



U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

**ORDER  
8130.2J**

National Policy

07/21/2017

**SUBJ:** Airworthiness Certification of Aircraft

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This order establishes policies and procedures for issuing airworthiness certificates, export certificates of airworthiness, and special flight authorizations for aircraft. This order applies to Federal Aviation Administration (FAA) aviation safety inspectors and certain persons designated to act as representatives of the FAA.

Suggestions for improving this order may be submitted using the FAA Office of Aviation Safety [Directive Feedback System](#), or FAA Form 1320-19, *Directive Feedback Information*, found in appendix K to this order.

A handwritten signature in blue ink that reads "Susan J. M. Cabler".

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## Chapter 1. Introduction

**1-1. Purpose of This Order.** As summarized in table 1-1 of this chapter, this order establishes policies and procedures for issuing:

- a. FAA Form 8100-2, *Standard Airworthiness Certificate*.
- b. FAA Form 8130-7, *Special Airworthiness Certificate*.
- c. Special flight authorizations (SFA).
- d. FAA Form 8130-4, *Export Certificate of Airworthiness* (export C of A).

**1-2. Audience.** FAA manufacturing and airworthiness aviation safety inspectors (ASI) and certain persons designated to act as representatives of the FAA.

**1-3. Where Can I Find This Order.** You can find this order on the [FAA employee website](#), on the [FAA public website](#), and in the [FAA Regulatory and Guidance Library](#) (RGL).

**1-4. Showing and Finding.** In seeking a certificate or an authorization under this order, an applicant is responsible for presenting evidence necessary to show compliance with applicable requirements; that is, the burden of proof is on the applicant. The FAA is responsible for reviewing and inspecting the applicant's evidence to make findings of compliance to applicable requirements. If an applicant's evidence is insufficient to enable the FAA to make its findings, the inspection may be stopped until such time as the applicant presents new evidence to support the FAA's findings.

**1-5. Aircraft Located Outside the United States.** Except for issuing an airworthiness certificate under paragraph 20-2 of this order, before processing an application for a certificate under this order for an aircraft located outside the United States, the FAA must find that the activity can be accomplished without placing an undue burden on FAA resources. The applicable [International Field Office](#) (IFO) is responsible for determining whether conducting any necessary FAA inspections and issuing the certificate would create an undue burden on the FAA.

**1-6. Cross Utilization.** The FAA performs a variety of functions in issuing certificates and authorization under this order. Many of these functions should be accomplished via coordination among manufacturing, airworthiness, or operations ASIs who have expertise in particular subject matters. Consult with other ASIs as necessary.

**1-7. Explanation of Policy Changes.** This revision changes the following:

- a. Consolidates common procedures for issuing an airworthiness certificate and reorganizes the order to eliminate repetition of those common procedures.
- b. Clarifies the need for aircraft familiarization to identify potential safety hazards.
- c. Revises the definition of "original certification." Adds new definitions of commonly used terms.
- d. Clarifies that § 21.183(c) applies only to new import aircraft.
- e. Clarifies that § 21.185(b) applies to issuance of recurrent airworthiness certificates for restricted category aircraft.



**f.** Removes the requirement for a type or production certificate for issuing a special flight permit for production flight testing.

**g.** Clarifies requirements for an export certificate of airworthiness for imported aircraft.

**h.** Incorporates recently coordinated/issued operating limitations for particular aircraft models and a new operating limitation to support the recent enhanced flight vision system (EFVS) final rule.

**i.** Clarifies requirements for reviewing and forwarding certification files.

**j.** Removes policies and procedures covered by FAA Order 8130.21, *Procedures for Completion and Use Authorized Release Certificate, FAA Form 8130-3, Airworthiness Approval Tag*.

**k.** Removes detailed policies and procedures for issuing an airworthiness certificate for new aircraft manufactured under § 21.6(b).

**1-8. Cancellation.** The following are cancelled upon the effective date of this order:

**a.** FAA Order 8130.2H, *Airworthiness Certification of Products and Articles*, dated February 4, 2015.

**b.** FAA Notice 8130.72, *Availability of FAA Forms 8130-7 and 8100-2*, dated January 27, 2017.

**c.** All clarification, deviation, and policy memorandums issued for FAA Order 8130.2 before the effective date of this order.

**1-9. FAA Forms.** Table 1-2 of this chapter lists forms the FAA completes under this order.

**1-10. Conflicts.** If a conflict exists between this order and an applicable bilateral agreement, follow the bilateral agreement.

**1-11. Effective Date.** This order is effective 9/21/2017.



**Table 1-2. FAA Forms Completed by the FAA Under This Order**

<b>Form Number</b>	<b>Title</b>	<b>Source</b>
AC Form 8050-72	Export Certificate Number Assignment Card	AFS-750 distributes to district offices
FAA Form 8100-1	Conformity Inspection Record	<a href="#">FAA public website</a>
FAA Form 8100-2	Standard Airworthiness Certificate	<a href="#">FAA Logistics Center</a> for paper version or <a href="#">FAA employee website</a> for fillable PDF format
FAA Form 8130-1	Application for Export Certificate of Airworthiness	<a href="#">FAA public website</a>
FAA Form 8130-4	Export Certificate of Airworthiness	<a href="#">FAA Logistics Center</a>
FAA Form 8130-6	Application for U.S. Airworthiness Certificate	<a href="#">FAA public website</a>
FAA Form 8130-7	Special Airworthiness Certificate	<a href="#">FAA Logistics Center</a> for paper version or <a href="#">FAA employee website</a> for fillable PDF format
FAA Form 8130-10	Surplus Military Aircraft Inspection Record	<a href="#">FAA public website</a>

## Chapter 2. Common Policies and Procedures for Issuing an Airworthiness Certificate

**2-1. Introduction.** This chapter provides common policies and procedures for issuing, amending, exchanging, and replacing standard and special airworthiness certificates. Additional classification-, category-, and purpose-specific procedures for issuing an airworthiness certificate are included in subsequent chapters of this order. This chapter does not apply to issuance of a special flight permit (SFP) except as referenced by chapter 18 of this order.

**Note:** The procedures for issuing an airworthiness certificate are a combination of the common procedures of this chapter and the applicable classification-, category-, and purpose-specific procedures in subsequent chapters.

### 2-2. Persons Authorized to Issue An Airworthiness Certificate.

**a. ASIs.** FAA ASIs are authorized to issue airworthiness certificates.

**b. Delegation.** The FAA may delegate the issuance of an airworthiness certificate per Title 14 of the Code of Federal Regulations (14 CFR) part 183 and the applicable designee management order.

#### **c. Responsibilities for Original and Recurrent Certifications.**

**Note:** Refer to appendix I to this order for definitions of original and recurrent certification as well as definitions of other terms used throughout this order.

(1) Manufacturing ASIs in the Aircraft Certification Service (AIR) are primarily responsible for original certifications, while airworthiness ASIs in the Flight Standards Service (AFS) are primarily responsible for recurrent certifications. When it is unclear whether a given activity is an original or recurrent certification, the affected offices should coordinate to establish mutual agreement on the responsible office. Manufacturing and airworthiness ASIs may assist each other by mutual agreement.

(2) If a Flight Standards District Office (FSDO) receives an application for an original certification, that FSDO must coordinate with the responsible Manufacturing Inspection District Office (MIDO) to determine which office will process the application. Similarly, if a MIDO receives an application for a recurrent certification, the MIDO must coordinate with the responsible FSDO to determine which office will process the application.

(3) Exceptions to paragraphs 2-2.c(1)-(2) of this chapter:

(a) Any request, original or recurrent, for a special airworthiness certificate for light-sport aircraft (LSA), research and development (R&D), crew training, exhibition, air racing, market survey, amateur-built, or SFP for new aircraft may be handled by a FAA manufacturing or airworthiness ASI without further coordination to determine which office will process the application.

(b) Experimental Showing Compliance. Processing an application for an experimental certificate for showing compliance with regulations is the primary responsibility of the MIDO. In remote areas or under special circumstances, the MIDO may request an airworthiness ASI perform these duties if it is established that the person has had experience in type certification programs of a type and complexity comparable to the certificate requested.

**2-3. Common Procedures for Issuing an Airworthiness Certificate.** Common procedures for issuing an airworthiness certificate are illustrated in figure 2-1 of this chapter and specified in this paragraph.

**a. Review Application.**

(1) FAA Form 8130-6. A properly completed application is required to begin the process for issuing an airworthiness certificate. FAA Advisory Circular (AC) 21-12, *Application for U.S. Airworthiness Certificate, FAA Form 8130-6*, provides guidance to the public for completing this form. Review FAA Form 8130-6 to verify the applicant completed the form properly.

(2) Letter of Authorization. If an agent completed the application, verify the registered owner of the aircraft provided a notarized letter of authorization and that the information in this letter is consistent with the application. A true copy of the notarized letter is acceptable.

(3) Type Certificate Data Sheet (TCDS). For an application for an aircraft in a category that requires a type certificate (TC), review the applicable TCDS, aircraft specification, or aircraft listing to verify the aircraft is eligible for issuance of the requested airworthiness certificate by make, model, and serial number (S/N). An aircraft listing maintained by the responsible ACO may consist of aircraft model and serial numbers of newly manufactured aircraft that are not yet listed on the TCDS. If none of these documents clearly show the eligibility of the applicant's aircraft by make, model, and S/N, contact the responsible Aircraft Certification Office (ACO) to verify eligibility.

**Note:** [RGL](#) contains TCDSs and aircraft specifications within the TCDS database.

**b. Review FAA Airworthiness Records on File at the Registry.**

(1) Current Registration. Access the [FAA Registry](#) [hereafter referred to as Registry] to verify the aircraft is currently registered per part 47. The aircraft is registered when an inquiry of the Registry shows that the nationality and registration number [hereafter referred to as the N-number] is "assigned" and the status is "valid."

**Note:** When searching the Registry for antique or replica aircraft displaying nationality and registration marks as provided for under § 45.22(b), omit the inserted symbol allowed by § 45.22(b).

(2) Prior Denials. Except for new aircraft, check the [Electronic Document Retrieval System](#) (EDRS) or [order a copy of the aircraft record](#) to determine if the FAA previously issued a denial for this aircraft. If previously denied, verify that the reasons for the denial have been corrected.

**c. Identify Potential Safety Hazards.** Review available information as necessary to assist you in becoming familiar with the aircraft, aircraft engine, and propeller models and with potential safety hazards. For example, review information as applicable and necessary to understand the manufacturer/builder; configuration; installed equipment; novel or unique features, characteristics, or systems; recent customer findings for new aircraft deliveries; recent quality escapes for new aircraft; histories of service difficulties, incidents, and accidents; ownership history of the aircraft; and potential for degradation from long-term storage.

**Note:** The National Transportation Safety Board (NTSB) maintains a searchable [database of accidents and incidents](#) involving civil aircraft.

**d. Review Aircraft Records.**

(1) Registration. Review the certificate of aircraft registration to verify the aircraft is currently registered and that information on the registration and application match. Note that the manufacturer's name may be abbreviated on the application and/or registration. If the registration does not have an expiration date, the registration is not effective. Evidence of aircraft registration may be shown via any of the following [hereafter referred to as registration]:

- (a) Aeronautical Center Form 8050-3, *Certificate of Aircraft Registration*.
- (b) Aeronautical Center Form 8050-6, *Dealer's Aircraft Registration Certificate*.
- (c) Form AFS-750-FAX-4, *Temporary Certificate of Registration*.

(2) Exemptions. For an exemption concerning airworthiness that the applicant claims to apply to this aircraft, verify the exemption is included in the FAA [Automated Exemptions System](#) and that the exemption applies to this aircraft.

(3) Maintenance Records. Verify the following:

- (a) The applicant has all maintenance records required under § [91.417](#).
- (b) All maintenance required as of the date you inspect the aircraft is complete, including compliance with applicable airworthiness directives (AD) and applicable component life limits.
- (c) For used, type-certificated aircraft, that maintenance, preventive maintenance, and alterations were accomplished per part 43.

(4) Weight and Balance. Review the weight and balance report to verify it reflects the current configuration.

(5) Manuals. Verify the applicant has applicable manuals and documents. Applicable manuals and documents may include an aircraft flight manual (AFM), equipment list, FAA-accepted Instructions for Continued Airworthiness (ICA), and FAA-accepted maintenance manual(s). Note that such manuals and documents may not be required for some aircraft certificated under the Civil Air Regulations (CAR).

(6) Flight Testing. Determine if the aircraft has been flight tested if required or as necessary to verify condition for safe operation. As necessary, issue a special airworthiness certificate for showing compliance with the airworthiness regulations (§§ [21.127](#), [21.137\(e\)\(1\)](#), [21.189\(a\)\(2\)](#), [21.185\(d\)](#), [21.190\(c\)\(7\)](#), and [91.319\(b\)](#)) per the applicable requirements of this order.

**e. Inspect Aircraft.** Physically inspect the aircraft to verify—

(1) Nationality, Registration, and Special Marks. The nationality and registration marks [hereafter referred to as the N-number] on both exterior sides of the aircraft match the application and the registration and meet the requirements of §§ [45.21 through 45.31](#).

(a) Size. When verifying an N-number is the proper size, verify the height of the marks were measured vertically. The font may be slanted, but do not use the length of the slant line to determine the height of the numbers.

**Note:** If a surface authorized for displaying required marks under § 45.25 is not large enough for display of full-size marks, § 45.25 allows for marks as large as practicable to be displayed. Assessing “as large as practicable” requires judgment based on the particular aircraft make/model. For example, for some strongly contoured surfaces, smaller marks may be more legible, and therefore more practicable, than the largest marks that could fit on that surface.

(b) Legibility, Style, Borders, and Shading. The N-number must be legible and written in capital Roman letters without ornamentation. Borders or shading is allowed only if it makes the numbers more legible. The color of the registration marks must contrast with the background. The N-number should be legible from 500 feet away when viewing it perpendicular to the side of the aircraft during daylight hours.

**Note:** Section 45.21(b) prohibits a person from placing on any aircraft a design, mark, or symbol that modifies or confuses the N-number. Note this requirement is very broad and includes any feature that would modify or confuse the N-number. For example, N-number paint type, paint color, font type(s), or background patterns must not modify or confuse the N-number.

(c) Display of Foreign Marks for Exporting New Aircraft. Per § 45.31, a person who manufactures an aircraft in the United States for export delivery may display foreign marks on the aircraft as required by the importing State of Registry (SOR) of the aircraft while the aircraft is registered in the United States. The manufacturer may operate the aircraft with the foreign marks within the United States for testing, demonstration, transfer to a completion center, or delivery; note these flights are performed under an SFP because the aircraft is registered in the United States.

(d) Marking of Certain Aircraft with a Special Airworthiness Certificate. When aircraft marks include only the Roman capital letter “N” and the registration number on limited, restricted or light-sport category aircraft or experimental or provisionally certificated aircraft, verify the operator displays on that aircraft near each entrance to the cabin, cockpit, or pilot station, in letters not less than two inches nor more than six inches high, the words “limited,” “restricted,” “light-sport,” “experimental,” or “provisional,” as applicable. Refer to § 45.23.

**Note:** Section 45.23 does not specify whether these marks must be inside or outside the aircraft; either is acceptable.

(e) Special Marks for Antique or Replica Aircraft. A small aircraft built 30 or more years ago or an aircraft for which an experimental certificate has been issued for operation as an exhibition or as an amateur-built aircraft and which has the same external configuration as an aircraft built 30 or more years ago may be marked per § 45.22(b): with the Roman capital letter “N” followed by the symbol appropriate to the airworthiness certificate of the aircraft (“C”, standard; “R”, restricted; “L”, limited; or “X”, experimental) followed by the registration number of the aircraft. The symbol used must be appropriate for the airworthiness certificate of the aircraft being certificated, not the aircraft being replicated. When an aircraft is marked as described in this paragraph, its registration and airworthiness certificate will not include the inserted symbol. In addition, § 45.23(b) provides that when the appropriate symbol

is used with the nationality and registration marks, the word “limited,” “restricted,” or “experimental” is not required to be displayed on the aircraft.

