR § 21.50(b). Conditions 1 and 2 are self-evident in their effect as to whether the rule applies. Condition 3 is the only case in which a repair station is required to perform maintenance per ICA. Condition 4 is the only case in which an individual is required to perform maintenance per ICA.

d. If a person can show they meet the "make available" conditions above then by regulation they are also entitled to request and receive changes to that ICA from the DAH.

e. Work on a 14 CFR parts 121 or 135 operator's products must be performed per the operator's processes and procedures (operator's specification approved by the FAA). The processes and procedures might not be those of the DAHs ICA.

f. The FAA does not regulate competition between repair stations, but rather safety. Our intent for 14 CFR § 21.50(b) is to facilitate owners and operators ability to manage their own maintenance, and to ensure that those required to accomplish continued airworthiness actions

have access to continued airworthiness instructions, in the interests of safety. We did not intend to ensure that any person wishing to enter the repair/overhaul business is provided with repair manuals.

Appendix A. Part 23 Airplane ICA Checklist

REQUIREMENT	Regulation Appendix	Location In ICA
( ) ICA for each aircraft engine.	G23.1(b)	
( ) ICA for each propeller.	G23.1(b)	
( ) ICA for each appliance required by this chapter.	G23.1(b)	
( ) Required information on the interface of ( ) appliances, ( ) aircraft engines, and ( ) propellers with the aircraft.	G23.1(b)	
( ) If ICA are not supplied by the manufacturer of an ( ) appliance, ( ) aircraft engine, or ( ) propeller installed on the aircraft, the ICA for the aircraft must include ( ) the information essential to the continued airworthiness of the aircraft.	G23.1(b)	
( ) Applicant's program showing how they or the manufacturers of products and appliances installed on the airplane will distribute changes to the ICA.	G23.1(c)	
( ) ICA in a manual or manuals. ( ) Manuals arranged for easy and practical use.	G23.2(a) G23.2(b)	
( ) Manuals prepared in English.	G23.3	
( ) Manuals must include introductory information explaining the airplane's features and data necessary for maintenance or preventive maintenance.	G23.3(a)(1)	
( ) Description of the ( ) aircraft and its systems and installations, ( ) aircraft engines and its systems and installations, ( ) propellers and its systems and installations, and ( ) appliances and its systems and installations.	G23.3(a)(2)	
( ) Basic control and operating information describing ( ) how the aircraft components and systems are controlled and ( ) how the aircraft components and systems are operated, including ( ) any special procedure and limitations.	G23.3(a)(3)	

REQUIREMENT	Regulation Appendix	Location In ICA
( ) Servicing information covering ( ) servicing points, ( ) capacities of tanks, ( ) capacities of reservoirs, ( ) types of fluids used, and ( ) pressures applicable to the various systems.	G23.3(a)(4)	
( ) Location of access panels for ( ) inspection and ( ) servicing.	G23.3(a)(4)	
( ) Servicing information covering ( ) locations of lube points and ( ) lube used.	G23.3(a)(4)	
( ) Equipment required for servicing.	G23.3(a)(4)	
( ) Tow instructions and limitations.	G23.3(a)(4)	
( ) Mooring information.	G23.3(a)(4)	
( ) Jacking information.	G23.3(a)(4)	
( ) Leveling information.	G23.3(a)(4)	
( ) Scheduling information for each part of the ( ) aircraft, including recommended periods for ( ) cleaning, ( ) inspecting, ( ) adjusting, ( ) testing, and ( ) lubricating; and ( ) the work recommended at these periods. Include any special notes, cautions or warnings in the maintenance section of the manual.	G23.3(b)(1)	
( ) Scheduling information for ( ) aircraft engines, including recommended periods for ( ) cleaning, ( ) inspecting, ( ) adjusting, ( ) testing, and ( ) lubricating; and ( ) the work recommended at these periods. **Note:** This information may be in the FAA accepted aircraft engine ICA. Include any special notes, cautions or warnings in the maintenance section of the manual.	G23.3(b)(1)	
( ) Scheduling information for ( ) the aircraft's auxiliary power unit, including recommended periods for ( ) cleaning, ( ) inspecting, ( ) adjusting, ( ) testing, and ( ) lubricating; and ( ) the work recommended at these periods.	G23.3(b)(1)	

REQUIREMENT	Regulation Appendix	Location In ICA
( ) Scheduling information for ( ) aircraft propellers, including recommended periods for ( ) cleaning, ( ) inspecting, ( ) adjusting, ( ) testing, and ( ) lubricating; and ( ) the work recommended at these periods. Include any special notes, cautions or warnings in the maintenance section of the manual.	G23.3(b)(1)	
( ) Scheduling information for ( ) aircraft accessories, including recommended periods for ( ) cleaning, ( ) inspecting, ( ) adjusting, ( ) testing, and ( ) lubricating; and ( ) the work recommended at these periods. Include any special notes, cautions or warnings in the maintenance section of the manual.	G23.3(b)(1)	
( ) Scheduling information for ( ) aircraft instruments, including recommended periods for ( ) cleaning, ( ) inspecting, ( ) adjusting, ( ) testing, and ( ) lubricating; and ( ) the work recommended at these periods. Include any special notes, cautions or warnings in the maintenance section of the manual.	G23.3(b)(1)	
( ) Scheduling information for ( ) aircraft equipment, including recommended periods for ( ) cleaning, ( ) inspecting, ( ) adjusting, ( ) testing, and ( ) lubricating; and ( ) the work recommended at these periods. Include any special notes, cautions or warnings in the maintenance section of the manual.	G23.3(b)(1)	
( ) Degree of inspection for each part of the ( ) aircraft and its ( ) aircraft engines, ( ) the auxiliary power unit, ( ) propellers, ( ) accessories, ( ) instruments, and ( ) equipment.	G23.3(b)(1)	
( ) Applicable wear tolerances.	G23.3(b)(1)	
Applicant may refer to an ( ) accessory, ( ) instrument, or ( ) equipment manufacturer as the source of this information if applicant shows ( ) that the item is exceptionally complex and requires specialized maintenance techniques, test equipment, or expertise.	G23.3(b)(1)	

REQUIREMENT	Regulation Appendix	Location In ICA
( ) Recommended overhaul periods and necessary cross-references to the ALS.	G23.3(b)(1)	
( ) Troubleshooting information describing ( ) probable malfunctions, ( ) how to recognize those malfunctions, and ( ) remedies for them.	G23.3(b)(2)	
( ) Description of the order and method of ( ) removing and ( ) replacing products (aircraft engines and propellers) with any precautions.	G23.3(b)(3)	
( ) Description of the order and method of ( ) removing and ( ) replacing parts, with any precautions.	G23.3(b)(3)	
( ) Other instructions, including ( ) storage limitations and procedures for ( ) testing system during ground running, (including trim checks, alignment, and calibration), ( ) making symmetry checks, ( ) weighing and determining the center of gravity, ( ) lifting, and ( ) shoring.	G23.3(b)(4)	
( ) Diagrams of structural access plates and information needed to gain access for inspections when access plates are not provided.	G23.3(c)	
( ) Details for applying special inspection techniques, including radiographic and ultrasonic testing, where such processes are specified.	G23.3(d)	
( ) Information needed to apply protective treatment to structure after inspection and/or maintenance.	G23.3(e)	
( ) All data on structural fasteners, such as ( ) installation requirements, ( ) type, ( ) identification, ( ) discard recommendations, and ( ) torque values.	G23.3(f)	
( ) List of special tools needed.	G23.3(g)	
( ) For commuter category aircraft: electrical loads applicable to the various systems.	G23.3(h)(1)	
( ) For commuter category aircraft: methods of balancing control surfaces.	G23.3(h)(2)	