(2) Product Marking.

(a) The aircraft is identified per § [21.182](#) with the exception of an SFP or an experimental airworthiness certificate not issued for operating amateur-built aircraft, operating primary kit-built aircraft, or operating LSA. Each installed aircraft engine, propeller, propeller blade, and propeller hub manufactured under a TC or Production Certificate (PC) is marked per § [45.11](#).

(b) Product identification (ID) plates include the information specified in § [45.13](#) and are attached per § [45.11](#). Verify the product make, model, and S/N on the product ID plates match the application. Verify the aircraft make, model, and S/N on the aircraft ID plate matches the registration. Note the manufacturer’s name may be abbreviated on the application and/or registration.

**Note 1:** For aircraft manufactured outside the United States pursuant to a § 21.29 TC, the TC and PC numbers on the ID plate may reflect the foreign design and production approval numbers. The ID plate information should provide a means to determine the applicable U.S. TC number if the TC number of the State of Manufacture (SOM) is used.

**Note 2:** The FAA has, in some cases, granted regulatory exemptions permitting alternate mounting locations of aircraft ID plates for certain aircraft of qualifying air carriers. For any aircraft whose ID plate is mounted in a location other than that which is required in § 45.11 verify this is covered by the provisions of a current regulatory exemption for alternate ID plate location.

(c) When an aircraft has been modified to conform to another make/model, verify the supplemental ID plate contains the information specified in § 45.13. If AFS-750 has not yet issued the new registration with the new model designation, verify that the aircraft make and S/N match the application and current registration. If ownership of the aircraft has not changed, an application for aircraft registration, reflecting the new model designation, need not be submitted; AFS-750 will change the model and issue a new registration after receipt of the certification files. Verify the original ID plate has not been altered in any manner.

(d) Inspect the aircraft and review aircraft records to determine whether a violation of § 45.13(c) or (e) is apparent. If a violation of § 45.13(c) or (e) is found, deny the airworthiness certificate and initiate an enforcement action.

(3) Conformity to TC. For an application for an aircraft in a category that requires a TC, verify the aircraft conforms to its TC. This includes conformity to applicable ADs, major repairs, and major alterations. Verify minor repairs or alterations conform to FAA-accepted data.

(4) Engines, Propellers, and Associated Instruments. The engine(s), propeller(s), and associated instruments operate per the manufacturer’s instructions or other FAA-approved instructions, placards, or Flight Manual Supplements.



(5) Systems. Aircraft systems have been checked for proper operation, including the flight control system and pitot static system, as applicable.

(6) Equipment. Installed equipment is functioning properly, including all equipment on the aircraft equipment list, as applicable.

(7) Instruments and Placards. Instruments and placards are correctly located, installed, and properly marked in the English language. In addition, for those instruments necessary for operation in the U.S. air traffic system, verify that measurements display in standard U.S. units of measure.

(8) Foreign Objects. That no foreign objects are present that could pose a safety hazard. For example, foreign objects could include tools, scrap material, or miscellaneous debris.

(9) Airworthiness. The aircraft is airworthy.

**f. Document the Inspections.** Document completed inspections on FAA Form 8100-1, *Conformity Inspection Record*, per the instructions on the back of the form. Verify the applicant corrects all unsatisfactory findings, and document those corrections on FAA Form 8100-1 before issuing an airworthiness certificate.

**g. Issue Airworthiness Certificate.** If you find the aircraft airworthy and all other requirements are met for the requested certificate:

(1) Complete sections V and VIII of FAA Form 8130-6 per the block-by-block instructions in section 2 of appendix A to this order.

(2) Complete the standard or special airworthiness certificate, as applicable, per the block-by-block instructions in section 3 or 4, respectively, of appendix A to this order.

(3) Make a maintenance record entry. The following is considered a satisfactory statement for the maintenance record entry: "I find that this aircraft meets the requirements for the certificate requested and have issued a [*standard airworthiness certificate or special airworthiness certificate for the purpose(s) of (enter purpose) and operating limitations*] dated \_\_\_\_\_. [*Signature: John Smith, Aviation Safety Inspector, SW 41*]."

(4) Give the completed airworthiness certificate to the applicant. Advise the applicant to display the certificate in the aircraft at the cabin or cockpit entrance so the certificate is legible to passengers or flightcrew per § [91.203\(b\)](#).

**h. Issue Letter of Denial.**

(1) If, after notifying the applicant of all unsatisfactory findings, the applicant does not correct those findings to your satisfaction in a timely manner, write a letter to the applicant denying issuance of the certificate and stating the reason(s) for the denial. If feasible, identify which steps may be accomplished to meet the certification requirements.

(2) Do not complete sections V and VIII of FAA Form 8130-6.

**i. Review Records and Forward to the Registry.**

(1) Review your records to verify completeness, accuracy, legibility, and compliance with applicable requirements.

(2) Review and forward certification files per appendix B to this order.

**2-4. Amendments, Exchanges, Replacements, Surrenders, and Transfers.****a. Amendment.**

- (1) Eligibility. An airworthiness certificate may be amended when there is—
  - (a) A change in the aircraft model specified on an airworthiness certificate.
  - (b) An alteration to the aircraft, such as one that has been approved by a supplemental type certificate (STC) or amended TC, that changes the category of the aircraft specified in block 4 of the standard airworthiness certificate.
  - (c) A change in the operating limitations for an aircraft with a special airworthiness certificate.
- (2) Procedures for Amending an Airworthiness Certificate. Follow the procedures in paragraph 2-3 of this order except as follows:
  - (a) Review Aircraft Records. A complete aircraft records inspection per paragraph 2-3.d of this order is not required. Review aircraft records as necessary in consideration of the reason for the amendment.
  - (b) Inspect Aircraft. A complete aircraft inspection per paragraph 2-3.e of this order is not required. Inspect the aircraft as necessary in consideration of the reason for the amendment.
  - (c) Issue Airworthiness Certificate. For a special airworthiness certificate, issue operating limitations per the current version of this order.

**b. Exchange.**

- (1) Eligibility. Owners that hold a current FAA Form 1362A, *Certificate of Airworthiness*, or FAA Form 1362B, *Certificate of Airworthiness*, may apply, as appropriate, for a standard airworthiness certificate, FAA Form 8100-2, or a special airworthiness certificate, FAA Form 8130-7.
- (2) Procedures for Exchanging an Airworthiness Certificate. Follow the procedures in paragraph 2-3 of this order except as follows:
  - (a) Review Application. The existing certificate serves as the application; an FAA Form 8130-6 is not required.
  - (b) Review Aircraft Records. A complete aircraft records inspection per paragraph 2-3.d of this order is not required. Review aircraft records as necessary to verify the applicant's request is valid.
  - (c) Inspect Aircraft. A complete aircraft inspection per paragraph 2-3.e of this order is not required. Inspect the aircraft as necessary to verify the applicant's request is valid.
  - (d) Issue Airworthiness Certificate. Issue FAA Form 8100-2 or FAA Form 8130-7 as applicable. Do not include the operating certificate number when issuing the airworthiness certificate.

**c. Replacement.**

- (1) Eligibility. The FAA may issue a replacement airworthiness certificate when a certificate is declared lost, has been mutilated, is no longer legible, or contains inaccurate and/or

erroneous information; or when the aircraft registration number has changed. Do not issue a replacement airworthiness certificate for the scenarios provided for under paragraph 2-4.a(1) of this order for amending an airworthiness certificate.

**Note:** Replacing an airworthiness certificate is an administrative function and does not require a finding of airworthiness.

(2) Procedures for Replacing an Airworthiness Certificate. Follow the procedures in paragraph 2-3 of this order except as follows:

(a) Review Application. FAA Form 8130-6 is not required; a signed statement is acceptable. Inspect the signed statement requesting the replacement certificate to verify it is from the registered owner or the operator and includes the aircraft registration number, make, model, and S/N; and a valid reason for replacing the certificate.

(b) Review FAA Airworthiness Records on File at the Registry. A replacement airworthiness certificate may be issued if all the information from the lost or mutilated certificate can be positively established from the maintenance records, from the remains of the certificate, or from the Registry. If there is insufficient data on which to base issuance of the replacement certificate, including the original operating limitations, do not issue the replacement certificate; advise the applicant to apply for a new airworthiness certificate.

(c) Review Aircraft Records. A complete aircraft records inspection per paragraph 2-3.d of this order is not required. Review records as necessary to verify the applicant's request is valid and the aircraft is eligible for the requested airworthiness certificate. When replacing an airworthiness certificate because the aircraft registration number has changed, review both the registration and Aeronautical Center Form 8050-64, *Assignment of Special Registration Marks*, to verify the aircraft is currently registered and to verify the current N-number.

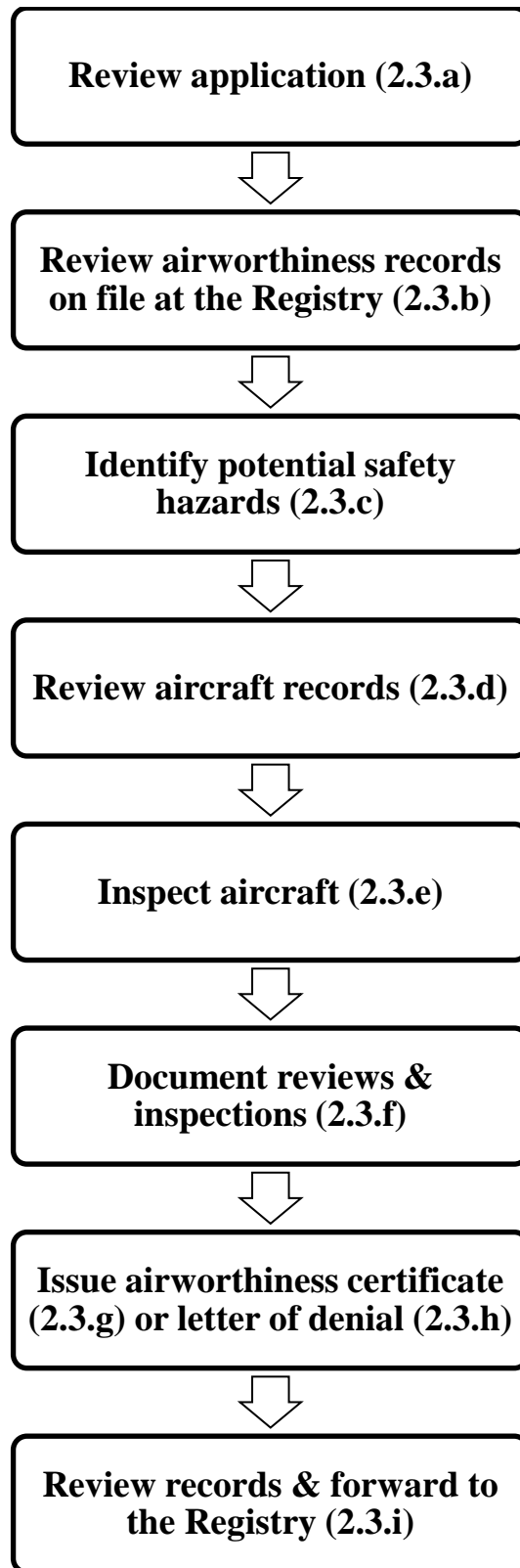
(d) Inspect Aircraft. A complete aircraft inspection per paragraph 2-3.e of this order is not required. Inspect the aircraft as necessary to verify the applicant's request is valid and the aircraft is eligible for the requested certificate.

(e) Issue Airworthiness Certificate. When issuing a replacement for a special airworthiness certificate, the operating limitations must match the operating limitations on the original certificate verbatim. Only modifications to the operating limitations for correcting administrative mistakes are allowed.

**d. Surrender.** Verify the aircraft owner's written authorization to surrender its airworthiness certificate states why the certificate is being surrendered. Forward the authorization and certificate to AFS-750 for retention in the permanent airworthiness files.

**e. Transfer.** An airworthiness certificate is transferred with the aircraft (§ [21.179](#)), for example, if there is a change of ownership or transfer of registration.

**Figure 2-1. Common Steps for Issuing an Airworthiness Certificate**



### Chapter 3. Issuing Standard Airworthiness Certificates (§ 21.183)

**3-1. Introduction.** This chapter provides policies and procedures for issuing standard airworthiness certificates under § [21.183](#) for aircraft in the normal, utility, acrobatic, commuter, or transport category; manned free balloons; or any other special class of aircraft designated by the FAA under § 21.17(b).

**3-2. Common Requirements for Reviewing Aircraft Records.** In addition to the common requirements for reviewing aircraft records in paragraph 2-3.d of this order, the following requirements also apply to certain airplanes per § [21.183](#):

**Note 1:** This list is not exhaustive. Other requirements may apply and require verification during your review of aircraft records such as § 91.1505, *Repair assessment for pressurized fuselages*, and § 91.1507, *Fuel tank system inspection program*.

**Note 2:** The requirements of this paragraph apply only to certain airplanes in the standard classification.

**a. Noise.** Per § 21.183(e), for an application for issuance of an original standard airworthiness certificate, review records to verify compliance with the applicable noise requirements of part 36 or part 91, subpart I, as applicable.

**b. Emergency Exit.** For transport category airplanes manufactured after October 16, 1987, review records to verify compliance with the passenger emergency exit requirements of § 21.183(f).

**c. Fuel Venting and Exhaust Emission.** Per § 21.183(g), review records to verify compliance with the fuel venting and exhaust emission requirements of part 34.

**3-3. New Aircraft Manufactured Under a PC (§ 21.183(a)).** Aircraft manufactured under the terms of a PC are eligible for the issuance of an airworthiness certificate without further showing in accordance with § 21.183(a). The submission of FAA Form 8130-9 is not required, nor is it mandatory for the FAA to inspect each aircraft to determine conformity with the approved type design. The inspection frequency may be adjusted by the geographic MIDO, MISO, or CMO/CMU having certificate management responsibility over the certificate holder. Consider the following in adjusting inspection frequencies: recent changes in the aircraft design, the quality system, personnel, and the supply base; and recent customer-identified deficiencies, quality escapes, service difficulties, incidents, and accidents. When inspecting an aircraft, follow the applicable procedures in paragraphs 2-3 and 3-2 and the following:

**a. Review Aircraft Records.**

(1) Review the PC and the Production Limitation Record (PLR) to verify the holder is authorized to manufacture the applicable aircraft make and model.

(2) Review the manufacturer's records to verify that quality system procedures have been completed satisfactorily, including production flight testing of the aircraft.

**b. Reserved.**

**3-4. New Aircraft Manufactured Under a TC Only (§ 21.183(b)).** Follow the common procedures for issuing an airworthiness certificate in paragraphs 2-32-3 and 3-2 of this order and the following:

**a. Review Application.**

(1) Verify that the manufacturer is still authorized to manufacture under a TC since such authorizations are of limited duration.

(2) Review FAA Form 8130-9, *Statement of Conformity*, to verify proper completion and to verify the applicant certifies the aircraft is airworthy and was flight tested. Refer to FAA Order 8110.4, *Type Certification*, for additional information on FAA Form 8130-9.

**b. Review Aircraft Records.**

(1) Review the FAA's inspection records/file for each aircraft to verify that any prior findings have been properly addressed.

(2) Review the manufacturer's records to verify that any interim quality system procedures have been completed satisfactorily, including production flight testing of the aircraft.

(3) Verify any nonconformities involving material review actions have been resolved through the responsible ACO before issuance of an airworthiness certificate.

**c. Inspect Aircraft.** You must inspect each aircraft presented for issuance of a standard airworthiness certificate to find the aircraft airworthy. Adjust inspections as necessary for any significant changes in manufacturing systems, procedures, or personnel, or when changes have been introduced into the aircraft. Inspect the aircraft to verify conformity to its TC, including applicable ADs. This does not imply that every article must be subjected to a conformity inspection. Conformity inspections of articles should only be conducted when, in the FAA's judgment, conformity cannot be substantiated by any other means.

**3-5. New Import Aircraft, Foreign SOM (§ 21.183(c)).** Follow the procedures for issuing an airworthiness certificate in paragraphs 2-3 and 3-2 and chapter 20 of this order.

**3-6. Used Aircraft (§ 21.183(d)).** This paragraph applies to issuing a standard airworthiness certificate for a used aircraft, including a surplus aircraft of the U.S. Armed Forces. Follow the common procedures for issuing an airworthiness certificate in paragraphs 2-32-3 and 3-2 of this order and the following:

**a. Review Aircraft Records.**

(1) Review aircraft maintenance records to verify the aircraft was inspected and found airworthy per § 21.183(d)(2) within 30 days before the date of the application. The rule requires the aircraft to have been inspected per the *performance* rules for 100-hour inspections in § 43.15, meaning use of a checklist that includes at least the scope and detail of appendix D to part 43. In lieu of a 100-hour type inspection, it is acceptable for the aircraft to have been inspected with an equivalent performance standard acceptable to the FAA, such as any inspection program prescribed under § 91.409; if inspected per an approved progressive or continuous airworthiness inspection program, this means all inspections must be current. Verify that one of the following persons performed this inspection and found the aircraft airworthy:

(a) The manufacturer;

- (b) The holder of a repair station certificate issued under 14 CFR part 145;
- (c) The holder of a mechanic certificate as authorized in 14 CFR part 65; or
- (d) The holder of a certificate issued under part 119, *Certification: Air Carriers and Commercial Operators*, and having a maintenance and inspection organization appropriately rated for the type of aircraft involved.

(2) Surplus Aircraft of the U.S. Armed Forces. Review:

(a) FAA Form 8130-31, *Statement of Conformity – Military Aircraft*, or its predecessor, FAA Form 8130-2, *Conformity Certificate – Military Aircraft*. This form is issued to a military service at the time of manufacture to identify deviations from the FAA TC for a new, military aircraft that was derived from an FAA, type-certificated aircraft. Verify any deviations have been corrected. Refer to FAA Order 8110.101, *Type Certification Procedures For Military Commercial Derivative Aircraft*, concerning the use of these forms.

(b) Military maintenance records to determine if operating limitations were exceeded; if so, contact the responsible ACO for an airworthiness assessment of all exceedances.

(c) Records of engines, gearbox assemblies, landing gear, instruments, or other articles establishing that they originally conformed to the TC and have been maintained per applicable FAA requirements. Military maintenance and/or FAA-approved repair station records may be used for this purpose.

**b. Used, Imported Aircraft.** For an application for a standard airworthiness certificate for a used, imported aircraft, refer to chapter 20 of this order for additional, related policies and procedures.

**3-7. Manned Free Balloons.** Follow the applicable procedures for issuing a standard airworthiness certificate in paragraphs 3-3 through 3-6 of this order and the following:

**a. Inspect Aircraft.** Inspect the aircraft to verify the applicant is presenting a complete aircraft for issuance of a standard airworthiness certificate. For a manned free balloon, a complete aircraft consists of an envelope with an eligible burner, fuel system, and basket; verify the particular combination is allowed per the TCDS. You may not issue a standard airworthiness certificate for an article only.

**b. Delivery of New Envelopes.** Manufacturers of manned free balloons may deliver a balloon envelope when the envelope is the only article ordered. A balloon envelope that is manufactured, assembled to a burner and basket, and flight tested is eligible for a standard airworthiness certificate. The envelope, along with the standard airworthiness certificate and the logbook, may be delivered without the burner and basket. The envelope may then be assembled to a different burner and basket per the TC. A person may accomplish the interchange of the burner and basket as a preventive maintenance task as described below.

**c. Changing the Burner and Basket.** A new airworthiness certificate is not required when the aircraft is disassembled and a different burner and basket combination is installed, as allowed by the TC. Reassembly of the envelope and bottom-end articles into a complete aircraft may be performed as preventive maintenance under part 43, appendix A, paragraph (c)(27). The aircraft records must properly reflect the installation of the bottom-end articles and record the new empty weight. The bottom-end components must be in a current “annual or 100-hour” inspection status. The individual records of the bottom-end articles must be maintained.

**d. Replacement Envelopes.** If an envelope is provided only as a replacement article without obtaining a new aircraft S/N, registration number, or ID plate, the installation of the replacement envelope is a maintenance item under part 43. This requires appropriate documentation of the work performed and a return to service entry in the aircraft records by a person authorized to perform the maintenance. The aircraft ID plate, S/N, and registration number are carried over from the previous aircraft envelope.



## Chapter 4. Issuing Special Airworthiness Certificates

### Section 1. General

#### 4-1. Introduction.

a. This section provides common procedures for issuing a special airworthiness certificate. A special airworthiness certificate may be issued for:

- (1) Primary. A primary category aircraft under § [21.184](#).
- (2) Restricted. A restricted category aircraft under § [21.185](#).
- (3) Limited. A limited category aircraft under § [21.189](#).
- (4) Provisional. An aircraft that meets part 21, subpart C, Provisional Type Certificates, and subpart I, Provisional Airworthiness Certificates.
- (5) Light-Sport. A light-sport aircraft under § [21.190](#).
- (6) Experimental. An aircraft for an experimental purpose under § [21.191](#).
- (7) Special Flight Permits. An aircraft that does not currently meet applicable airworthiness requirements, but is capable of safe flight, and meets §§ [21.197](#) and [21.199](#).

b. Section 2 of this chapter provides common policies and procedures for issuing a special airworthiness certificate for experimental purposes.

c. Additional policies and procedures that are specific to certain aircraft categories, experimental purposes, and for SFPs are provided in subsequent chapters of this order.

d. The following special airworthiness certificates have similar provisions for crew training and for demonstration flights. Pay close attention to the scopes of these provisions to ensure you issue the appropriate certificate.

(1) Experimental certificate for crew training under § 21.191(c) is for training the applicant's flightcrews. This normally includes a manufacturer's employees who need to be trained in experimental aircraft but may also include a company/applicant that operates an experimental aircraft and needs to train its pilots/employees to obtain an appropriate type rating or authorization to serve as pilot in command (PIC) of the aircraft.

(2) Experimental certificate for market survey under § 21.191(f) is for purposes of conducting market surveys, sales demonstrations, and customer crew training only as provided for in § [21.195](#) for an aircraft manufacturer, an engine manufacturer, or a person who has altered the design of an aircraft type-certificated in the normal, utility, acrobatic, or transport category.

(3) An SFP under § 21.197(a)(5) is for aircraft manufacturers for conducting customer demonstration flights in new production aircraft that have satisfactorily completed production flight testing.

(4) An aircraft manufacturer, therefore, could conduct sales/customer demonstration flights as experimental for market survey or with an SFP under § 21.197(a)(5).

**4-2. Common Procedures for Issuing a Special Airworthiness Certificate.** Except for issuance of an SFP, follow the common procedures in paragraph 2-3 of this order for issuing an

airworthiness certificate and appendix D to this order for issuing operating limitations. This paragraph does not apply to issuance of an SFP.

**4-3. Flight Operations Outside the United States.** A special airworthiness certificate does not authorize flight operations over a foreign country without the permission of that country. However, the FAA still issues the certificate when the applicant intends to operate the aircraft over other countries as long as the applicant meets requirements for that certificate. A U.S. special airworthiness certificate is often helpful to a Civil Aviation Authority (CAA) when issuing its permission to operate the aircraft in or over its country. If the FAA knows the affected CAA will not permit operation of the aircraft in or over its country, the FAA cannot deny issuance of the certificate if the applicant has met requirements for that certificate. In any case, an ASI should make the [applicable CAA\(s\)](#) aware of the aircraft, its category or experimental purpose, and the operating limitations for the aircraft.

**4-4. Aircraft Equipped With Explosive Devices or Jettisonable Stores.** These types of systems are usually associated with former-military or certain restricted category aircraft.

**a. Maintenance of Jettisonable Stores.** Verify that applicant's inspection program includes maintenance and inspection of jettisonable external stores systems per the manufacturer's procedures.

**b. Ejection Seat Systems.** Verify the ejection seat system has been approved for use in the aircraft model by the aircraft manufacturer or by a military service using that aircraft model.

**c. Procedures for Securing Aircraft.** Verify the applicant has provisions and procedures for securing the aircraft whenever the aircraft is parked to prevent inadvertent operations of systems that use an explosive device.

**d. Airport Notification.** Verify that applicant has notified the manager of the airport where the aircraft is based concerning the presence of jettisonable stores, any explosive devices, and planned operations of the aircraft from that airport.

**e. Marks for Explosive Devices.** Verify the applicant clearly marked all explosive devices on the exterior of the aircraft. Marks must clearly indicate that the aircraft is equipped with explosive devices.

**f. Operations with Jettisonable Stores.** Except for certain restricted category aircraft, only aircraft with an experimental certificate for R&D may be operated with a jettisonable store for a test that requires jettisoning that store.

## **Section 2. Experimental Certificates**

**4-5. Introduction.** This section provides common policies and procedures for issuing special airworthiness certificates for experimental purposes.

**4-6. Common Procedures for Issuing an Experimental Certificate (§ [21.191](#)).** Follow the procedures for issuing an airworthiness certificate in section 1 of this chapter and the following:

**a. Review Application.** Review the program letter.

(1) Verify it meets § [21.193](#):

(a) Purpose. Verify the program letter clearly describes the purpose for which the aircraft will be used and the purpose of the experiment and that purpose is one listed in § 21.191. The use of the same aircraft for overlapping programs is acceptable, and the program letter can outline one or more programs. After showing compliance with § 91.319(b), the aircraft can be used to support other aircraft in the program or other experimental programs the applicant has underway, for example, to support flightcrew movements, to support R&D, to be used as a chase plane, or to carry spare engines. If applicable, verify such support activities are described in the program letter.

(b) Time. Verify the program letter contains the estimated number of flights or flight hours, and the period of calendar time required for the experiment.

(c) Area. Verify the program letter defines the specific area over which the aircraft will be operated, including routes to and from specified airports. A written description or annotated map is acceptable.

(d) Drawings or Photographs. Unless converted from a previously type-certificated aircraft without significant change in the external configuration, verify the program letter includes three-view drawings or three-view dimensioned photographs of the aircraft.

(2) Eligibility. Verify the program letter supports the requested experimental purpose and that purpose is one listed in § 21.191. For example, except as provided for under §§ 21.191(f) and 21.195, brokering or marketing of experimental aircraft is not a valid experimental purpose; this includes an individual who manufactures, imports, or assembles an aircraft, and then applies for an experimental airworthiness certificate to help sell the aircraft.

(3) Information for Operating Limitations. Verify the level of detail in the program letter is sufficient to enable the FAA to prescribe operating limitations.

(4) Multiple Purposes. If the applicant is seeking an experimental certificate for multiple purposes, verify the program letter clearly documents all of the items listed in paragraph 4-6.a(1) of this order separately for each purpose. In addition, verify the program letter describes any required configuration changes for changing purposes, to include adding or removing equipment and enabling or disabling systems; required configuration changes are typically specified via the modification or addition of operating limitations. Configuration changes may also require adjustments to the aircraft inspection program. Refer to paragraph 4-8 of this order for additional policies and procedures concerning multiple experimental purposes.

(5) Additional Guidance. Appendix C to this order contains additional information to help you evaluate whether a program letter is clear and specific enough to enable you to understand how the applicant will use the aircraft and to issue appropriate operating limitations.

**b. Inspect Aircraft.**

(1) Special Aircraft Marks. Inspect the aircraft to verify the aircraft is marked, "Experimental."

(2) Information to Safeguard the Public. Per § 21.193(c), after inspecting the aircraft, obtain any pertinent information from the applicant as necessary to safeguard the general public.

**c. Issue Airworthiness Certificate.**

(1) Flight Tests. For flight tests, refer to paragraph 4-7 of this order for additional policies and procedures concerning flight test areas.

(2) Reserved.

#### **4-7. Flight Test Areas.**

##### **a. Assigned Flight Test Area.**

(1) Section 91.319(b) requires that an unproven experimental aircraft be assigned to a flight test area until it is shown that the aircraft is controllable throughout its normal range of speeds, is controllable throughout all maneuvers to be executed, and has no hazardous operating characteristics or design features. Per § 91.305, verify the assigned test area includes areas over open water or sparsely populated areas and with light air traffic. Evaluate each application to determine that the flight test area and airports are sufficient to accomplish the program. In some cases, assigning multiple flight test areas and airports may be required to accommodate various aircraft configurations, types of operations, airport facilities, or safety hazards.

(2) It is recommended that you coordinate the applicant's proposed flight test area with an operations ASI. In addition, consider coordinating with the applicable Air Traffic Control (ATC) facilities. The General Aviation Operations Branch (AFS-830) is available to assist in resolving any issues in assigning flight test areas.

##### **b. Airport Surrounded by Densely Populated Area.**

(1) Coordination of Approach/Departure Routes. Before issuing operating limitations for the aircraft, coordinate approach and departure routes with the FSDO operations unit and the ATC facility that has the geographic responsibility for the applicable airport(s) and flight test area(s).

(2) Acceptable Approach/Departure Route. In the case of the first flight of an aircraft from an airport surrounded by a densely populated area, but with at least one acceptable approach/departure route, ensure a route is selected which subjects the fewest number of persons and the least property to possible hazards. In addition, upon leaving such an airport, the aircraft must be required to operate from an outlying airport until its controllability and safety are established, after which the aircraft may return to its base and use the established route for subsequent flight operations. The description of the area selected by the applicant and agreed to by the FAA must be included in the operating limitations.

**Note:** An acceptable approach/departure route provides a reasonable opportunity to execute an off-airport emergency landing that will not jeopardize other persons or property.

(3) No Acceptable Approach/Departure Route. In the case of an aircraft located at an airport surrounded by a densely populated area with no acceptable approach/departure route, you may issue the airworthiness certificate that includes an operating limitation that prohibits operations at that airport. Advise the applicant to relocate the aircraft to an airport suitable for flight testing.

##### **c. Aerobatics.**

(1) Aerobic maneuvers may be permitted while the aircraft is in the assigned flight test area if the aircraft has the capability of such flight. However, these maneuvers should not be

attempted until sufficient flight experience has been gained to establish that the aircraft is controllable.

(2) Aerobatic maneuvers that have been demonstrated in the assigned flight test area should be documented in the aircraft records. Only those aerobatic maneuvers that have been successfully accomplished should be permitted after leaving the assigned flight test area.

**d. Duration of Assignment to the Flight Test Area.**

(1) Duration. Except for amateur-built aircraft and experimental light-sport aircraft (ELSA), there are no specific flight time requirements or guidelines for operation within an assigned flight test area. Judge each case based on the type, complexity, and condition of the aircraft and the complexity of the test. For example, flight testing in conjunction with a minor STC alteration may require only one hour in an assigned flight test area while the initial operation of a prototype jet aircraft or a former-military aircraft may require much more time. In some cases, it may be appropriate to specify the duration as completion of the flight test program, not a fixed flight time.