REQUIREMENT	Regulation Appendix	Location In ICA
( ) For commuter category aircraft: identification of primary and secondary structures.	G23.3(h)(3)	
( ) For commuter category aircraft: any special repair methods applicable.	G23.3(h)(4)	
( ) ICA must contain a section, titled Airworthiness Limitations, that is ( ) segregated and ( ) clearly distinguishable from the rest of the document. **Note:** The appropriate ACO office will evaluate and approve the Airworthiness Limitations Section (ALS) in the applicant's ICA. Airworthiness Limitations can not be altered, established or cancelled without coordinating with the appropriate Certificate Management Aircraft Certification Office.	G23.4	
( ) ALS must describe each ( ) mandatory replacement time, ( ) structural inspection interval, and ( ) related structural inspection procedure, including ( ) envelope structural integrity, required for type certification.	G23.4	
( ) If ICA consist of multiple manuals, the ALS required by this paragraph must be in the principal manual.	G23.4	
( ) ALS must contain a legible statement in a prominent location that reads : "The Airworthiness Limitations Section is FAA approved and specifies maintenance required under 14 CFR §§ 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved." If there are no new (including changes) airworthiness limitations associated with the project, the airworthiness limitations section should include the following statement: "There are no new (or additional) airworthiness limitations associated with this equipment and/or installation."	G23.4	

Appendix B. Part 25 Airplane ICA Checklist

REQUIREMENT	Regulation Appendix	Location In ICA
( ) ICA for each aircraft engine.	H25.1(b)	
( ) ICA for each propeller.	H25.1(b)	
( ) ICA for each appliance required by this chapter.	H25.1(b)	
( ) Required information on the interface of ( ) appliances, ( ) aircraft engines, and ( ) propellers with the aircraft.	H25.1(b)	
( ) If ICA are not supplied by the manufacturer of an ( ) appliance, ( ) aircraft engine, or ( ) propeller installed on the aircraft, the ICA for the aircraft must include ( ) the information essential to the continued airworthiness of the aircraft.	H25.1(b)	
( ) Applicant's program showing how they or the manufacturers of products and appliances installed on the airplane will distribute changes to the ICA.	H25.1(c)	
( ) ICA in a manual or manuals. ( ) Manuals arranged for easy and practical use.	H25.2(a) H25.2(b)	
( ) Manuals prepared in English.	H25.3	
( ) Manuals must include introductory information explaining the airplane's features and data necessary for maintenance or preventive maintenance. Includes any other information on the ( ) content, ( ) scope, ( ) purpose, ( ) arrangement, ( ) applicability, ( ) definitions, ( ) abbreviations, ( ) precautions, ( ) units of measurement, ( ) referenced publications.	H25.3(a)(1)	
( ) Description of the ( ) aircraft and its systems and installations, ( ) aircraft engines and its systems and installations, ( ) propellers and its systems and installations, and ( ) appliances and its systems and installations.	H25.3(a)(2)	
( ) Basic control and operating information describing ( ) how the aircraft components and systems are controlled and ( ) how the aircraft components and systems are operated, including ( ) any special procedure and limitations.	H25.3(a)(3)	

REQUIREMENT	Regulation Appendix	Location In ICA
( ) Servicing information covering ( ) servicing points, ( ) capacities of tanks, ( ) capacities of reservoirs, ( ) types of fluids to be used, and ( ) pressures applicable to the various systems.	H25.3(a)(4)	
( ) Location of access panels for ( ) inspection and ( ) servicing.	H25.3(a)(4)	
( ) Servicing information covering ( ) locations of lube points, ( ) lube used.	H25.3(a)(4)	
( ) Equipment required for servicing.	H25.3(a)(4)	
( ) Tow instructions and limitations.	H25.3(a)(4)	
( ) Mooring information.	H25.3(a)(4)	
( ) Jacking information.	H25.3(a)(4)	
( ) Leveling information.	H25.3(a)(4)	
( ) Scheduling information for each part of ( ) aircraft, including periods for ( ) cleaning, ( ) inspecting, ( ) adjusting, ( ) testing, and ( ) lubricating; and ( ) the work recommended at these periods. Include any special notes, cautions or warnings in the maintenance section of the manual.	H25.3(b)(1)	
( ) Scheduling information for ( ) aircraft engines, including recommended periods for ( ) cleaning, ( ) inspecting, ( ) adjusting, ( ) testing, and ( ) lubricating; and ( ) the work recommended at these periods. **Note:** This information may be in the FAA accepted aircraft engine ICA. Include any special notes, cautions or warnings in the maintenance section of the manual.	H25.3(b)(1)	
( ) Scheduling information for ( ) the aircraft's auxiliary power unit, including recommended periods for ( ) cleaning, ( ) inspecting, ( ) adjusting, ( ) testing, and ( ) lubricating; and ( ) the work recommended at these periods.	H25.3(b)(1)	
( ) Scheduling information for ( ) aircraft propellers, including recommended periods for ( ) cleaning, ( ) inspecting, ( ) adjusting, ( ) testing, and ( ) lubricating; and ( ) the work recommended at these periods. Include any special notes, cautions or warnings in the	H25.3(b)(1)	

REQUIREMENT	Regulation Appendix	Location In ICA
maintenance section of the manual.		
( ) Scheduling information for ( ) aircraft accessories, including recommended periods for ( ) cleaning, ( ) inspecting, ( ) adjusting, ( ) testing, and ( ) lubricating; and ( ) the work recommended at these periods. Include any special notes, cautions or warnings in the maintenance section of the manual.	H25.3(b)(1)	
( ) Scheduling information for ( ) aircraft instruments, including recommended periods for ( ) cleaning, ( ) inspecting, ( ) adjusting, ( ) testing, and ( ) lubricating; and ( ) the work recommended at these periods. Include any special notes, cautions or warnings in the maintenance section of the manual.	H25.3(b)(1)	
( ) Scheduling information for ( ) aircraft equipment, including recommended periods for ( ) cleaning, ( ) inspecting, ( ) adjusting, ( ) testing, and ( ) lubricating; and ( ) the work recommended at these periods. Include any special notes, cautions or warnings in the maintenance section of the manual.	H25.3(b)(1)	
( ) Degree of inspection for each part of ( ) aircraft and its ( ) aircraft engines, ( ) the auxiliary power unit, ( ) propellers, ( ) accessories, ( ) instruments, and ( ) equipment.	H25.3(b)(1)	
( ) The applicable wear tolerances.	H25.3(b)(1)	
Applicant may refer to an ( ) accessory, ( ) instrument, or ( ) equipment manufacturer as the source of this information if applicant shows ( ) that the item is exceptionally complex and requires specialized maintenance techniques, test equipment, or expertise.	H25.3(b)(1)	
( ) The recommended overhaul periods and necessary cross-references to the ALS.	H25.3(b)(1)	
( ) An inspection program that includes ( ) the frequency and ( ) extent of the inspection necessary to provide for continued airworthiness.	H25.3(b)(1)	