(2) Finding Compliance. You may amend the operating limitations to permit flight outside of the assigned flight test area after the applicant shows and you find compliance with § 91.319(b). Your finding may be based on a statement by the pilot in the aircraft maintenance records that the aircraft is controllable throughout its normal range of speeds and throughout all of the maneuvers to be executed and has no hazardous operating characteristics or design features. You may also witness flights or inspect the aircraft if deemed necessary. You may also find compliance based on the FAA-approved procedures of a PC holder or modifier as discussed in paragraph 4-94-9 of this order. Note that an application is required to amend the airworthiness certificate/operating limitations.

**e. Phased Operating Limitations.** Phased operating limitations are allowed for exhibition, air racing, operating amateur-built aircraft, or operating light-sport aircraft under § 21.191.

(1) Phase I means the initial flight testing period for a newly assembled aircraft, not a newly manufactured or newly built aircraft. Newly manufactured or newly built aircraft must complete initial flight testing comparable to experimental amateur-built aircraft.

(2) Phase II means a period in which an aircraft has completed phase I testing and has not been altered from the tested configuration or flown outside the flight tested envelope.

**f. Operating Outside Flight Test Areas.** After complying with § 91.319(b), aircraft may be operated outside of an assigned flight test area. Except as provided for in paragraphs 4-9 and D-3 of appendix D to this order, operation of the aircraft outside an assigned flight test area will require issuance of an amended experimental airworthiness certificate with amended operating limitations.

**4-8. Multipurpose Experimental Airworthiness Certificates.** An experimental airworthiness certificate may be issued for more than one of the purposes under § 21.191. When more than one purpose is requested, verify the operator has adequate procedures for ensuring airworthiness when changing purpose. The issuance of multiple purpose certificates for R&D and showing compliance should be limited to PC holders; this may be extended to modifiers (§ 21.195(c)) when justified. PC holders or modifiers may submit a procedure that meets the requirements of paragraph 4-94-9 of this order to their geographic responsible FAA office for approval.

**Note:** Issuing multiple certificates for a restricted category aircraft under § 21.187 is different than issuing an experimental certificate with multiple purposes or issuing multiple experimental certificates for multiple purposes. Issuance of multiple certificates for restricted category aircraft is covered by chapter 7 of this order.

**a. Options.** Use your discretion in determining the best option for the desired use. Options include issuing multiple certificates, issuing a multipurpose certificate, or not allowing the aircraft to be used for more than one purpose.

**b. Configuration Changes.** Consider how the aircraft configuration may change and how the operation of the aircraft may change from one purpose to another. This information should be included in the program letter because it may impact the operating limitations issued to the applicant, and/or additional inspections may be required when changing purposes.

**Example 1:** The holder of an experimental exhibition certificate seeks an experimental R&D certificate for flying as a chase aircraft in support of an R&D project. No alterations to the aircraft are necessary. An R&D certificate could be issued for the duration of the R&D project, and the applicant could be allowed to hold both certificates. When the R&D project is completed, no further action is required because the applicant still holds the exhibition certificate.

**Example 2:** The holder of an experimental exhibition certificate seeks an experimental R&D certificate to test new sensor technology. The operator will need to appreciably modify the aircraft. The aircraft should only hold the R&D certificate.

**Example 3:** An applicant for an experimental certificate for operating an amateur-built aircraft mentions they intend to race the aircraft. A single certificate with both purposes listed may be appropriate in this situation.

**Note:** Configuration changes and operational differences should also be considered if the applicant intends to conduct public or military aircraft operations while holding the experimental certificate.

**4-9. PC Holder's or Modifier's Procedure for Operating Experimental Aircraft.** A PC holder or aircraft modifier who applies regularly for special airworthiness certificates to conduct flight tests following the same procedures may submit its procedures to its geographic responsible FAA office for approval. Having an approved procedure benefits the applicant and the FAA with increased standardization, simpler program letters, reduced duplication of coordination among FAA offices, and more timely issuance of airworthiness certificates. After approval, the procedure may be listed in the operating limitations as indicated in appendix D to this order. The FAA may exclude certain aircraft from the privileges of either all or part of this procedure such as the first aircraft of a new model or a non-production R&D aircraft. The procedure should include the following elements:

**a. Flight Test Area.** A description of the flight test area that meets paragraph 4-7 of this order.

**b. Flight Log.** A daily flight log that records completion of pre-flight inspections and compliance with § 91.319(b) for the duration of the certificate.

**c. Flights Outside the Test Area.** A description of the method used to conduct and record necessary flights outside the test area, and for maintaining these records. This procedure will remain active for the duration of the certificate, and will eliminate the need for the PC holder to obtain approval for each flight.

**d. Carriage of Persons.** A description of the method used to define the persons who may be carried during these flight operations that includes:

(1) A requirement that the PIC advise each passenger of the experimental nature of the aircraft, per § 91.319(d).

(2) A method of recording persons carried on each flight for the duration of the certificate.

(3) A provision that no persons may be carried in the aircraft during flight unless that person is required for the purpose of the flight. Persons other than flightcrew members may be carried when all of the following conditions are met:

(a) The aircraft is of the same basic model that previously has shown compliance with §§ 91.319(b) and 21.195.

(b) Flight tests do not include intentional maneuvers involving abrupt changes in the aircraft's attitude, abnormal attitudes, or abnormal acceleration/deceleration not necessary for normal flight.

(c) The procedures specifically cover the types of flying to be permitted while carrying passengers other than flightcrew members.

**e. Multiple Experimental Purposes.** A description of the method used to determine an aircraft is in a condition appropriate for the purpose intended when changing from one experimental purpose to another, including documenting the results of this determination in a maintenance record or daily flight sheet.

**f. Carrying the Approved Procedure.** A requirement that a copy of the procedures approved under paragraph 4-9 of this order be carried in the aircraft while operating under the privileges of this procedure. A copy of this procedure may also be included or directly referenced in the PC holder's quality manual for the convenience of the manufacturer and the FAA.

**g. Other.** Any other procedures you deem necessary in the interest of safety.

**Note:** Approval of this procedure may require the coordination of different offices within the FAA (such as MIDOs, FSDOs, the Air Traffic Organization (ATO), the Aircraft Evaluation Group (AEG)), and outside the agency. This could include airport first responders such as fire departments and security.

**4-10. Inspection Programs for Certain Experimental Aircraft.** This paragraph applies to experimental aircraft that are turbine-powered or weigh over 12,500 pounds. Advise the applicant to consider FAA AC 43-209, *Recommended Inspection Procedures for Former Military Aircraft*, in developing its inspection program.

**Note:** This paragraph is being relocated to FAA Order 8900.1. Once relocation is complete, refer to FAA Order 8900.1.

**a. Definitions.** The following definitions are terms that may be used in the development of inspection programs for these aircraft.

(1) **Overhaul.** Methods, techniques, or practices for disassembling, cleaning, inspecting, repairing as necessary, reassembling, and testing in accordance with approved standards and technical data acceptable to the Administrator. Overhaul should not be confused with life limit.

(2) **Life Limit.** The finite/retirement time assigned to a component that requires the removal of that component from service.

(3) **Shelf Life.** A recommended time determined by the manufacturer for removal of a component from service.

**b. Inspection Program Submittal Requirements.** The applicant should submit the following material for review:

(1) **Proposed Inspection Program.** The submitted program for an aircraft may be a current manufacturer's program, a current military program (preferably North Atlantic Treaty Organization (NATO)), an owner/operator-developed program, or based on a program previously approved for the same make/model. Prior FAA approval of an inspection program does not guarantee an automatic approval for a similar make/model because inspection programs are aircraft-specific and will be identified by the aircraft S/N. Inspection programs are subject to amendment whenever significant changes in operating environment and/or equipment occur.

(2) **Operable Ejection Seats.** The inspection program for operable ejection seats will be based on a current manufacturer's or current military program, and will include replacement intervals for shelf-life components such as pyrotechnic cartridges. Shelf-life intervals cannot be extended without the manufacturer's approval.

(3) **Required Manufacturer/Military Manuals.** If the manuals were not originally published in English, the applicant will submit an English translation of the original manuals. It is to the applicant's benefit to ensure the translation is performed by a technically competent individual familiar with aviation terms and practices.

(4) **Substituting Materials or Replacement Parts.** Changes involving the substitution of materials or replacement parts should be in accordance with FAA-accepted procedures or a recognized industry standard, or based on dimensions and technical data provided by the manufacturer or information provided by an appropriate engineering evaluation. Life-limited articles specified in the applicable technical publications pertaining to the aircraft and its articles are complied with in one of the following manners:

(a) **Type-Certificated Products.** Replacement of life-limited parts required by § 91.409(e) is only applicable to experimental aircraft when the required replacement times are specified in the U.S. aircraft specifications or TCDS.

(b) **Non-Type-Certificated Products.** Unless otherwise determined by the FAA, all articles installed in non-type-certificated products operated in the experimental category, in which the manufacturer has specified limits, must include in their program an equivalent level of safety for those articles. Although the FAA recommends adherence to part replacements, achieving an equivalent level of safety for non-type-certificated products is acceptable. The



article must be inspected to ensure the equivalent level of safety still renders the product in a serviceable condition for safe operation.

(5) Extension of Component Life Limits.

(a) The applicant may submit data (review by an FAA designated engineering representative (DER) is encouraged), with a request to the FSDO, to extend the life limit on specific components of the aircraft beyond the manufacturer, military, and/or technical order recommended life limits. At a minimum, the data submitted by the applicant should contain:

- 1 The original strength, stress, and fatigue data for the aircraft and the pertinent parts, including other parts that may be affected by changes of the life limits and inspection intervals;
- 2 The methodology the designers used while developing the life limits and inspection intervals;
- 3 The operational history of the aircraft and parts (usage affects life limits and inspection intervals);
- 4 The service history of the aircraft and pertinent parts, including any repairs and modifications affecting the strength, stress, and fatigue characteristics of the parts and their effects on the parts' life limits and inspection intervals;
- 5 How the present operational usage differs from prior military usage;
- 6 Evidence that the applicant's inspection/testing techniques, for example, nondestructive inspection/nondestructive testing, are comparable to those used by the military;
- 7 Evidence that the methodology chosen by the owner (for example, damage tolerance with inspections versus safe-life with automatic removal) produces at least as safe a product as the military's approach.
- 8 A procedure to inspect the component to some appropriate physical standard, and non-destructive testing, where applicable.

(b) In cases where the data listed above is unavailable or cannot be substantiated, the components will not be eligible for any extension of life limits.

(6) Extension of Component Recommended Overhaul Times. The owner/operator may elect to continue in service any component that has reached its recommended overhaul time if an approved inspection is implemented that includes a procedure to inspect the component to an appropriate physical standard with a definitive time period for review. Testing to the standard may be accomplished in place where practicable. This inspection procedure will be submitted to the local FSDO to be included in the FAA-approved inspection program.

**c. Inspection Program Content.**

(1) The owner/operator-developed inspection program presented for FAA approval should reference specific details from the appropriate military/manufacturer's manuals while encompassing the scope and detail of part 43, appendix D, as appropriate.

(2) As an alternative, a military/manufacturer's inspection program may be adopted and presented for FAA approval. Specific irrelevant sections may be deleted for aircraft systems

that have been removed or deactivated. However, all inspection programs will provide for a complete inspection of the aircraft within the preceding 12 calendar months.

(3) The following items should be a part of an approved inspection program:

(a) Title page that includes the aircraft manufacturer's name and the aircraft model, serial number, and registration number to which the inspection program applies; and the owner/operator's name and address.

(b) Table of contents.

(c) Log of revisions.

(d) Method of revision.

(e) List of effective pages.

(f) Introduction that includes the following:

1 A description of the inspection program with references to sections and supporting documents. These references may include standards of performance, procedures, methods, instructions, or other technical data. If section references are not specified by title, page, and revision, the referenced documents in their entirety become a part of the inspection program.

2 A statement that this inspection will be performed to ensure the aircraft is in a condition for safe operation and the inspection is performed in accordance with the procedures of the program.

3 Identification of the individual responsible for scheduling and performing the inspections, including their name and address.

4 A listing of the specific maintenance/inspection manuals for the make and model of the aircraft being certificated.

(g) Program-unique definitions and/or acronyms.

(h) A replacement schedule of life-limited/retirement items, if applicable.

(i) Procedures to ensure inspection records are kept and include:

1 Date of inspection,

2 Name and certificate number of the person performing the inspection,

3 Type of inspection, and

4 Total time of the component being inspected expressed in cycles, calendar time, hours, or any combination of these.

(j) Instructions and procedures for the conduct of inspections for the particular make and model of aircraft, including necessary tests and checks. The instructions and procedures must set forth in detail the parts and areas of the airframe, engines, propellers, and appliances required to be inspected, including survival and emergency equipment.

(k) A schedule for performing the required inspections under the program as expressed in terms of time-in-service, calendar time, number of system operations, or any combination of these. It should also include low-utilization inspections.

(l) Additional procedures, including—

- 1 Special inspections such as short-and long-term storage/out-of-service inspections, hard landing inspections, and structural inspections;
- 2 Compliance with service letters, service bulletins, time compliance technical orders, and ADs, as well as the method to ensure compliance;
- 3 Corrosion inspections; and
- 4 Any other inspection that may be required due to unusual environmental operations or aircraft design, such as composite construction.

**d. Inspection Program Approval.** Approval of the inspection program is granted by a stamp of approval and the principal maintenance inspector/principal avionics inspector signature on the list of effective pages (LEP), or by some other official means of conveying approval.

**e. Maintenance Requirements.** The owner/operator of the aircraft will have the inspections performed as prescribed in the approved program and will, between inspections, have discrepancies repaired per the appropriate manufacturer/military manuals, instructions, and technical orders.

**f. Maintenance Records.** The owner/operator shall keep the records required under § 91.417 as applicable to the aircraft.

#### **4-11. Former-Military Aircraft Operated for Experimental Purposes.**

**a. Advising the Applicant.** Advise the applicant to review AC 21-54, *Experimental Airworthiness Certification of Certain Former-Military Aircraft*.

**b. Eligibility.**

- (1) If a TC has not been issued for the aircraft, it may be eligible for a special airworthiness certificate for the experimental purpose of R&D, crew training, exhibition, or air racing.
- (2) Some aircraft may have high risk factors that may be impractical to mitigate and, consequently, may not be eligible for an airworthiness certificate.

**c. Identify Potential Safety Hazards.** Given the variety of aircraft types, models, alterations, operational histories, and airworthiness ramifications of possible long-term storage, becoming familiar with former-military aircraft is especially important. Additional considerations for becoming familiar with the aircraft and with potential safety hazards include:

- (1) Identify the aircraft model and/or series, as well as the type of engine(s), propellers, and other systems installed, as applicable. Obtain as much historical information as possible to include S/Ns, overhaul dates, airframe cycles, and engine time and cycles.
- (2) Review accident and incident data for the aircraft model. Data can be retrieved from the NTSB [database of accidents and incidents](#), the FAA, and other international and military sources.
- (3) Review available aircraft type club information.

(4) Review the ownership history of the aircraft. This may provide information on how the aircraft was previously operated and maintained, which may have implications for the airworthiness inspection.

(5) Become familiar with the scope of any restoration, repairs, and maintenance conducted by or for the applicant. It is also helpful to become familiar with the general condition of working/storage areas, availability of spare parts, and equipment before conducting the formal records inspection.

(6) Ensure the operator has a complete set of the applicable military flight, inspection, and maintenance manuals for the aircraft and inspection and maintenance manuals for the engine.

(7) Ensure the operator has applicable military technical orders to address known issues related to airworthiness, maintenance, and servicing.

(8) Identify any high-risk factors associated with the design, manufacture, maintenance, and operation of the aircraft. Verify the applicant adequately mitigates any high-risk factors.

**d. Import Documentation for Imported, Former-Military Aircraft.**

(1) Records for imported, former-military aircraft that may have weapons installed should include the following documents issued by the Department of Justice, Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF):

(a) ATF Form 6, *Application and Permit for Importation of Firearms, Ammunition, and Implements of War*.

(b) ATF Form 6A, *Release and Receipt of Imported Firearms, Ammunition, and Implements of War*.

**Note:** For any questions regarding ATF Forms 6 or 6A, contact the ATF Firearms and Explosives Imports Branch.

(2) A product that was declared as parts, scrap, or for museum display on any documentation related to importing that product is not eligible for an airworthiness certificate. This includes documents issued by or for ATF, Customs and Border Protection, or the Department of State.

**e. Demilitarization of Former-Military Aircraft.**

(1) Removing or Disabling Systems. The FAA may require that some systems be removed or disabled to establish a condition for safe operation for the intended use. For example, safe operation of guns, cannons, targeting radars, electronic jammers, jettisonable stores (including external store pylons and external fuel tanks), or explosive devices may not be feasible under or consistent with the intended experimental purpose. Potential safety hazards related to these systems include accidental firing of guns, accidental release of stores, accidental operation of radars on the ground, compartment fires, and damage to the airframe. These hazards may pose risks to other aircraft and to persons and property on the ground and may not be able to be adequately mitigated via operating limitations. Although some of these systems may be required to support a valid R&D purpose, the applicant and the FAA need to understand

the corresponding safety risks and work closely together to determine the feasibility of mitigating these risks via operating limitations.

(2) **Additional Information on Weapons.** For additional information on aircraft weapons systems, refer to aircraft maintenance manuals and the related weapons delivery manual. Some aircraft manufacturers may offer guidance on aircraft demilitarization. Consider [U.S. Air Force Technical Order 00-80G-1](#), *Make Safe Procedures for Public Static Display*.

**f. Ejection Seats.**

(1) An inspection program for operable ejection seats will be based on a current manufacturer's or current military program, and will include replacement intervals for life-limited or shelf-life-limited components such as pyrotechnic cartridges. These limits cannot be extended without the manufacturer's approval.

(2) The PIC and flightcrew operating aircraft equipped with operational ejection seat(s), whether armed or not armed, must have satisfactorily completed an ejection seat training program per AC 91-87, *Ejection Seat Training Programs*, within the past 24 calendar months prior to operation for this make and model of aircraft. Passengers of these aircraft must have a safety brief prior to flight per AC 91-87.

(3) The PIC and flightcrew operating aircraft that were previously issued an operating limitation that required FAA acceptance or approval of an ejection seat training program, meet that operating limitation if they successfully complete training using an ejection seat training program per the AC 91-87 for the applicable aircraft make/model.

(4) For questions concerning specific aircraft and ejection seat training, contact the local FSDO or AFS-830.

**g. Drag Chutes.** As applicable, verify the drag chute installation records reflect installation per applicable military installation requirements.

**4-12. Flight Operations in Reduced Vertical Separation Minimum (RVSM) Airspace.**

Experimental aircraft that do not meet the requirements of § [91.180\(a\)](#) may be allowed to operate in RVSM airspace in certain circumstances as described in § 91.180; part 91, appendix G; and the [Aeronautical Information Manual](#). In addition, at the time of the flight, ATC must find the aircraft can be provided appropriate separation and that the flight will not interfere with, or impose a burden on, other approved RVSM operations.

**a.** Flights for aircraft certification and development purposes may be allowed in RVSM airspace. These flights are typically limited to gathering data to show that the aircraft can meet the minimum standards for the operation in RVSM airspace specified in part 91, appendix G.

**b.** Aircraft climbing or descending through RVSM flight levels without intermediate level off, to or from flight levels above RVSM airspace, may be accommodated. Obtain data from the operator showing that the aircraft can complete a non-stop climb to flight level 430.

**4-13. Pioneer Era Aircraft.** Replica, reproduction, restored, and similar aircraft based on aircraft from before the year 1914, require special consideration. Many of these aircraft have limited maneuverability and are only capable of flying for very short distances. An application for an airworthiness certificate for these aircraft should be coordinated with the Airworthiness Certification Section (AIR-113) or the General Aviation and Commercial Division (AFS-800) to ensure the operating limitations are appropriate for the intended operations.

## Chapter 5. Primary Category (§ 21.184)

**5-1. Introduction.** This chapter provides policies and procedures for issuing a special airworthiness certificate for a primary category aircraft under § [21.184](#).

**5-2. General Requirements.** Follow the procedures in chapter 4, section 1 of this order and the following:

**a. Review Aircraft Records.** Verify that any special inspection and preventive maintenance program for the applicable aircraft make and model was accepted by the FAA as follows:

(1) For airplanes, acceptance by the Kansas City AEG (MKC-AEG) with engineering input by the ACO where TC application was made.

(2) For rotorcraft, acceptance by the Fort Worth AEG (FTW-AEG) with engineering input by the ACO where TC application was made.

**b. Issue Airworthiness Certificate.** Advise the applicant that only a properly qualified pilot/owner may perform preventive maintenance under the special inspection and preventive maintenance program. To be properly qualified, a pilot/owner must successfully complete an FAA-approved course given by an approved aviation maintenance technician school, the holder of the PC for the pilot/owner's aircraft, or another entity approved by the FAA.

**5-3. New Aircraft Manufactured Under a PC (§ 21.184(a)).** Follow the procedures in paragraphs 3-3 and 5-2 of this order.

**5-4. New Imported Aircraft (§ 21.184(b)).** Follow the procedures in paragraph 5-2 and chapter 20 of this order.

**5-5. Aircraft Having a Current Standard Airworthiness Certificate (§ 21.184(c)).** As provided for under § 21.184(c), an applicant may exchange a current standard airworthiness certificate for a special airworthiness certificate in the primary category if the aircraft meets § 21.24(a)(1). Note that conversion from standard to primary categories allows an owner/pilot to perform preventive maintenance. The conversion will be made via STC. To issue a special airworthiness certificate under § 21.184(c), follow the procedures in paragraph 5-2 of this order and the following:

**a. Issue Airworthiness Certificate.**

(1) Obtain the standard airworthiness certificate from the applicant.

(2) Advise the applicant that its aircraft cannot be returned to a standard airworthiness certificate without showing that it meets all of the requirements for a standard airworthiness certificate as prescribed by the regulations. Such a showing historically has been difficult when an aircraft has remained in a different classification or category for a lengthy period. To facilitate the return to a standard airworthiness certificate, the aircraft records should indicate, among other requirements, that the aircraft has been maintained according to the manufacturer's instructions, and that any alterations to the aircraft either were removed or approved by the FAA.

**b. Reserved.**

**5-6. Other Aircraft (§ 21.184(d)).** For an application for a special airworthiness certificate in the primary category for an aircraft that meets the criteria of 14 CFR 21.24(a)(1) and is not covered by paragraphs 5-3, 5-4, or 5-5 of this order, follow the procedures of paragraph 5-2 of this order and the following:

**a. Review Aircraft Records.** Review applicable records to verify:

(1) The aircraft conforms to an approved primary, normal, utility, or acrobatic type certificate, including compliance with all applicable ADs.

(2) The aircraft has been inspected and found airworthy within the past 12 calendar months per § 91.409(a)(1).

**b. Reserved.**

## Chapter 6. Restricted Category (§ 21.185)

**6-1. Introduction.** This chapter provides policies and procedures for issuing a special airworthiness certificate for a restricted category aircraft under § [21.185](#).

**6-2. Common Requirements.** Follow the procedures in chapter 4, section 1 of this order and the following:

**a. Review Application.**

(1) Verify the restricted category operation is indicated in section II, block B.3 of the application. If “other” is selected in this block, verify the other operation specified is one of the following that has been approved under § 21.25(b)(7):

- (a) Rotorcraft external load operations.
- (b) Carriage of cargo—incidental to the operator’s business.
- (c) Target towing.
- (d) Search and rescue for non-transport purposes only.
- (e) Space vehicle launch.
- (f) Glider towing—civil derived aircraft only.
- (g) Fuel hauling within the State of Alaska.
- (h) Alaskan fixed wing external loads.

(2) If an applicant wishes to obtain approval for a new special purpose operation not previously approved under § 21.25(b)(7), advise the applicant to submit a letter with its request and supporting justification to the Design, Manufacturing, and Airworthiness Division (AIR-100), Attention: AIR-111. If accepted, AIR-111 will provide public notice with request for comment in the [Federal Register](#) on the new proposed special purpose operation and will consider all comments before making a final decision.

(3) Verify the aircraft is type-certificated in the restricted category under § 21.25, CAR 8, or § 21.29 or previously type-certificated in another category and modified for a special purpose.

(a) In the case of an aircraft previously type-certificated in another category and modified for a restricted special purpose operation under § 21.25 or CAR 8, the previously approved TC and the STC or approved data can be considered as the equivalent of a restricted TC. The TC and STC or approved design data should define the design parameters that make up the restricted category TCDS.

(b) Non-U.S.-manufactured aircraft type-certificated in any other category under § 21.29 are not eligible for certification in the restricted category unless the aircraft was issued a new or amended TC under § 21.29 or an STC under § 21.25, and subsequently was modified per the TC or STC. In this instance, § 21.185(b) is the basis for issuing the restricted airworthiness certificate.

(4) Verify the special purpose operation(s) indicated on the application is listed in the TCDS certification basis or approved by an installed STC.



**b. Review Aircraft Records.** Per § 21.185(d), review records to verify compliance with the applicable noise requirements of part 36.

**c. Inspect Aircraft.** Verify the word, “restricted,” is displayed on the aircraft. Refer to §§ [45.22](#), [45.23](#).

**6-3. New Aircraft Manufactured as Restricted Category (§ 21.185(a)).**

**a. Under a PC.** Follow the procedures in paragraphs 3-3 and 6-2 of this order.

**b. Under a TC.** Follow the procedures in paragraphs 3-4 and 6-2 of this order.

**6-4. Surplus Military Aircraft of a U.S. Armed Force (§ 21.185(b)).** Follow the procedures in paragraph 6-2 of this order.

**6-5. Aircraft Previously TC'd in Another Category (§ 21.185(b)).** For modified aircraft that were either surplus military aircraft of a U.S. Armed Force or previously type-certificated in another category and modified for a restricted special purpose operation under § 21.25 or CAR 8, the previously approved TC and the STC or approved data can be considered as the equivalent of a restricted TC. The TC and STC or approved design data should define the design parameters that make up the restricted category TCDS. Follow the procedures in paragraph 6-2 of this order, and verify the following:

**a.** The alteration conforms to the FAA-approved data forming the basis for the restricted TC.

**b.** The aircraft is in a good state of preservation and repair and is in a condition for safe operation.

**6-6. Recurrent Certificates for Restricted Category Aircraft (§ 21.185(b)).** Follow the procedures in paragraph 6-2 of this order.

**6-7. Import Aircraft (§ 21.185(c)).** Follow the procedures in paragraph 6-2 and Chapter 20. of this order.

## Chapter 7. Multiple Certificates for Restricted Category Aircraft (§ 21.187)

**7-1. Introduction.** This chapter provides policies and procedures for issuing multiple airworthiness certificates for a restricted category aircraft under § [21.187](#).

**Note:** Issuing multiple certificates for a restricted category aircraft under § 21.187 is different than issuing an experimental certificate with multiple purposes or issuing multiple experimental certificates for multiple purposes. Issuance of multiple certificates and a multi-purpose certificate for experimental aircraft is covered by paragraph 4-8 of this order.

**7-2. Procedures for Issuing Multiple Airworthiness Certificates for an Aircraft.** The procedures for issuing multiple airworthiness certificates is a combination of the procedures covering standard (chapter 3 of this order) and restricted (chapter 6 of this order) airworthiness certificates, or limited (chapter 8 Chapter 8. of this order) and restricted airworthiness certificates and the following:

**a. Review Application.** Verify the aircraft is eligible—

(1) For multiple certificates for the requested aircraft categories. An aircraft in the restricted category may be eligible for multiple airworthiness certificates if it can be converted to the normal, utility, acrobatic, transport, or limited category by removing or adding equipment by simple mechanical means. This provision does not extend to either of the following:

- (a) An aircraft in the primary category as prohibited by § 21.187(a); and
- (b) Commuter category airplanes because § 23.3(e) prohibits a commuter category airplane from being type-certificated in more than one category.

(2) By S/N for both categories according to the applicable TCDSs or STC.

**b. Review Aircraft Records.** Determine if operations in the restricted category would exceed operating limitations of the other aircraft category. If so, the aircraft may not be eligible for a multiple airworthiness certificate. Any operations outside of the other category operating limitations while operating in the restricted category, unless approved for that aircraft, may make it impossible to return the aircraft to the other category unless a complete engineering evaluation is made. Therefore, to retain eligibility for return to the other category after being operated in the restricted category, the following applies:

(1) While being operated in the restricted category, any changes made to the aircraft that are to be retained when returning to the other category, or any operations that are outside of the operating limitations of the other category, must be approved per the regulations and procedures applicable to the other category.

(2) If the maximum gross weight and/or operating limitations for the restricted category is/are higher than that for the other category, the aircraft is not eligible for operation in the other category after having been operated in the restricted category unless—

(a) The TCDS specifically states that the aircraft is eligible for operation in the other category after having been operated at the limitations applicable to the restricted category; or

(b) If the TCDS does not have such a note or any other reference, the operations outside of the other category operating limitations including increased gross weights must be FAA-approved.

**c. Inspect Aircraft.**

(1) Witness the applicant's method of compliance with §§ 21.187(a)(1) and 21.187(a)(2), and determine if the instructions for converting the aircraft from one category to the other are adequate.

(2) Reserved.

**d. Issue Airworthiness Certificates.** If the application is for restricted and limited categories, issue FAA Form 8130-7 with appropriate operating limitations for each category. If the application is for the restricted category and a category in the standard classification, issue FAA Form 8100-2 for the standard classification and FAA Form 8130-7 with appropriate conditions and operating limitations for the restricted category.

(1) If one of the multiple certificates is a standard airworthiness certificate, and the aircraft will be used for the carriage of passengers for compensation or hire in the standard configuration, the FAA must evaluate the restricted special purpose operation to find whether the airworthiness inspection prescribed in § 21.187(b) will be required each time the aircraft is converted from a restricted airworthiness certificate to a standard airworthiness certificate. Normally, if the special purpose operation involves carriage of maximum loads or if the aircraft is subject to contamination by pesticides or herbicides, the airworthiness inspection must be required and an operating limitation to this effect should be prescribed.

(2) If the FAA finds the airworthiness inspection by the FAA or an appropriately certificated mechanic is necessary because of the nature of the special purpose, the operating limitations should so specify.

## Chapter 8. Limited Category (§ 21.189)

**8-1. Introduction.** This chapter provides policies and procedures for issuing a special airworthiness certificate for an aircraft in the limited category under § [21.189](#).

**8-2. Procedures for Issuing an Airworthiness Certificate.** Follow the procedures in chapter 4, section 1 of this order and the following:

### a. Review Aircraft Records.

(1) Review the TCDS, aircraft specifications, and/or applicable aircraft listing to verify the aircraft is eligible for issuance of a special airworthiness certificate in the limited category. Refer to table 8-1 of this chapter for aircraft makes and models with TCs in the limited category. If you are unsure whether an aircraft is eligible according to its TCDS, contact the responsible office listed in RGL for that TCDS.

(2) Review the aircraft maintenance records to verify the applicant met the § 21.189(a)(2) requirement for flight testing the aircraft. Verify these records include the findings of the flight test and were signed by the pilot who conducted the flight test.

(3) Review available documents, such as military technical orders and inspection records to help you assess the airworthiness of the aircraft.