REQUIREMENT	Regulation Appendix	Location In ICA
( ) All CMR necessary for airworthiness.	H25.3(b)(1)	
( ) Troubleshooting information describing ( ) probable malfunctions, ( ) how to recognize those malfunctions, and ( ) remedies for them.	H25.3(b)(2)	
( ) Descriptions of the order and method of ( ) removing and ( ) replacing products (aircraft engines and propellers) with any necessary precautions.	H25.3(b)(3)	
( ) Descriptions of the order and method of ( ) removing and ( ) replacing parts with any necessary precautions.	H25.3(b)(3)	
( ) Other instructions, including ( ) storage limitations and procedures for ( ) testing system during ground running, (including trim checks, alignment, and calibration), ( ) making symmetry checks, ( ) weighing and determining the center of gravity, ( ) lifting, and ( ) shoring.	H25.3(b)(4)	
( ) Diagrams of structural access plates and information needed to gain access for inspections when access plates are not provided.	H25.3(c)	
( ) Details to apply special inspection techniques, including radiographic and ultrasonic testing where such processes are specified.	H25.3(d)	
( ) Information needed to apply protective treatment to structure after inspection and/or maintenance.	H25.3(e)	
( ) All data on structural fasteners, such as ( ) installation requirements, ( ) type, ( ) identification, ( ) discard recommendations, and ( ) torque values.	H25.3(f)	
( ) List of special tools needed.	H25.3(g)	
( ) ICA must contain a section, titled Airworthiness Limitations that is ( ) segregated and ( ) clearly distinguishable from the rest of the document. **Note:** The appropriate ACO office will evaluate and approve the Airworthiness Limitations Section (ALS) in the applicant's ICA. Airworthiness Limitations can not be altered, established or cancelled without coordinating with the appropriate Certificate Management Aircraft Certification Office.	H25.4(a)	

REQUIREMENT	Regulation Appendix	Location In ICA
( ) ALS must describe each mandatory replacement time, structural inspection interval, and related structural inspection procedures approved under 14 CFR §§ 25.571.	H25.4(a)(1)	
( ) ALS must describe each mandatory replacement time, inspection interval, related inspection procedure, and all critical design configuration control limitations approved under 14 CFR § 25.981 for the fuel tank system.	H25.4(a)(2)	
( ) If the ICA consist of multiple manuals, the ALS required by this paragraph must be in the principal manual.	H25.4(b)	
( ) ALS must contain a legible statement in a prominent location that reads: "The Airworthiness Limitations Section is FAA approved and specifies maintenance required under 14 CFR §§ 43.16 and 91.403 of the Federal Aviation Regulations, unless an alternative program has been FAA approved." If there are no new (including changes) Airworthiness Limitations associated with the project, the Airworthiness Limitations Section should include the following statement: "There are no new (or additional) Airworthiness Limitations associated with this equipment and/or installation."	H25.4(b)	

Appendix C. Part 27 Rotorcraft ICA Checklist

REQUIREMENT	Regulation Appendix	Location In ICA
( ) ICA for each aircraft engine.	A27.1(b)	
( ) ICA for each rotor.	A27.1(b)	
( ) ICA for each appliance required by this chapter.	A27.1(b)	
( ) Required information on the interface of ( ) appliances, ( ) aircraft engines, and ( ) rotors with the rotorcraft.	A27.1(b)	
( ) If ICA are not supplied by the manufacturer of an ( ) appliance, ( ) aircraft engine, or ( ) rotor installed on the rotorcraft, the ICA for the rotorcraft must include the ( ) information essential to the continued airworthiness of the rotorcraft.	A27.1(b)	
( ) Applicant's program showing how they or the manufacturers of products and appliances installed on the rotorcraft will distribute changes to the ICA.	A27.1(c)	
( ) ICA in a manual or manuals. ( ) Manuals arranged for easy and practical use.	A27.2(a) A27.2(b)	
( ) Manuals prepared in English.	A27.3	
( ) Manuals must include introductory information explaining the rotorcraft's features and data necessary for maintenance or preventive maintenance. Includes any other information on the ( ) content, ( ) scope, ( ) purpose, ( ) arrangement, ( ) applicability, ( ) definitions, ( ) abbreviations, ( ) precautions, ( ) units of measurement, ( ) referenced publications.	A27.3(a)(1)	
( ) Description of ( ) rotorcraft and its systems and installations, ( ) aircraft engines and its systems and installations, ( ) rotors and its systems and installations, and ( ) appliances and its systems and installations.	A27.3(a)(2)	
( ) Basic control and operating information describing ( ) how the rotorcraft components and systems are controlled and ( ) how the rotorcraft components and systems are operated, including ( ) any special procedure and limitations.	A27.3(a)(3)	

REQUIREMENT	Regulation Appendix	Location In ICA
( ) Servicing information covering ( ) servicing points, ( ) capacities of tanks, ( ) capacities of reservoirs, ( ) types of fluids used, and ( ) pressures applicable to the various systems.	A27.3(a)(4)	
( ) Location of access panels for ( ) inspection and ( ) servicing.	A27.3(a)(4)	
( ) Servicing information covering ( ) locations of lube points and ( ) the lube used.	A27.3(a)(4)	
( ) Equipment required for servicing.	A27.3(a)(4)	
( ) Tow instructions and limitations.	A27.3(a)(4)	
( ) Mooring information.	A27.3(a)(4)	
( ) Jacking information.	A27.3(a)(4)	
( ) Leveling information.	A27.3(a)(4)	
( ) Scheduling information for each part of the ( ) rotorcraft, including recommended periods for ( ) cleaning, ( ) inspecting, ( ) adjusting, ( ) testing, and ( ) lubricating; and ( ) the work recommended at these periods.	A27.3(b)(1)	
( ) Scheduling information for ( ) aircraft engines, including recommended periods for ( ) cleaning, ( ) inspecting, ( ) adjusting, ( ) testing, and ( ) lubricating; and ( ) the work recommended at these periods. **Note:** This information may be in the accepted aircraft engine ICA.	A27.3(b)(1)	
( ) Scheduling information for ( ) the rotorcraft's auxiliary power unit, including recommended periods for ( ) cleaning, ( ) inspecting, ( ) adjusting, ( ) testing, and ( ) lubricating; and ( ) the work recommended at these periods.	A27.3(b)(1)	
( ) Scheduling information for ( ) rotorcraft rotors, including recommended periods for ( ) cleaning, ( ) inspecting, ( ) adjusting, ( ) testing, and ( ) lubricating; and ( ) the work recommended at these periods.	A27.3(b)(1)	