(4) Look for evidence of long-term storage and inactivity which may impact the scope of your aircraft inspection.

### b. Inspect Aircraft.

(1) Inspect the aircraft to verify the aircraft is marked, "LIMITED." Refer to §§ [45.22](#), [45.23](#).

(2) Because surplus military aircraft may have deteriorated due to prolonged storage, prolonged inactivity, or age, the FAA must ensure the aircraft is subjected to a thorough inspection to determine its state of preservation and repair and ensure it is in a condition for safe operation. The inspection may require removing rivets and cutting openings to check the condition of faying surfaces and closed areas. If this is the case, the applicant should be advised that the inspection would be expedited if an airworthiness inspection is performed by an appropriately rated repair station or mechanic, per the requirements of part 43.

**Table 8-1. Limited Category TCs**

Original Manufacturer	TC Holder	Model	Limited Spec No.	RGL Listing
Boeing	Transcontinental and Western	B-17F and B-17G	AL-1	LTC-1
North American	S and R	B-25, B-25C, B-25G, B-25H, B-25J, and B-25N	AL-2	AL-2
Douglas	P.V. Shields	A-26B and A-26C	AL-3	TCS L-3
Douglas	Seaboard and Western	A-24 (Navy SBD-5)	AL-4	TCS L-4
Consolidated Vultee	R.M. Lewis	PB2Y-3, PB2Y-3R, PB2Y-5, PB2-5R, and PB2Y-5Z	AL-5	LTC-5
Consolidated Vultee	Consolidated Vultee	LB-30	AL-6	LTC-6
Sikorsky	Holmes	R-4B Helicopter	AL-7	LTC-7
Grumman	Air Trading Corp	TBF-1, TBF-1C, TBM-1, TBM-1C, TBM-3, and TBM-3E	AL-8	LTC-8
Douglas	Hughes	A-20B, A-20C, A-20G, A-20H, and A-20J	AL-9	TCL-9
Lockheed	Lockheed	P-38E, P-38J, P-38L, P-38M, F-5E, F-5F, and F-5G	AL-10	LTC-10
North American	Cal Pacific	P-51C, P-51D, and P-51K	AL-11	LTC-11
Beech	Cameron	AT-10, AT-10BH, AT-10GF, and AT-10GL	AL-12	LTC-12
Lockheed	Air Trading Corp	B-34, PV-1, and PV-2	AL-13	LTC AL-13
Northrup	Northrup	P-61, P-61A, and P-61B	AL-14	LTC-14
North American	Edmondson	A-36A	AL-15	LTC-15
Curtis	Holmberg	O-52	AL-16	LTC-16
Grumman	Utterback	J2F-3, J2F-4, J2F-5, and J2F-6	AL-17	LTC-17
Curtis-Wright	Prevost	P-40L and P-40N	AL-18	LTC-18
Sikorsky	Hel-i-cop Advertising	R-5A Helicopter	AL-19	LTC-19
Martin	Krogman	PBM-5	AL-20	LTC-20
Bell Aircraft	Bell Helicopter Textron	P-63C and P-63E	AL-21	LTC-21
North American	Mustang Aviation	BC-1	AL-22	LTC-22
Grumman	Grumman	F8F-1	AL-23	LTC-23
Chance-Vought	Chance-Vought	OS2N-1, OS2U-1, OS2U-2, and OS2U-3	AL-24	LTC-24
Grumman	Carlisle	FM-1	AL-25	LTC-25
Consolidated Vultee	Executive Airlines	L-1, L-1A, L-1B, L-1C, L-1D, L-1E, and L-1F	AL-26	LTC-26
North American	Wyatt	BT-9, BT-9A, BT-9B, and BT-9C	AL-27	LTC-27
Culver	Superior	PQ-14A, PQ-14B, YPG-14B, YPQ-14A, and Navy TD2C1	AL-28	LTC-28
Sikorsky	Stolp-Adams	R-6A and YR-6A, HOS-1 Helicopter	AL-29	LTC-29
Consolidated	Odom	C-87	AL-30	LTC-30
Curtis-Wright	Rehr	AT-9 and AT-9A	AL-31	LTC-31
North American	Franklin	BT-14	AL-32	LTC-32
Martin	Tennessee Gas Transmission Co.	B-26	AL-33	LTC-33

## Chapter 9. Light-Sport Aircraft (LSA) Category (§ 21.190)

### 9-1. Introduction.

**a. Scope.** This chapter provides policies and procedures for issuing special airworthiness certificates for aircraft—

- (1) that meet the definition of LSA in § [1.1](#);
- (2) in the light-sport category under § [21.190](#); and
- (3) that belong to one of the following five classes of LSA: airplanes, gliders, powered parachutes, weight-shift control (WSC) (commonly called trikes) aircraft, and lighter-than-air aircraft (balloons and airships).

**b. Gyroplanes.** Although gyroplanes meet the definition of “light-sport aircraft” in § 1.1, they are excluded from obtaining a special airworthiness certificate in the light-sport category per § 21.190(a). Gyroplanes may be eligible for airworthiness certification in other categories or purposes.

**c. LSA Assembled from Kit.** LSA assembled from kit are also excluded from obtaining a special airworthiness certificate in the LSA category, but may receive a special airworthiness certificate for the experimental purpose of operating LSA. Policies and procedures for issuing a special airworthiness certificate for the experimental purpose of operating LSA are included in chapter 17 of this order.

**d. Production Flight Testing.** Policies and procedures for issuing an SFP for production flight testing LSA are included in paragraph 18-6 of this order.

### 9-2. General.

**a. LSA Statement of Compliance (SOC).** To be eligible for a special airworthiness certificate in the light-sport category, § 21.190(b)(1)(iii) requires a manufacturer’s SOC. Section 21.190(c) specifies required elements of this SOC. A properly completed FAA Form 8130-15 meets this requirement for a manufacturer’s SOC.

#### **b. LSA Consensus Standards.**

(1) FAA Acceptance. To be eligible for an airworthiness certificate in the special LSA category, § 21.190 requires the applicant to present satisfactory evidence that the aircraft and manufacturer meet the applicable consensus standards. FAA acceptance of a consensus standard is published in the [Federal Register](#) via a notice of availability (NOA). For verification of FAA acceptance of LSA consensus standards, refer to the FAA-accepted standards matrix and NOA information on the [FAA webpage for LSA](#).

(2) Clarifications.

(a) The manufacturer of an LSA is not required to be a production approval holder (PAH).

(b) The manufacturer of LSA must use articles, components, and equipment that meet the applicable FAA-accepted consensus standards.

(c) LSA are not type-certificated, but may incorporate type-certificated components, equipment, and products. Type-certificated components, equipment, or products must comply with applicable ADs.

(d) The manufacturer that issues the SOC is responsible for the quality of the LSA end product. That responsibility extends to materials and parts supplied for the aircraft and assembly work performed by other persons, including dealers and distributors, when acting on behalf of a manufacturer. The manufacturer's quality system documentation must name those individuals authorized to work on the aircraft before an airworthiness certificate is issued and specify the conditions and process controls for that work.

**c. First Make or Model LSA.** Contact AIR-143 before issuing the first airworthiness certificate to any new make or model LSA. For powered parachutes and WSC aircraft, this includes a new combination of a wing and fuselage that has not been previously issued a special LSA airworthiness certificate. The FAA maintains a [Special LSA Make/Model Directory](#) for LSA that have already been issued a special LSA airworthiness certificate. A designee may not issue the first airworthiness certificate for a new make or model LSA.

**d. Changes With the Manufacturer.** Contact AIR-113 before issuing a special airworthiness certificate under § 21.190 in the case of actual or pending changes with the manufacturer, cessation of business, or change in ownership, name, or location.

**9-3. Procedures for Issuing an Airworthiness Certificate.** Follow chapter 2 and chapter 4, section 1 of this order and the following:

**a. Review Application.**

(1) FAA Form 8130-6. In reviewing the application for a LSA manufactured outside the United States, verify that box 11 is not checked or annotated with the origin of the aircraft. For the purpose of issuing a special airworthiness certificate, LSA manufactured outside the United States are not treated as imports but must be from a country having a bilateral agreement with the United States concerning airplanes.

(2) Manufacturer's SOC. Review the aircraft manufacturer's completed FAA Form 8130-15, *LSA SOC*, per section 5 of appendix A to this order for accuracy and completeness.

**b. Review Aircraft Records and Documents.**

(1) Per § 21.190(b)(2), verify that the aircraft described on the application has not been issued a standard, primary, restricted, limited, or provisional airworthiness certificate or an equivalent airworthiness certificate by another CAA.

(2) Verify all documentation is in the English language.

(3) Maintenance and Inspection Procedures.

(a) Verify that a written maintenance manual is with the aircraft and applies to its make, model, and S/N.

(b) Verify that any documents referred to by the aircraft maintenance manual are with the aircraft.

(c) When maintenance or inspections were conducted before issuance of the special airworthiness certificate, verify the person who performed those tasks was authorized to do so via the aircraft manufacturer's quality assurance manual.

(4) Continued Airworthiness Reporting System.

(a) Verify the Aircraft Operating Instructions (AOI) and/or the maintenance and inspection procedures/manual include(s) a continued airworthiness reporting system per § 21.190(c)(5).

(b) Verify the reporting system includes instructions for reporting to the manufacturer and retaining a copy of the report in the aircraft records. The system may allow the operator to submit paper or electronic reports or both.

**Note 1:** An LSA is not eligible for a special airworthiness certificate under § 21.190 if the manufacturer's continued airworthiness reporting system is no longer functioning.

**Note 2:** As discussed in the light-sport rule, a manufacturer that can no longer support its aircraft can transfer continued airworthiness responsibilities to a responsible person. This person must have access to the design data and production records for the applicable make/model of aircraft for developing new procedures for maintenance, repair, or alterations. The responsible person must have the authority to receive and evaluate service difficulty and/or safety of flight issues and the proper means to issue safety directives. Affected make/model aircraft may continue to operate with their current special light-sport aircraft (SLSA) airworthiness certificates when continued airworthiness responsibilities are properly transferred.

(5) Aircraft Operating Instructions (AOI).

**Note:** The AOI is also commonly called the Pilot's Operating Handbook (POH). For the purposes of this order, the term AOI is used interchangeably with POH.

(a) Verify that the AOI and the flight training supplement are with the aircraft per § 21.190(b).

(b) Verify that the AOI and flight training supplement apply to the aircraft make, model, and S/N being inspected.

(c) Verify that AOI data meets the applicable air speed data identified in the § 1.1 definition of light-sport aircraft.

(d) Verify the AOI includes weight and balance or weight and loading data for the aircraft as designed and manufactured. This is part of the permanent record for the aircraft, and is a basis for the associated operating and performance data located in this documentation.

(6) Weight and Balance. Compare the aircraft weight and balance or weight and loading data to the data in the AOI for accuracy. If a discrepancy is found, the aircraft must be re-weighed. The weight scales used must meet the aircraft manufacturer's quality assurance system for calibration and be within the limits of the calibration interval. The aircraft presented



must match the AOI, the aircraft equipment listing, and the regulations or it may not be certificated. Verify the completed weight and balance report, including load limits for flight personnel, oil, fuel, and any cargo carrying capabilities, is available in the aircraft.

**Note:** The LSA manufacturer must document the accurate weight of the aircraft per established weight and balance or weight and loading procedures to determine, as applicable and appropriate to the class of aircraft, the aircraft's empty, gross, and most forward and aft center of gravity (CG) location, including the weight and balance or weight and loading calculations from the initial flight.

- (7) Aircraft Maintenance Records. Verify that aircraft maintenance records show:
  - (a) Satisfactory completion of required ground and flight tests and inspections.
  - (b) Compliance with all applicable manufacturer safety directives. Verify the person who recorded that information has the appropriate authorization to perform the tasks in the safety directive.
  - (c) Compliance with all applicable ADs. This applies to an AD for a specific LSA make and model and for an AD issued against a type-certificated product or equipment installed in the LSA. If an AD is issued against a type-certificated product installed in a light-sport category aircraft, the manufacturer of the aircraft is required per the FAA-accepted consensus standard to issue a safety directive providing instructions on how to address the AD on the specific aircraft.
- (8) Pre-Certification Work. When any work was performed on the aircraft (such as installations, assembly, or reassembly operations) after completion of original production ground and flight tests--
  - (a) Verify that the work performed on the aircraft is covered within the manufacturer's quality system documentation. This could be in the form of an authorization or instruction. When any of the requirements for an LSA cannot be substantiated by an applicant, the LSA is not eligible for U.S. certification in light-sport. When a flight test is required, check the final inspection acceptance record and aircraft maintenance record for entries.
  - (b) Verify the person who performed the work was authorized by the manufacturer and that the work was properly documented in the aircraft records.
  - (c) Verify the aircraft has a final inspection record showing acceptance by an authorized person.
  - (d) If the work affects the aircraft weight and balance or load and balance, verify the weight and balance or load and balance data sheet has been recalculated.
- (9) Consistency Among Documents. Verify the data contained in the documentation is consistent. For example, the AOI, maintenance manual, and the aircraft's fuel tank placard must all prescribe the same fuel requirements.
- (10) First Make or Model LSA. When issuing the first airworthiness certificate to any new make or model LSA, review the following additional items:

(a) Manufacturer's Ground Test Report. Verify the report indicates test acceptance, the responsible person, and the qualification and title of the responsible person. Verify the report uses standard, accepted aeronautical abbreviations.

(b) Manufacturer's Flight Test Report.

1 Verify that the flight test process is documented within the manufacturer's quality assurance system along with the approved flight test procedure. Verify the revision level as called out in block 18 of FAA Form 8130-15 matches the manufacturer's quality assurance system revision level. When this documentation cannot be shown to or does not comply with the authorized processes, the production flight test acceptance report cannot be accepted to validate FAA Form 8130-15 for issuance of a special airworthiness certificate under § 21.190.

2 Verify that the report indicates testing acceptance, the person responsible, the qualification and title of the production flight test pilot, and the location where the production flight testing was performed. Verify the data contents of the as-tested acceptance record are within the requirements of the AOI operating limitation ranges and parameters. Verify the flight test report reflects the testing of equipment identified in the AOI. Verify the report uses standard, accepted aeronautical abbreviations.

3 When a LSA manufacturer delegates flight testing, verify the manufacturer provided written authorization for that delegation.

**Note:** All special LSA pre-certification flight operations within the United States will be conducted with a SFP. All tests, inspections, or qualifications affecting the eligibility and determination of the airworthiness of the aircraft must be accomplished before issuing the special light-sport category airworthiness certificate.

(c) Maintenance and Inspection Procedures.

1 Verify that the maintenance and inspection procedures address engine/powerplant maintenance. Overhaul procedures for the engine/powerplant are not mandatory. Engine/powerplant procedures may be incorporated entirely within the aircraft maintenance manual or by reference into a separate engine/powerplant manual (such as a manual from the engine OEM). If the engine/powerplant maintenance and overhaul procedures are in a separate manual, verify that the aircraft maintenance manual includes a reference to the engine/powerplant and overhaul manuals; the reference must specify the unique identification information for the manual.

2 Verify that the maintenance and inspection procedures prescribe who can perform each task. The LSA manufacturer is responsible for assigning the level of training and certification required.

(d) Continued Airworthiness Reporting System. If the system relies on electronic media, verify that the electronic media and instructions are available as described.

**c. Inspect Aircraft.** An inspection is accomplished only after the aircraft is complete in every respect and before the issuance of the airworthiness certificate. Do not perform any fabrication, construction, assembly, testing, manufacturer's quality inspections, or closing work on the aircraft.

(1) Verify the aircraft meets § 1.1 light-sport aircraft requirements, as applicable.