REQUIREMENT	Regulation Appendix	Location In ICA
( ) Scheduling information for ( ) rotorcraft accessories, including recommended periods for ( ) cleaning, ( ) inspecting, ( ) adjusting, ( ) testing, and ( ) lubricating; and ( ) the work recommended at these periods.	A27.3(b)(1)	
( ) Scheduling information for ( ) rotorcraft instruments, including recommended periods for ( ) cleaning, ( ) inspecting, ( ) adjusting, ( ) testing, and ( ) lubricating; and ( ) the work recommended at these periods.	A27.3(b)(1)	
( ) Scheduling information for ( ) rotorcraft equipment, including recommended periods for ( ) cleaning, ( ) inspecting, ( ) adjusting, ( ) testing, and ( ) lubricating; and ( ) the work recommended at these periods.	A27.3(b)(1)	
( ) Degree of inspection for each part of ( ) rotorcraft and its ( ) engines, ( ) the auxiliary power unit, ( ) rotors, ( ) accessories, ( ) instruments, and ( ) equipment.	A27.3(b)(1)	
( ) The applicable wear tolerances.	A27.3(b)(1)	
Applicant may refer to an ( ) accessory, ( ) instrument, or ( ) equipment manufacturer as the source of this information if applicant shows ( ) that the item is exceptionally complex and requires specialized maintenance techniques, test equipment, or expertise.	A27.3(b)(1)	
( ) Recommended overhaul periods and necessary cross-references to the ALS.	A27.3(b)(1)	
( ) Inspection program that includes ( ) the frequency and ( ) extent of the inspection necessary to provide for continued airworthiness.	A27.3(b)(1)	
( ) Troubleshooting information describing ( ) probable malfunctions, ( ) how to recognize those malfunctions, and ( ) remedies for them.	A27.3(b)(2)	
( ) Descriptions of the order and method of ( ) removing and ( ) replacing aircraft engines with any necessary precautions.	A27.3(b)(3)	
( ) Descriptions of the order and method of ( ) removing and ( ) replacing rotors with any necessary precautions.	A27.3(b)(3)	
( ) Descriptions of the order and method of ( ) removing and ( ) replacing parts with any necessary precautions.	A27.3(b)(3)	

REQUIREMENT	Regulation Appendix	Location In ICA
( ) Other instructions, including ( ) storage limitations and procedures for ( ) testing system during ground running, ( ) making symmetry checks, ( ) weighing and determining the center of gravity, ( ) lifting, and ( ) shoring.	A27.3(b)(4)	
( ) Diagrams of structural access plates and information needed to gain access for inspections when access plates are not provided.	A27.3(c)	
( ) Details to apply special inspection techniques, including radiographic and ultrasonic testing where such processes are specified.	A27.3(d)	
( ) Information needed to apply protective treatment to structure after inspection.	A27.3(e)	
( ) All data on structural fasteners, such as ( ) identification, ( ) discard recommendations, and ( ) torque values and installation requirements, if any.	A27.3(f)	
( ) List of special tools needed.	A27.3(g)	
( ) ICA must contain a section, titled Airworthiness Limitations, that is ( ) segregated and ( ) clearly distinguishable from the rest of the document. **Note:** The appropriate ACO office will evaluate and approve Airworthiness Limitations Section (ALS) in the applicant's ICA.	A27.4	
( ) ALS must describe each mandatory replacement time, structural inspection interval, and related structural inspection procedures approved under 14 CFR § 27.571.	A27.4	
( ) If the ICA consist of multiple manuals, the ALS required by this paragraph must be in the principal manual.	A27.4	
( ) ALS must contain a legible statement in a prominent location that reads: "The Airworthiness Limitations Section is FAA approved and specifies inspections and other maintenance required under 14 CFR §§ 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved."	A27.4	

Appendix D. Part 29 Rotorcraft ICA Checklist

REQUIREMENT	Regulation Appendix	Location In ICA
( ) ICA for each aircraft engine.	A29.1(b)	
( ) ICA for each rotor.	A29.1(b)	
( ) ICA for each appliance required by this chapter.	A29.1(b)	
( ) Any required information on the interface of the ( ) appliances, ( ) aircraft engines, and ( ) rotors with the rotorcraft.	A29.1(b)	
( ) If ICA are not supplied by the manufacturer of an ( ) appliance, ( ) aircraft engine, or ( ) rotor installed on the rotorcraft, the ICA for the rotorcraft must include ( ) the information essential to the continued airworthiness of the rotorcraft.	A29.1(b)	
( ) Applicant's program showing how they or the manufacturers of products and appliances installed on the rotorcraft will distribute changes to the ICA.	A29.1(c)	
( ) ICA in a manual or manuals. ( ) Manuals arranged for easy and practical use.	A29.2(a) A29.2(b)	
( ) ICA manual prepared in English.	A29.3	
( ) Manuals must include introductory information explaining the rotorcraft's features and data necessary for maintenance or preventive maintenance. Any other information on the ( ) content, ( ) scope, ( ) purpose, ( ) arrangement, ( ) applicability, ( ) definitions, ( ) abbreviations, ( ) precautions, ( ) units of measurement, ( ) referenced publications.	A29.3(a)(1)	
( ) Description of ( ) rotorcraft and its systems and installations, ( ) aircraft engines and its systems and installations, ( ) rotors and its systems and installations, and ( ) appliances and its systems and installations.	A29.3(a)(2)	
( ) Basic control and operating information describing ( ) how the rotorcraft components and systems are controlled and ( ) how the rotorcraft components and systems are operated, including ( ) any special procedure and limitations.	A29.3(a)(3)	

REQUIREMENT	Regulation Appendix	Location In ICA
( ) Servicing information covering ( ) servicing points, ( ) capacities of tanks, ( ) capacities of reservoirs, ( ) types of fluids to be used, and ( ) pressures applicable to the various systems.	A29.3(a)(4)	
( ) Location of access panels for ( ) inspection and ( ) servicing.	A29.3(a)(4)	
( ) Servicing information covering ( ) locations of lube points and ( ) the lube used.	A29.3(a)(4)	
( ) Equipment required for servicing.	A29.3(a)(4)	
( ) Tow instructions and limitations.	A29.3(a)(4)	
( ) Mooring information.	A29.3(a)(4)	
( ) Jacking information.	A29.3(a)(4)	
( ) Leveling information.	A29.3(a)(4)	
( ) Scheduling information for each part of the ( ) rotorcraft, including recommended periods for ( ) cleaning, ( ) inspecting, ( ) adjusting, ( ) testing, and ( ) lubricating; and the ( ) work recommended at these periods.	A29.3(b)(1)	
( ) Scheduling information for ( ) aircraft engines, including recommended periods for ( ) cleaning, ( ) inspecting, ( ) adjusting, ( ) testing, and ( ) lubricating; and the ( ) work recommended at these periods. **Note:** This information may be in the FAA accepted engine ICA.	A29.3(b)(1)	
( ) Scheduling information for ( ) the rotorcraft auxiliary power unit, including recommended periods for ( ) cleaning, ( ) inspecting,( ) adjusting, ( ) testing, and ( ) lubricating; and the ( ) work recommended at these periods.	A29.3(b)(1)	
( ) Scheduling information for ( ) rotorcraft rotors, including recommended periods for ( ) cleaning, ( ) inspecting, ( ) adjusting, ( ) testing, and ( ) lubricating; and the ( ) work recommended at these periods.	A29.3(b)(1)	
( ) Scheduling information for ( ) rotorcraft accessories, including recommended periods for ( ) cleaning, ( ) inspecting, ( ) adjusting, ( ) testing, and ( ) lubricating; and the ( ) work recommended at these periods.	A29.3(b)(1)	