- (2) Verify the aircraft configuration matches the flight test report and AOI.
- (3) Verify that installed equipment is per the AOI.
- (4) Verify the instruments are appropriately marked and required placards are located for easy reference. When inspecting airplanes, give particular attention to the airspeed indicator. Verify that the marks within the airspeed indicator match the AOI/POH calculated data for indicated airspeed limitations (such as  $V_{NE}$ , red line; caution range, yellow arc; normal operating range, green arc; when equipped, flap operating range, white arc with lower limit of  $V_{SO}$  at maximum weight).
- (5) As applicable, verify that system controls (for example, fuel selector(s) and electrical switches/breakers) are appropriately placed, clearly marked, provide easy access and operation, and function per the manufacturer's specifications and applicable consensus standard.
- (6) As applicable, verify that airframe emergency parachutes that are ballistic, assisted, or deployable are properly marked, identified, and within their service dates. Verify aircraft marks clearly identify all explosive devices used in conjunction with ballistic parachutes; marks indicating the aircraft is equipped with explosive devices must be applied externally and be readable from the ground.

**d. Correction of Discrepancies.** Inform the applicant of any omissions, errors, or other discrepancies identified during your inspections. When the applicant is not the LSA manufacturer, the corrections of discrepancies with the aircraft or aircraft documentation must be authorized by the manufacturer. Only when the required corrections have been made can an airworthiness certificate be issued.

**e. Issue Airworthiness Certificate.** Return the original manufacturer's SOC to the applicant for retention in the aircraft records.

#### **9-4. Changing From Experimental to Special LSA Category.**

**a. Eligibility.** An LSA that has been previously issued an experimental airworthiness certificate may be eligible for certification in the light-sport category under the following conditions:

- (1) When the light-sport prototype aircraft has been flown by the manufacturer under a special airworthiness certificate for the experimental purpose of R&D, and the manufacturer provides the documentation required by § 21.190 with the appropriate FAA forms and applications.
- (2) When an applicant is seeking to return an LSA, previously converted from a special light-sport category airworthiness certificate to an experimental LSA certificate (§ 21.191(i)(3)), back to the light-sport category.

**b. Procedures for Issuing an Airworthiness Certificate.** Follow paragraph 9-3 and the following:

- (1) Review all original documentation required by § 21.190.
- (2) Review the manufacturer's SOC for the aircraft that was used for the original issuance of the light-sport category airworthiness certificate.

(3) Verify proof of compliance with applicable safety directives, repairs, and safety alterations published by the manufacturer and documented in the aircraft's records per part 43.

(4) Verify that the aircraft was not altered without the manufacturer's approval. The manufacturer's approval must specify the particular aircraft make, model, and S/N. The manufacturer's approval must also specify the current applicable revision of FAA-accepted consensus standards in effect at the time the approval was given for the alteration. All manufacturer alteration approvals will be made a part of the aircraft's permanent record and documented in the aircraft's records per part 43. If this is not done, the aircraft is not eligible for return to the special light-sport category.

**Note:** An aircraft is not eligible for certification in LSA if there are any alterations, additions, or changes, approved by the manufacturer or not, that conflict with the definition of an LSA in § 1.1, the eligibility requirements of part 21, or the operating requirements of part 91. Refer to § 21.181(a)(3).

## Chapter 10. Experimental Purposes of R&D/Showing Compliance (§§ 21.191(a)/(b))

**10-1. Introduction.** This chapter provides policies and procedures for issuing special airworthiness certificates for the experimental purposes of research and development (R&D) under § [21.191\(a\)](#) or showing compliance with regulations under § 21.191(b).

**10-2. Procedures for Issuing an Airworthiness Certificate.** Follow chapter 4 of this order and the following:

**a. Review Application.** Verify the applicant has a project that is consistent with the requested experimental purpose:

(1) R&D. Per 14 § CFR 21.191(a), this purpose includes flights that test new aircraft design concepts, new aircraft equipment, new aircraft installations, new aircraft operating techniques, or new uses for aircraft. Although the flight operations may eventually lead to a TC or STC, they may be conducted by the applicant only as a matter of research or to determine whether an idea warrants further development. Note that the purpose of R&D only allows testing of aircraft.

(2) Showing Compliance with Regulations. Per 14 § CFR 21.191(b), this purpose includes flights to show compliance with applicable regulations for the issuance of TCs, STCs, and major design changes, including showing compliance with applicable function and reliability requirements. This purpose would be considered valid when the applicant for a TC or an aircraft modifier has revised the TC design data or has applied for an STC or field approval. The purpose is to show compliance to the CFR after the applicant has completed testing under R&D, if applicable, and is ready for flight testing by the FAA.

(3) Supporting Aircraft. The operation of a chase plane, a tanker used for in-flight icing tests, or other aircraft not otherwise eligible for a standard or experimental certificate but necessary for use in direct support of an R&D or certification project is considered to be within the scope of these purposes. Do not issue an R&D for a supporting aircraft without a project.

**b. Reserved.**

**10-3. Holding an Airworthiness Certificate in Suspension.** This policy and procedure allows for the issuance of an experimental certificate for R&D and/or showing compliance with regulations for aircraft already issued a standard airworthiness certificate or special airworthiness certificate for restricted category or SLSA aircraft. This procedure enables an applicant to conduct short term projects such as flight testing for an STC project or an LSA manufacturer flight testing major repairs or alterations without having to permanently surrender its original airworthiness certificate. To do so, the FAA must obtain the original airworthiness certificate from the applicant and hold it in suspension upon issuing an airworthiness certificate for R&D and/or showing compliance with regulations. Do not use this procedure if the applicant cannot ensure the aircraft will remain in compliance with all of the maintenance and preventive maintenance programs required under the airworthiness certificate that is intended to be held in suspension.

**a.** When an applicant for a change in type design alters an aircraft per a proposed type design change, a flight test may be required to demonstrate compliance with airworthiness regulations. A flight test also may be required if an applicant wishes to conduct R&D testing of

an altered aircraft. However, the altered aircraft is no longer in compliance with its TC; therefore, the aircraft does not have an effective airworthiness certificate under which to conduct the flight test. In these cases, the FAA may issue an experimental certificate for R&D flight testing and/or showing compliance with airworthiness regulations.

**b.** The applicant must comply with the requirements of § 21.193, and submit a completed FAA Form 8130-6 to request a special airworthiness certificate for R&D testing and/or showing compliance with regulations. Process the application in the usual manner with the following differences:

(1) The applicant must surrender the aircraft's airworthiness certificate to the FAA so it can be held in suspension by the responsible MIDO or FSDO. If testing will be completed in less time than required to send the airworthiness certificate to the MIDO/FSDO, the ASI or designee may hold the airworthiness certificate in suspension. The owner or applicant does not retain the suspended airworthiness certificate.

(2) If the applicant's need for the special airworthiness certificate for R&D testing and/or showing compliance with regulations exceeds 30 days, verify the need is valid, and re-verify the need every 30 days thereafter until the process is complete. If the need is valid, no change is required. If the aircraft meets the maintenance and inspection requirements of the suspended airworthiness certificate, no change is required. If the need is not valid or inspection requirements are not met, advise the applicant that the suspended airworthiness certificate is now surrendered, and upon completion of testing, the applicant must apply for a new airworthiness certificate. The total duration of the special airworthiness certificate for R&D and/or showing compliance with regulations may not exceed the requirements of § 21.181.

(3) Since the aircraft was airworthy prior to the alteration for R&D testing and/or showing compliance with the regulations, you are not required to conduct a full airworthiness assessment of the aircraft. You may limit your aircraft records review and aircraft inspection to those areas related to finding airworthiness of the alterations and to support issuance of appropriate operating limitations.

(4) When issuing the special airworthiness certificate for R&D testing and/or showing compliance with regulations, make the required maintenance record entry. These entries streamline the reinstatement of the airworthiness certificate.

(a) Explain the reason for issuance of the special airworthiness certificate.

(b) Provide all information that expedites reinstatement of the standard, restricted, or SLSA airworthiness certificate (for example, type of alteration performed).

(5) Enter "Do Not Code" on FAA Form 8130-6, FAA Coding block. This ensures AFS-750 does not change the aircraft airworthiness status in the Registry database. FAA Form 8130-6 is submitted for the issuance of the special airworthiness certificate for R&D testing or to show compliance with regulations.

**c.** After flight testing has been completed and the applicant requests the return of the suspended certificate, perform the following:

(1) Review aircraft records and inspect the aircraft only as necessary to confirm what has occurred from suspension to return of the original airworthiness certificate unless you

identify a need for further reviews and inspections. Verify that the aircraft is airworthy with respect to either the original design or the applicable approved design for the alteration.

(2) Make a signed and dated entry in the aircraft maintenance records fully explaining what has occurred and include the following statements as applicable:

(a) R&D flight tests. “I find this aircraft meets the requirements for the reinstatement of the [*standard or restricted*] airworthiness certificate, following completion of R&D flight testing, based on an inspection confirming reconfiguration of the aircraft to the approved type design.”

(b) LSA flight tests. “I find this aircraft meets the requirements for the reinstatement of the special LSA airworthiness certificate, following completion of R&D flight testing, based on an inspection confirming reconfiguration of the aircraft to the manufacturer’s approved design.”

(c) Show Compliance Flight Tests. “I find this aircraft meets the requirements for the reinstatement of the [standard or restricted] airworthiness certificate and the inspection was performed based on all installations and alterations related to [*insert STC number, amended TC number, or other form of project description*], performed from [*insert date the alteration(s) was first installed*] to [*insert current date*].”

(d) All Flight Tests. “This certification process does not replace or change the dates or times of scheduled inspection requirements (for example, annual or 100-hour inspections).”

## Chapter 11. Experimental Purpose of Crew Training (§ 21.191(c))

**11-1. Introduction.** This chapter provides policies and procedures for issuing a special airworthiness certificate for the experimental purpose of crew training per § [21.191\(c\)](#).

**11-2. Procedures for Issuing an Airworthiness Certificate.** Follow chapter 4 of this order and the following:

**a. Review Application.** Verify the application, including the program letter, demonstrates eligibility for the requested experimental purpose of crew training.

(1) Aircraft are eligible for an airworthiness certificate for the experimental purpose of crew training when the purpose is limited to training the applicant's flightcrews. This normally includes a manufacturer's employees who need to be trained in experimental aircraft. The manufacturer's flightcrews operate aircraft being flight tested in type certification programs or for production flight testing. This may also include a company/applicant that operates an experimental former-military aircraft and needs to train its pilots/employees to obtain an appropriate type rating or authorization to serve as PIC in the aircraft.

(2) Except for a manufacturer's first of an aircraft model, do not issue a special airworthiness certificate for the experimental purpose of crew training when an equivalent aircraft with a standard airworthiness certificate is available.

**b. Reserved.**



## Chapter 12. Experimental Purpose of Exhibition (§§ 21.191(d))

**12-1. Introduction.** This chapter provides policies and procedures for issuing special airworthiness certificates for the experimental purpose of exhibition per § [21.191\(d\)](#).

**12-2. Procedures for Issuing Airworthiness Certificates.** Follow chapter 4 of this order and the following:

**a. Review Application.** Verify the application, including the program letter, demonstrates eligibility for the requested experimental purpose of exhibition. This purpose includes exhibiting the aircraft's flight capabilities, performance, or unusual characteristics at air shows, fly-ins, and similar events; for motion picture, television, and similar productions; and for the maintenance of exhibition flight proficiency, including (for persons exhibiting aircraft) flying to and from such events and productions.

**b. Reserved.**

### **Chapter 13. Experimental Purpose of Air Racing (§§ 21.191(e))**

**13-1. Introduction.** This chapter provides policies and procedures for issuing special airworthiness certificates for the experimental purpose of air racing per § [21.191\(e\)](#).

**13-2. Procedures for Issuing Airworthiness Certificates.** Follow chapter 4 of this order and the following:

**a. Review Application.** Verify the application, including the program letter, demonstrates eligibility for the requested experimental purpose of air racing. This purpose includes participating in air races, practicing for air races, and flying to and from racing events.

**b. Reserved.**

## **Chapter 14. Experimental Purposes of Market Surveys, Sales Demonstrations, and Customer Crew Training (§§ 21.191(f) and 21.195)**

**14-1. Introduction.** This chapter provides policies and procedures of issuing a special airworthiness certificate for the experimental purpose of market surveys, sales demonstrations, and customer crew training, in accordance per §§ [21.191\(f\)](#) and [21.195](#).

**14-2. Procedures for Issuing an Airworthiness Certificate.** Follow chapter 4 of this order and the following:

**a. Review Application.** Verify the application, including the program letter, demonstrates eligibility for the requested experimental purpose of market surveys, sales demonstrations, and/or customer crew training. An aircraft is eligible for the requested certificate if the applicant meets §§ 21.191(f) and 21.195.

**b. Review Aircraft Records.** Verify the aircraft and the required maintenance entries meet the minimum flight hour requirements and requirements for an inspection and maintenance program.

## Chapter 15. Experimental Purpose of Operating Amateur-Built Aircraft (§ 21.191(g))

**15-1. Introduction.** This chapter provides policies and procedures for issuing special airworthiness certificates for the experimental purpose of operating amateur-built aircraft under § [21.191\(g\)](#).

### 15-2. General.

**a. Amateur Builder.** Under § 21.191(g), the FAA receives applications from and issues airworthiness certificates to amateur builders. An amateur builder (hereafter, builder) is the natural person(s) who fabricates and assembles the major portion of its aircraft for its own recreation or education. A kit manufacturer or commercial assistance provider is not the builder.

**b. Major Portion.** “Major portion” means more than 50 percent of the fabrication and assembly tasks, commonly referred to as the “51 percent rule.”

**c. Builder’s Education or Recreation.** An aircraft manufactured or assembled by a business does not meet the education or recreation requirements of § 21.191(g). Prototype aircraft built to prove the design for sale as an amateur-built kit are not produced by persons “solely for their own education or recreation” and, therefore, are not eligible for an experimental airworthiness certificate under § 21.191(g).

**d. Designs.** Amateur-built aircraft may be constructed from a builder’s original design, purchased plans, from a kit, or a combination of these.

#### e. Kit Evaluations.

(1) The FAA performs a kit evaluation to determine if an aircraft built from that kit per the kit manufacturer’s instructions may allow a builder to meet the major portion requirement. The FAA maintains a list of completed kit evaluations, [Revised Listing of Amateur-Built Aircraft Kits](#) (referred to hereafter as the “kit list”), and completed [Amateur-Built Fabrication and Assembly Checklists](#) for evaluated kits. These completed checklists will enable builders to determine how much commercial assistance may be used.

**Note:** For information on the kit evaluation process or for kit manufacturers desiring a kit evaluation, refer to FAA Order 8130.35, *Amateur-Built Aircraft National Kit Evaluation Team* (NKET).

(2) The FAA does not certify or approve kits or kit manufacturers. The outcome of a kit evaluation does not mean a kit is FAA “certified,” “certificated,” or “approved,” and kit manufacturers may not represent their kits as such.

(3) A kit evaluation or the inclusion of a kit on the kit list is not a prerequisite for selling a kit or for an airworthiness certificate.

**f. Type-Certificated Aircraft.** Altering, repairing, or rebuilding type-certificated aircraft constitutes maintenance of a type-certificated aircraft under part 43, not fabrication and assembly of amateur-built aircraft. This policy has been in effect since 1952 under section 1.74-3 of the *Civil Aeronautics Manual* (CAM) 1, which specifically states, “structural components of other aircraft may be used [for amateur-built aircraft]; however, it is not intended that this provision be used to avoid obtaining approval of major alterations to aircraft previously certificated in another category.”