REQUIREMENT	Regulation Appendix	Location In ICA
( ) Scheduling information for ( ) rotorcraft instruments, including recommended periods for ( ) cleaning, ( ) inspecting, ( ) adjusting, ( ) testing, and ( ) lubricating; and the ( ) work recommended at these periods.	A29.3(b)(1)	
( ) Scheduling information for the ( ) rotorcraft equipment, including recommended periods for ( ) cleaning, ( ) inspecting, ( ) adjusting, ( ) testing, and ( ) lubricating; and the ( ) work recommended at these periods.	A29.3(b)(1)	
( ) Degree of inspection for each part of the ( ) rotorcraft and its ( ) engines, ( ) the auxiliary power unit, ( ) rotors, ( ) accessories, ( ) instruments, and ( ) equipment.	A29.3(b)(1)	
( ) Applicable wear tolerances.	A29.3(b)(1)	
Applicant may refer to an ( ) accessory, ( ) instrument, or ( ) equipment manufacturer as the source of this information if applicant shows ( ) that the item is exceptionally complex and requires specialized maintenance techniques, test equipment, or expertise.	A29.3(b)(1)	
( ) Recommended overhaul periods and necessary cross-references to the ALS.	A29.3(b)(1)	
( ) Inspection program that includes ( ) the frequency and ( ) extent of the inspection necessary to provide for continued airworthiness.	A29.3(b)(1)	
( ) Troubleshooting information describing ( ) probable malfunctions, ( ) how to recognize those malfunctions, and ( ) remedies for them.	A29.3(b)(2)	
( ) Description of the order and method of ( ) removing and ( ) replacing aircraft engines with any necessary precautions.	A29.3(b)(3)	
( ) Description of the order and method of ( ) removing and ( ) replacing rotors with any necessary precautions.	A29.3(b)(3)	
( ) Description of the order and method of ( ) removing and ( ) replacing parts with any necessary precautions.	A29.3(b)(3)	
( ) Other instructions, including ( ) storage limitations and procedures for ( ) testing the system during ground running, ( ) making symmetry checks, ( ) weighing and determining the center of gravity, ( ) lifting, and ( ) shoring.	A29.3(b)(4)	
( ) Diagrams of structural access plates and information needed to gain access for inspections when access plates are not provided.	A29.3(c)	

REQUIREMENT	Regulation Appendix	Location In ICA
( ) Details for applying special inspection techniques, including radiographic and ultrasonic testing where such processes are specified.	A29.3(d)	
( ) Information needed to apply protective treatment to structure after inspection.	A29.3(e)	
( ) All data on structural fasteners, such as ( ) identification, ( ) discard recommendations, and ( ) torque values and installation requirements, if any.	A29.3(f)	
( ) List of special tools needed.	A29.3(g)	
( ) ICA must contain a section, titled Airworthiness Limitations, that is ( ) segregated and ( ) clearly distinguishable from the rest of the document. **Note:** The appropriate ACO will evaluate and approve the Airworthiness Limitations Section (ALS) in the applicant's ICA.	A29.4	
( ) ALS must describe each mandatory replacement time, structural inspection interval, and related structural inspection procedures approved under 14 CFR § 29.571.	A29.4	
( ) If ICA consists of multiple manuals, ALS required by this paragraph must be in the principal manual.	A29.4	
( ) ALS must contain a legible statement in a prominent location that reads: "The Airworthiness Limitations Section is FAA approved and specifies maintenance required under 14 CFR §§ 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved."	A29.4	

Appendix E. Manned Free Balloon ICA Checklist

REQUIREMENT	Regulation Appendix	Location In ICA
( ) ICA includes ICA for all balloon parts required by this chapter.	A31.1(b)	
( ) ICA includes any required information on the interface of the balloon's required parts.	A31.1(b)	
( ) ICA includes information essential to the balloon's continued airworthiness.	A31.1(b)	
( ) Applicant's program showing how they or the manufacturers of parts installed on the balloon will distribute changes to the ICA.	A31.1(c)	
( ) ICA in a manual or manuals.	A31.2(a)	
( ) Manuals arranged for easy and practical use.	A31.2(b)	
( ) The manuals prepared in English.	A31.3	
( ) Manuals must include introductory information that explains the balloon's features and data necessary for maintenance or preventive maintenance. Include any other information on the content, scope, purpose, arrangement, applicability, definitions, abbreviations, precautions, units of measurement, referenced publications, and distribution of the ICA as applicable.	A31.3(a)	
( ) Description of balloon and its systems and installations.	A31.3(b)	
( ) Basic control and operating information for the balloon and its components and systems, and special procedures, if any.	A31.3(c)	
( ) Servicing information covering ( ) servicing of balloon components, servicing points, ( ) burner nozzles, ( ) fuel tanks, and ( ) valves during operations.	A31.3(d)	
( ) Maintenance information for each part of balloon with recommended periods for ( ) cleaning, ( ) adjustment, ( ) test, ( ) lubrication, ( ) applicable wear tolerances, and ( ) the work recommended. Include any special notes, cautions or warnings in the maintenance section of the manual.	A31.3(e)	
( ) Maintenance information for each part of the envelope with recommended periods for ( ) cleaning, ( ) adjusting, ( ) testing, and ( ) lubricating; ( ) applicable wear tolerances; and ( ) the work recommended. Include any special notes, cautions or warnings in the maintenance section of the manual.	A31.3(e)	

REQUIREMENT	Regulation Appendix	Location In ICA
( ) Maintenance information for each part of the controls with recommended periods for ( ) cleaning, ( ) adjusting, ( ) testing, and ( ) lubricating; ( ) applicable wear tolerances; and ( ) the work recommended. Include any special notes, cautions or warnings in the maintenance section of the manual.	A31.3(e)	
( ) Maintenance information for each part of the rigging, including recommended periods for ( ) cleaning, ( ) adjusting, ( ) testing, and ( ) lubricating; ( ) applicable wear tolerances; and ( ) the work recommended. Include any special notes, cautions or warnings in the maintenance section of the manual.	A31.3(e)	
( ) Maintenance information for each part of the basket structure, including recommended periods for ( ) cleaning, ( ) testing, and ( ) lubricating; ( ) applicable wear tolerances; and ( ) the work recommended. Include any special notes, cautions or warnings in the maintenance section of the manual.	A31.3(e)	
( ) Maintenance information for each part of the fuel systems, including recommended periods for ( ) cleaning, ( ) adjusting, ( ) testing, and ( ) lubricating; ( ) applicable wear tolerances; and ( ) the work recommended. Include any special notes, cautions or warnings in the maintenance section of the manual.	A31.3(e)	
( ) Maintenance information for each of the instruments, including recommended periods for ( ) cleaning, ( ) adjusting, ( ) testing, and ( ) lubricating; ( ) applicable wear tolerances; and ( ) the work recommended. Include any special notes, cautions or warnings in the maintenance section of the manual.	A31.3(e)	
( ) Maintenance information for each part of the heater assembly, including recommended periods for ( ) cleaning, ( ) adjusting, ( ) testing, and ( ) lubricating; ( ) applicable wear tolerances; and ( ) the work recommended. Include any special notes, cautions or warnings in the maintenance section of the manual.	A31.3(e)	
Applicant may refer to an ( ) accessory, ( ) instrument, or ( ) equipment manufacturer as the source of this information if applicant shows ( ) that the item is exceptionally complex and requires specialized maintenance techniques, test equipment, or expertise.	A31.3(e)	
( ) Recommended overhaul periods and necessary cross-references to the ALS must also be included.	A31.3(e)	
( ) Inspection program that includes ( ) the frequency and ( ) extent of the inspection necessary to provide for the balloon's continued airworthiness.	A31.3(e)	

REQUIREMENT	Regulation Appendix	Location In ICA
( ) Troubleshooting information describing ( ) probable malfunctions, ( ) how to recognize those malfunctions, and ( ) remedies for them.	A31.3(f)	
( ) Details for what, and how, to inspect after a hard landing.	A31.3(g)	
( ) Instructions for storage preparation, including any storage limits.	A31.3(h)	
( ) Instructions for repair on the balloon envelope and its basket or trapeze.	A31.3(i)	
( ) ICA must contain a section, titled Airworthiness Limitations Section, that is ( ) segregated and ( ) clearly distinguishable from the rest of the document. The FAA Inspector will not establish, alter, or cancel Airworthiness Limitations without coordinating with the appropriate type certificate holding office. **Note:** The appropriate ACO will evaluate and approve the Airworthiness Limitations Section (ALS) in the applicant's ICA.	A31.4	
( ) ALS must describe each ( ) mandatory replacement time, ( ) structural inspection interval, and ( ) related structural inspection procedure, including ( ) envelope structural integrity, required for type certification.	A31.4	
( ) If ICA consist of multiple manuals, the ALS required by this paragraph must be in the principal manual.	A31.4	
( ) ALS must contain a legible statement in a prominent location that reads: "The Airworthiness Limitations section is FAA approved and specifies maintenance required under 14 CFR §§ 43.16 and 91.403 of the Federal Aviation Regulations." If there are no new (including changes) airworthiness limitations associated with the project, the Airworthiness Limitations Section should include "There are no new (or additional) airworthiness limitations associated with this equipment or and installation."	A31.4	

Appendix F. Aircraft Engine ICA Checklist

REQUIREMENT	Regulation Appendix	Location In ICA
( ) ICA for each aircraft engine must include the ICA for all engine parts.	A33.1(b)	
( ) Applicant's program showing how they or the manufacturers of aircraft engine parts will distribute changes to the ICA.	A33.(c)	
( ) ICA in a manual or manuals.	A33.2(a)	
( ) Manuals arranged for easy and practical use.	A33.2(b)	
( ) Manuals prepared in English.	A33.3	
( ) ICA must contain the following manuals or sections, as appropriate, and information: ( ) Engine Maintenance Manual or Section. ( ) Engine Overhaul Manual or Section.	A33.3	
Engine Maintenance Manual or Section.	**A33.3(a)**	
( ) Introduction information that explains the aircraft engine's features and data for maintenance or preventive maintenance. Includes any other information on the ( ) content, ( ) scope, ( ) purpose, ( ) arrangement, ( ) applicability, ( ) definitions, ( ) abbreviations, ( ) precautions, ( ) units of measurement, ( ) referenced publications.	A33.3(a)(1)	
( ) Detailed description of the aircraft engine and its ( ) components, ( ) systems, ( ) and installations.	A33.3(a)(2)	
( ) Installation instructions, including proper procedures for ( ) uncrating, ( ) deinhibiting, ( ) acceptance checking, and ( ) lifting and attaching accessories, ( ) with any necessary checks. (These accessories are items not supplied with the aircraft engine as part of the engine TC).	A33.3(a)(3)	
( ) Basic control and operating information describing how the aircraft engine components, systems, and installations ( ) operate, and information describing the methods of ( ) starting, ( ) running, ( ) testing, and ( ) stopping the aircraft engine and its parts, including any ( ) special procedures and ( ) limitations that apply.	A33.3(a)(4)	

REQUIREMENT	Regulation Appendix	Location In ICA
( ) Servicing information covering ( ) servicing points, ( ) capacities of tanks, ( ) reservoirs, ( ) types of fluids to be used, ( ) pressures applicable to the various systems, ( ) locations of lubrication points, ( ) lubricants to be used, and ( ) equipment required for servicing.	A33.3(a)(5)	
( ) Scheduling information for each part of the aircraft engine, including recommended periods for ( ) cleaning, ( ) inspecting, ( ) adjusting, ( ) testing, and ( ) lubricating; the ( ) degree of inspection; the applicable ( ) wear tolerances; and ( ) work recommended.	A33.3(a)(6)	
( ) Recommended ( ) overhaul periods and ( ) necessary cross-references to the ALS of the manual must also be included.	A33.3(a)(6)	
( ) Applicant must include an ( ) inspection program that includes the ( ) frequency and ( ) extent of the inspection necessary to provide for continued airworthiness.	A33.3(a)(6)	
( ) Troubleshooting information describing ( ) probable malfunctions, ( ) how to recognize those malfunctions, and ( ) remedies for them.	A33.3(a)(7)	
( ) Descriptions of the order and method of ( ) removing the aircraft engine and its parts and replacing ( ) parts, with any necessary ( ) precautions. Instructions for proper ( ) ground handling, ( ) crating, and ( ) shipping must also be included.	A33.3(a)(8)	
( ) List of the ( ) tools and ( ) equipment necessary for maintenance and directions for use.	A33.3(a)(9)	
Engine Overhaul Manual or Section.	**A33.3(b)**	
( ) Disassembly information, including the order and method of disassembly for overhaul.	A33.3(b)(1)	
( ) Cleaning and inspection ( ) instructions that cover the ( ) materials and ( ) apparatus to be used and ( ) methods and ( ) precautions during overhaul.	A33.3(b)(2)	
( ) Methods of overhaul inspection must also be included.	A33.3(b)(2)	
( ) Details of all fits and clearances relevant to overhaul.	A33.3(b)(3)	
( ) Details of repair methods for worn or otherwise substandard parts and components along with the information necessary to determine when replacement is necessary.	A33.3(b)(4)	
( ) Order and method of assembly at overhaul.	A33.3(b)(5)	

REQUIREMENT	Regulation Appendix	Location In ICA
( ) Instruction for testing after overhaul.	A33.3(b)(6)	
( ) Instructions for ( ) storage preparation, including any ( ) storage limits.	A33.3(b)(7)	
( ) A list of tools needed for overhaul.	A33.3(b)(8)	
( ) ICA must contain a section, titled Airworthiness Limitations, that is ( ) segregated and ( ) clearly distinguishable from the rest of the document. **Note:** The appropriate ACO will evaluate and approve the Airworthiness Limitations Section (ALS) in the applicant's ICA.	A33.4	
( ) ALS must describe each ( ) mandatory replacement time, ( ) inspection interval, and ( ) related procedure required for type certification.	A33.4	
( ) If ICA consist of multiple manuals, the section required by this paragraph must be in the principal manual.	A33.4	
( ) ALS must contain a legible statement in a prominent location that reads: "The Airworthiness Limitations Section is FAA approved and specifies maintenance required under 14 CFR §§ 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved."	A33.4	

Appendix G. Propeller ICA Checklist

REQUIREMENT	Regulation Appendix	Location In ICA
( ) ICA for each propeller must include ICA for all propeller parts.	A35.1(b)	
( ) Applicant's program showing how they or the manufacturers of propeller parts will distribute changes to the ICA.	A35.1(c)	
( ) ICA in a manual or manuals.	A35.2(a)	
( ) Manuals arranged for easy and practical use.	A35.2(b)	
( ) Manuals prepared in English.	A35.3	
( ) ICA must contain the following sections and information: ( ) Propeller Maintenance Section. ( ) Propeller Overhaul Section.	A35.3(a)	
Propeller Maintenance Section.	A35.3(**a)**	
( ) Introduction information that explains the propeller's features and data for maintenance or preventive maintenance. Includes any other information on the ( ) content, ( ) scope, ( ) purpose, ( ) arrangement, ( ) applicability, ( ) definitions, ( ) abbreviations, ( ) precautions, ( ) units of measurement, ( ) referenced publications.	A35.3(a)(1)	
( ) Detailed description of propeller and its ( ) systems, ( ) and installations.	A35.3(a)(2)	
( ) Basic descriptions of how propeller components and systems are ( ) controlled and how they ( ) operate, including any ( ) special procedures that apply.	A35.3(a)(3)	
( ) Instructions for ( ) uncrating, ( ) acceptance checking, ( ) lifting, and ( ) installing propeller.	A35.3(a)(4)	
( ) Instructions for propeller operational checks.	A35.3(a)(5)	
( ) Scheduling information for each part of propeller, including recommended periods for ( ) cleaning, ( ) adjusting, and ( ) testing; the applicable ( ) wear tolerances; and the ( ) work recommended.	A35.3(a)(6)	
( ) Recommended ( ) overhaul periods and ( ) necessary cross-references to the ALS of the manual must also be included.	A35.3(a)(6)	
( ) In addition, the applicant must include an ( ) inspection program that includes the ( ) frequency and ( ) extent of	A35.3(a)(6)	

inspection necessary for propeller's continued airworthiness.		
( ) Troubleshooting information describing ( ) probable malfunctions, ( ) how to recognize those malfunctions, and ( ) remedies for them.	A35.3(a)(7)	
( ) Description of order and method of ( ) removing and replacing ( ) propeller parts, with any ( ) necessary precautions.	A35.3(a)(8)	
( ) List of special tools for maintenance, other than for overhauls.	A35.3(a)(9)	
Propeller Overhaul Section.	**A35.3(b)**	
( ) Disassembly information, including ( ) order and method of disassembly for overhaul.	A35.3(b)(1)	
( ) Cleaning and inspection ( ) instructions covering the ( ) materials and ( ) apparatus used, and ( ) methods and ( ) precautions to take during overhaul.	A35.3(b)(2)	
( ) Include methods of overhaul inspection.	A35.3(b)(2)	
( ) Details of all fits and ( ) clearances relevant to overhaul.	A35.3(b)(3)	
( ) Details of repair methods for worn or otherwise substandard parts and components along with the ( ) information to determine when replacement is necessary.	A35.3(b)(4)	
( ) Order and method of assembly at overhaul.	A35.3(b)(5)	
( ) Instruction for testing after overhaul.	A35.3(b)(6)	
( ) Instructions for storage preparation, including any ( ) storage limits.	A35.3(b)(7)	
( ) A list of tools needed for overhaul.	A35.3(b)(8)	
( ) ICA must contain a section, titled Airworthiness Limitations, that is ( ) segregated and ( ) clearly distinguishable from the rest of the document. **Note:** The appropriate ACO will evaluate and approve the Airworthiness Limitations Section (ALS) in the applicant's ICA.	A35.4	
( ) The ALS must describe each ( ) mandatory replacement time, ( ) inspection interval, and ( ) related procedure required for type certification.	A35.4	

( ) ALS must contain a legible statement in a prominent location that reads: "The Airworthiness Limitations Section is FAA approved and specifies maintenance required under 14 CFR §§ 43.16 and 91.403 of the Federal Aviation Regulations unless an alternative program has been FAA approved."	A35.4	

Appendix H. Related Publications

1. Code of Federal Regulations (CFR). Order copies of 14 CFR sections from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402-9325. Telephone 202-512-1800; fax 202-512-2250. Alternatively, you can get copies on-line at http://www.gpoaccess.gov/cfr/ .

2. FAA Orders, Advisory Circulars (AC), and Technical Standard Orders (TSO). Copies of the following orders, ACs, and TSO are available from the FAA Aircraft Certification Service Regulatory Guidance Library website at http://rgl.faa.gov .

- FAA Order 8100.8, *Designee Management Handbook.*
- FAA Order 8100.15, *Organization Designation Authorization Procedures.*
- FAA Order 8110.4, *Type Certification.*
- FAA Order 8110.37, *Designated Engineering Representative (DER) Handbook.*
- FAA Order 8110.42, *Parts Manufacturer Approval Procedures.*
- FAA Order 8110.52, *Type Validation and Post-Type Validation Procedures.*
- FAA Order 8110.104, *Responsibilities and Requirements for Implementing Part 26 Safety Initiatives.*
- FAA Order 8150.1, *Technical Standard Order Program.*
- FAA Order 8430.21, *Flight Standards Division, Aircraft Certification Division, and Aircraft Evaluation Group Responsibilities.*
- FAA Order 8900.1, *Flight Standards Information Management Systems (FSIMS).*

  (**Note:** You can get copies of this order online at http://fsims.faa.gov/home.aspx)

- AC 20-114, *Manufacturers' Service Documents.*
- AC 21-23, *Airworthiness Certification of Civil Aircraft, Engine, Propeller and Related Products Imported to the United States.*
- AC 21-40, *Guide for Obtaining a Supplemental Type Certificate.*
- AC 25-19, *Certification Maintenance Requirement.*

- AC 25-26, *Development of Standard Wiring Practices Documentation.*
- AC 25-27, *Development of Transport Category Airplane Electrical Wiring Interconnection Systems Instructions for Continued Airworthiness Using an Enhanced Zonal Analysis Procedure.*
- AC 25.571-1, *Damage Tolerance and Fatigue Evaluation of Structure*.
- AC 25.1529-1, *Instructions for Continued Airworthiness of Structural Repairs on Transport Airplane.*
- AC 33.4-1, *Instructions for Continued Airworthiness*.
- AC 33.4-2, *Instructions for Continued Airworthiness: In-Service Inspection of Safety Critical Turbine Engine Parts at Piece-Part Opportunity***.**
- AC 33.4-3, *Instructions for Continued Airworthiness, Aircraft Engine High Intensity Radiated Fields (HIRF) and Lightning Protection Features.*
- AC 35.4-1, *Propeller Instructions for Continued Airworthiness*.
- AC 43-13-1B, *Acceptable Methods, Techniques, and Practices – Aircraft Inspection and Repair*.
- AC 120-93, *Damage Tolerance Inspections for Repairs and Alterations.*
- AC 121-22, *Maintenance Review Board Procedures.*
- TSO-C77b, *Gas Turbine Auxiliary Power Units*.

3. Other FAA Document. The FAA and Industry Guide to Product Certification (CPI Guide), dated September 2004, is available from the Regulatory Guidance Library.

4. Air Transport Association (ATA) Document. Order copies of ATA iSpec 2200, *Information Standards for Aviation Maintenance*, latest edition, from the ATA Distribution Center, P.O. Box 511, Annapolis Junction, MD 20701. Telephone 301-490-7951; fax 301-206-9789. Alternatively, you can buy copies on-line at http://www.airlines.org/ .

5. General Aviation Manufacturers Association (GAMA) Document. Order copies of GAMA Specification No. 2, *Maintenance Manual*, dated September 1, 1982, from the General Aviation Manufacturers Association, 1400 K Street NW, Suite 801, Washington, D.C. 20005. Telephone 202-393-1500; fax 202-842-4063. Alternatively, you can buy copies on-line at http://www.gama.aero/ .

6. Aerospace and Defence Industries Association of Europe (ASD). Order copies of ASD-S1000D, *International Specification for Technical Publications Utilizing a Common Source Data*

Base, from Aerospace and Defence Industry Association of Europe, 270 Avenue de Tervuren, b-1150 Brussels, Belgium. Telephone +32 2 775 8110 or you can buy copies online at www.asd-europe.org.

Appendix I. Definitions

1. Acceptable ICA. ICA that the FAA has evaluated and found to meet the requirements of the applicable airworthiness regulations.

2. ACO Engineer. Aviation safety engineer or aerospace engineer responsible for finding compliance and issuing design approvals.

3. Aircraft Evaluation Group (AEG). Flight Standards organization that is co-located with each directorate. These groups are responsible for determining the operational acceptability and continuing airworthiness requirements of newly certified or modified aircraft, engines, and propellers. These products are intended to be operated under 14 CFR requirements.

4. Airworthy. When a product conforms to its type design or properly altered condition and is in a condition for safe operation.

5. Applicant. Individual, firm, partnership, corporation, company, association, joint stock association, or governmental entity. Includes a trustee, receiver, assignee, or similar representative of any of them.

6. Certificate Management ACO (CMACO) – the ACO managing the product's TC. The CMACO also manages the continued airworthiness for all products it approves for as long as the products are in service.

7. Continued Airworthiness. When certified aircraft, engines, propellers, and appliances maintain a condition in which they can be operated safely for their intended purpose. They maintain this condition safely throughout their service life. The product shows its continued airworthiness when it meets its type design and is in a condition for safe operation.

8. Design Approval Holder (DAH). Holder of any design approval, including TCs, amended TCs, STCs, amended STCs, PMAs, TSO authorization, letter of TSO design approval, and field approvals (FAA Form 337).

9. FAA Oversight Office is the aircraft certification office or office of the Transport Airplane Directorate with oversight responsibility for the relevant type certificate, supplemental type certificate, or manufacturer, as determined by the FAA.

10. Field Approval. Major repair or major alteration authorized by an aviation safety inspector for an individual aircraft, aircraft engine, propeller, or appliance. We approve these major repairs or alterations by either examining data only, or by physically inspecting, demonstrating, or testing the product.

11. Instructions for Continued Airworthiness (ICA). Documentation that gives instructions and requirements for the maintenance that is essential to the continued airworthiness of an aircraft, engine, or propeller.

12. Manufacturers' Service Documents. Publications by a TC holder (or appliance or component manufacturer) about safety, product improvement, economics, and operational and maintenance practices. Typical publications include: service bulletins, all-operator's letters, service newsletters, service digests, and magazines. They do not include publications required for FAA type certification or approval such as flight manuals and certain maintenance manuals.

13. Operator. Person who uses, or is authorized to use, aircraft for air navigation, including piloting the aircraft.

14. Owner. For this order, an owner is a person who owns an aircraft, balloon, aircraft engine, or propeller.

15. Product. For this order, product means an aircraft, aircraft engine, or propeller.

Appendix J. Acronyms

ACO	Aircraft certification office, in this order may refer to an engine certification office or directorate office responsible for import validation or type certification
14 CFR	Title 14 of the Code of Federal Regulations
AEG	Aircraft evaluation group
AFS	Flight Standards Service
AIR	Aircraft Certification Service
AL	Airworthiness limitation
ALS	Airworthiness limitations section
CA	Certificating authority
CDCCL	Critical design configuration control limitations
CMACO	Certificate management aircraft certification office
CMM	Component maintenance manual
CMR	Certification maintenance requirements
CPN	Certification project notification
DAH	Design approval holder
DAR	Designated airworthiness representative
DER	Designated airworthiness representative
ECO	Engine certification office, in this order may be referred to as an aircraft certification office
EWIS	Electrical wire interconnection system
EZAP	Enhanced zonal analysis procedure
FAA	Federal Aviation Administration
FSDO	Flight standards district office
FSIMS	Flight standards information management system
GPS	Global positioning satellite
ICA	Instruction for continued airworthiness
LODA	Letter of design approval
MDL	Master drawing list
MRB	Maintenance review board
NDI	Non-destructive test
ODA	Organization designation authorization
PMA	Parts manufacturer approval
PNL	Program notification letter
RGL	Regulatory and Guidance Library
SFAR	Special Federal Aviation Regulation
STC	Supplemental type certificate
SWPM	Standard wiring practices manual
TC	Type certificate
TCDS	Type certificate data sheet
TSO	Technical standard order
TSOA	Technical standard order authorization
VA	Validating authority

Appendix K. Administrative Information

1100. Distribution. Distribute this order to branch levels of the Aircraft Certification Service, Flight Standards Service, and Office of Environment and Energy, and to all designated engineering representatives (DER).

1101. Authority to Change This Order. The issuance, revision, or cancellation of the material in this order is the responsibility of the Aircraft Certification Service, Delegation and Airworthiness Programs Branch (AIR-140).

1102. Suggestions for Improvement. If you find any deficiencies, need clarification, or want to suggest improvements to this directive, send a written or electronic copy of FAA Form 1320-19 to the Aircraft Certification Service, Administrative Services Branch, AIR-510, Attention: Directives Management Officer. You may also send a copy to the Aircraft Engineering Division, AIR-100, Attention: Comments to Order 8110.54A. If you urgently need an interpretation, contact the Delegations and Airworthiness Programs Branch, AIR 140, at (405) 954-4103. Always use FAA Form 1320-19 to follow-up each verbal conversation.

1103. Records Management. Refer to Orders 0000.1, FAA Standard Subject Classification System; 1350.14, Records Management; and 1350.15, Records, Organization, Transfer, and Destruction Standards; or your office Records Management Officer or Directives Management Officer for guidance regarding retention or disposition of records.

Appendix L. FAA Form 1320-19 Directives Feedback Information

U.S. Department
of Transportation

**Federal Aviation
Administration**

Directive Feedback Information

Please submit any written comments or recommendations for improving this directive, or suggest new items or subjects to be added to it. Also, if you find an error, please tell us about it.

Subject: Order 8110.54A

To: Directive Management Officer, 9-AWA-AVS-AIR-DMO@FAA.GOV

(*Please check all appropriate line items)*

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

☐ Recommend paragraph _____ on page _____ be changed as follows:
(attach separate sheet if necessary)

☐ In a future change to this directive, please include coverage on the following subject:
(briefly describe what you want added)

☐ Other comments:

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

Submitted by: _____ Date: _____

FTS Telephone Number: _____ Routing Symbol: _____

FAA Form 1320–19 (dated 10/98)