**15-3. When Builders or Applicants Contact the FAA.** Builders and applicants who contact the FAA should be:

- a. Encouraged to review the following before starting their project:
  - (1) FAA AC 20-27, *Certification and Operation of Amateur-Built Aircraft*.
  - (2) The [FAA amateur-built website](#).
  - (3) The [Experimental Aircraft Association \(EAA\) website](#) to learn about other resources for builders.
- b. Advised to check the kit list if building an aircraft with a kit.

**15-4. Procedures for Issuing an Airworthiness Certificate.** Follow the procedures in paragraph 2-3 and chapter 4 of this order and the following:

- a. **Review Application.**
  - (1) Eligibility Statement. Review the applicant's notarized FAA Form 8130-12, *Eligibility Statement, Amateur-Built Aircraft*, for accuracy and completeness. Verify that all sources of commercial assistance are included.

- (2) Reserved.

- b. **Review Aircraft Records.**

- (1) Supporting Documentation for the Eligibility Statement.
  - (a) Review the builder's documentation to verify it shows:
    - 1 What was fabricated, assembled, and inspected.
    - 2 Who performed these actions.
    - 3 The date the activity was performed.
    - 4 Where the activity was performed.
    - 5 The methods used.
    - 6 Any commercial assistance or education assistance used.
  - (b) Examples of documentation include:
    - 1 The applicable *Amateur-Built Aircraft Fabrication and Assembly Checklist* and detailed descriptions of the steps included in each of the listed tasks.
    - 2 A comprehensive builder's log that includes items such as drawings, engineering specifications, plans, references, handbooks, kit manufacturer's data, photographs, video, documentation of commercial assistance used (including receipts), documentation of education assistance used, article inventories and histories, receipts, catalogs, and logbook entries.
- (2) Review any documentation of in-process and pre-cover inspections.
- (3) Verify that aircraft records include a completed statement from the owner that the aircraft has been inspected per part 43, appendix D, or other approved programs, and was found to be in a condition for safe operation. The inspection will help identify any errors made during

construction of the aircraft. This statement will support the owner's inspection and airworthiness statement in block III of FAA Form 8130-6.

**Note:** There is no requirement for a certificated mechanic to sign off on the inspection. The builder's signature on FAA Form 8130-6, block III, attests to the airworthiness of the aircraft.

(4) Review records to verify that the aircraft has been weighed per established weight and balance procedures.

(a) If the builder designed the aircraft, these limits would be determined by the builder's calculations.

(b) If the aircraft is constructed from a kit or built from purchased plans, review the kit instructions or build plans to verify the builder followed those instructions or plans.

(c) If the builder made changes to a kit that affect the aircraft CG, the kit manufacturer's weight and balance calculations must be recalculated based on the change(s).

(5) It is recommended that you obtain and review a fuel test flow report from the applicant to verify adequate fuel flow rate:

(a) For airplanes with gravity fed systems (main and reserve), the flow rate should be 150 percent of the takeoff fuel consumption of the engine(s).

(b) For airplanes with a fuel pump, the flow rate should be at least 125 percent of the takeoff fuel consumption of the engine(s).

(c) For rotorcraft, the fuel system for each engine should be shown to provide the engine with at least 100 percent of the fuel required under each operating and maneuvering condition expected.

### **c. Inspect the Aircraft.**

(1) Level of Assembly/Disassembly. At the time of airworthiness certification, the aircraft must be complete.

(a) In-Process Inspections. The FAA does not typically perform in-process inspections during the fabrication and assembly process. The builder must document all in-process inspections including dates and names of all person(s) involved. The FAA recommends that in-process inspections be completed by knowledgeable persons, such as EAA technical counselors or certificated mechanics.

(b) Pre-Cover Inspections. The FAA does not typically perform pre-cover inspections to determine if the aircraft meets the major-portion requirement. The builder must document all pre-cover inspections including dates and names of all persons involved.

(c) Requesting Disassembly of the Aircraft. During the airworthiness evaluation, do not request excessive disassembly of the aircraft if the builder can provide evidence of fabrication, assembly, and in-process inspections.

(2) Ask questions as necessary to evaluate the level of involvement of the applicant in construction of the aircraft.

(3) When Builders Use a Kit. Aircraft fabricated and assembled from a kit must meet the requirements of § 21.191(g).

(a) An aircraft assembled from a kit composed entirely of finished prefabricated articles is not eligible for a certificate under § 21.191(g).

(b) A certain quantity of prefabricated articles, such as heat-treated ribs, bulkheads, or complex articles made from sheet metal, fiberglass, composites, or polystyrene is acceptable. Kits that provide large articles, such as complete fuselages and wing structures requiring minimal supplemental fabrication and assembly may not allow a builder to meet the major-portion requirement.

(c) Applicable Policy and Guidance. If the kit was evaluated and placed on the kit list before September 30, 2009 and, since the evaluation, the kit manufacturer has made no changes to the kit that would affect the allocation of task credit and the applicant is not obtaining commercial assistance, the policy and guidance in effect at the time the FAA evaluated the kit apply. For a non-evaluated kit purchased from the kit manufacturer before September 30, 2009, and the applicant is not obtaining commercial assistance, the policy and guidance in effect at the time the applicant purchased the kit apply. Otherwise, current policy and guidance apply.

(4) Inspect the aircraft to verify the aircraft is marked, “EXPERIMENTAL.” Refer to §§ [45.22](#), and [45.23](#).

(5) Condition for Safe Operation. Inspect the aircraft to verify it is in a condition for safe operation. The sample checklist for a condition inspection in appendix 1 to FAA AC 90-89, *Amateur-Built Aircraft and Ultralight Flight Testing Handbook*, may be used for determining if the aircraft is in a condition for safe operation.

**d. Verify Major Portion.** The ASI must always make a major-portion determination at the time of the airworthiness evaluation. To determine if an aircraft meets the major-portion requirement, evaluate the amount of fabrication and assembly work accomplished by the builder(s) against the total amount necessary to complete the aircraft.

**Note:** Fabrication is defined as layout, bending, countersinking, straightening, cutting, sewing, gluing/bonding, lay-up, forming, shaping, trimming, drilling, deburring, machining, applying protective coatings, surface preparation and priming, riveting, welding, and heat treating or otherwise transforming an article toward or into its finished state.

(1) Using the *Amateur-Built Aircraft Fabrication and Assembly Checklist*. The *Amateur-Built Aircraft Fabrication and Assembly Checklist* is an aid for the ASI in determining if a specific aircraft meets the major portion requirement.

(a) The FAA has also developed [checklists](#) for fixed-wing, helicopter, WSC, powered parachute, and gyrocopter aircraft.

(b) NKET kit evaluations determine whether an aircraft fabricated and assembled by the builder from the kit may meet the major portion requirement. [NKET developed checklists](#) for kits it evaluated.

(c) ASIs must use the checklist when—

- 1 Performing NKET evaluations.
- 2 A builder used commercial assistance.

3 A builder made alterations to an aircraft kit included on the kit list that potentially affects the major portion determination.

4 The aircraft was built from a kit that has not been evaluated or is not on the kit list.

5 Providing guidance to a kit manufacturer to determine if a proposed kit may meet the major portion requirement of § 21.191(g).

6 There are questions that arise as to the determination of major portion.

7 The aircraft was built from prefabricated major components readily available from aircraft part suppliers, other than those components listed in paragraph 15-4.d(2) of this chapter.

8 The aircraft was built using salvaged articles from other aircraft.

(d) Review the [job aid for completing the checklist](#).

(2) Commercially-Produced Products and Articles. The FAA recognizes that builders cannot be expected to fabricate every product and article that makes up the aircraft and that some products and articles will be acquired from commercial sources. Items such as engines; engine accessories; propellers; rotor blades; rotor hubs; tires; wheel and brake assemblies; instruments; hot air balloon burners; fuel tanks; and standard aircraft hardware, including pulleys, bell cranks, rod ends, bearings, bolts, and rivets are acceptable and may be procured on the open market. The use of these items is not counted against a builder in assessing the major-portion requirement.

(3) Evaluate Commercial and/or Educational Assistance.

(a) Commercial Assistance. Any fabrication or assembly tasks contracted to another party, performed by a commercial assistance center, or performed by a kit manufacturer, must not prevent the builder from meeting the requirements of § 21.191(g).

(b) Commercial Educational Assistance. The builder may receive commercial educational assistance for fabrication or assembly of specific articles or the completion of tasks involved in building the aircraft. In some cases, educational assistance may be provided by a kit manufacturer. The builder may receive credit for tasks completed with this assistance as long as the assistance did not exceed demonstration of how to perform the task.

(4) When Builders Use Articles from Other Aircraft. The use of used or salvaged articles, including military surplus articles, from other aircraft is permitted if they are in a condition for safe operation; however, all fabrication, installation, and assembly tasks accomplished with used or salvaged articles will be credited to the "Mfr Kit/Part/Component" column on the *Amateur-Built Aircraft Fabrication and Assembly Checklist*. No credit will be given toward the major-portion requirement for work on these salvaged articles. This includes any "rebuilding" or "restoring" activities to return these articles to an airworthy condition. Assembly credit may be given in those cases where used or salvaged articles are assembled with portions of the aircraft fabricated and assembled by the builder.

(5) Aircraft Previously Certificated by a Foreign CAA. For aircraft that were previously certificated as amateur-built by a foreign CAA, the applicant may provide an official document from the CAA stating that the original builder met the requirements of § 21.191(g).



(6) Contact AIR-113 as needed for assistance with a major portion determination.

**e. Issue Airworthiness Certificate.**

(1) Duration of Assignment to Flight Test Area. Amateur-built aircraft should be limited to operation within an assigned flight test area for at least:

(a) 40 hours when a non-type-certificated engine, propeller, or engine/propeller combination is installed.

(b) 40 hours if an installed type-certificated engine, propeller, or engine/propeller combination has been altered in a way that differs from an approved type design on a TCDS.

(c) 25 hours when an unaltered, type-certificated engine/propeller combination is installed.

(d) 10 hours and at least five takeoffs and landings for gliders, balloons, and airships.

(e) Five hours after any major change.

(2) Reserved.

## **Chapter 16. Experimental Purpose for Primary Kit Built Aircraft (§ 21.191(h))**

**16-1. Introduction.** This chapter provides policies and procedures for issuing a special airworthiness certificate for the experimental purpose of operating primary kit-built aircraft per § [21.191\(h\)](#).

**Note:** In this chapter, “kit” refers to a primary kit-built aircraft, and not a set of purchased plans and components for an amateur-built aircraft (as discussed in chapter 15 of this order or an ELSA built from a kit as discussed in chapter 17 of this order).

**16-2. Procedures for Issuing an Airworthiness Certificate.** Follow chapter 4 of this order and the following:

**a. Inspections.** Review the application and aircraft records, and inspect the aircraft as necessary to verify:

- (1) The aircraft has a primary category type certificate.
- (2) The kit was manufactured by the holder of PC for that kit.
- (3) The aircraft was not assembled under the quality system of the PC holder.

**b. Reserved.**

## Chapter 17. Experimental Purpose of Operating Light-Sport Aircraft (§ 21.191(i))

**17-1. Introduction.** This chapter provides policies and procedures for issuing experimental airworthiness certificates for operating light-sport aircraft that—

- a. meet the definition of LSA in § [1.1](#);
- b. meet the requirements of §§ [21.191](#) and [21.193](#); and
- c. belong to one of the following five classes of aircraft: airplanes, gliders, powered parachutes, WSC aircraft (commonly called trikes), and lighter-than-air aircraft (balloons and airships).

**Note:** Prior to January 31, 2008 the FAA allowed a few gyroplanes built to consensus standards to fly under E-LSA, while a few others were “grandfathered” in the E-LSA category when the rule took effect in 2004. Since that date, however, the FAA no longer issues experimental certificates for gyroplanes under § 21.191.

### 17-2. General.

#### a. Kit LSA.

(1) Eligible LSA assembled from kit must be designed and assembled per the applicable FAA-accepted consensus standard.

(2) An LSA assembled from kit does not have to meet the major-portion requirement for amateur-built aircraft under § 21.191(g). The FAA does not evaluate or approve LSA manufacturer’s kits, and, as such, there is no listing of FAA-evaluated or FAA-approved LSA kits or manufacturers.

(3) Do not perform progressive inspections during the construction or assembly of the aircraft unless you suspect a safety or compliance issue.

(4) An LSA assembled from kit must not be modified or altered without prior written approval from the manufacturer.

(5) To show compliance with § 91.319(b), the applicant must perform flight testing per the manufacturer’s AOI, maintenance and inspection procedures, flight training supplement, and ground and flight testing procedures that meet the applicable FAA-accepted consensus standards.

#### b. Prototype Aircraft Produced by a Light-Sport Manufacturer.

(1) An airworthiness certificate in the special light-sport category or experimental LSA purpose may not be issued for a manufacturer’s prototype (first of make or model) aircraft without satisfactory completion of flight testing. Accordingly, review Registry information to determine if the aircraft is a first of that make or model. If so, the FAA may issue an experimental certificate for R&D as long as the applicant’s flight test program meets the applicable consensus standard and other applicable requirements.

(2) Following satisfactory completion of an R&D program, such prototype aircraft may be eligible for an LSA category certificate under § 21.190. AIR-100 must be contacted before issuing the first LSA category (§ 21.190) airworthiness certificate to any new manufacturer’s LSA or to a new LSA model from existing manufacturers.

**c. LSA Previously Certificated Under § 21.190.** Aircraft previously issued a special airworthiness certificate in the light-sport category under § 21.190 may be eligible for an experimental certificate for operating an LSA under § 21.191(i)(3). These aircraft have previously been flight tested and are not required to have additional flight testing unless they have subsequent alterations to the aircraft that were not approved in writing by the LSA manufacturer and recorded in the aircraft records. Apply an appropriate time in the phase I operating limitations for flight testing of aircraft with unapproved alterations.

**d. Flight Testing After Major Changes.** Following a major change to an aircraft, the FAA may modify the experimental LSA operating limitations with additional requirements for flight testing.

**e. Expiration of Grandfathering Provision for Ultralight Vehicles.** The FAA will no longer issue an experimental certificate under § 21.191(i)(1).

**17-3. Procedures for Issuing an Airworthiness Certificate.** Follow chapters 2 and 4 of this order and the following:

**a. Review Application.**

(1) FAA Form 8130-6. In reviewing the application for LSA assembled from kits manufactured outside the United States, verify that box 11 is not checked or annotated with the origin of the aircraft. For the purpose of issuing a special airworthiness certificate, LSA manufactured outside the United States are not treated as imports but must be from a country having a bilateral agreement with the United States concerning airplanes.

(2) Manufacturer's SOC. Review the aircraft manufacturer's completed FAA Form 8130-15, *LSA SOC*, as required by § 21.193(e) for LSA kits, or §§ 21.190(b) and (c) for previously certificated special LSA category, per section 5 of appendix A to this order for accuracy and completeness.

**b. Review FAA Airworthiness Records on File at the Registry.** For an application for an experimental certificate under § 21.191(i)(3), verify the aircraft was previously issued an airworthiness certificate under § 21.190.

**c. Review Aircraft Records and Documents.**

(1) Verify that all documentation is in the English language.

(2) LSA Assembled from Kit. Review aircraft records to verify the aircraft was assembled per the manufacturer's assembly instructions.

(3) AOI and Flight Training Supplement.

**Note:** The AOI is also commonly called the Pilot's Operating Handbook (POH). For the purposes of this order, the term AOI is used interchangeably with POH.

(a) Verify the AOI and the flight training supplement are with the aircraft.

(b) Verify that the AOI and flight training supplement apply to the make, model and S/N of the aircraft being inspected.

(c) Verify that AOI data meets the applicable air speed data identified in the § 1.1 definition of light-sport aircraft.

(4) **Weight and Balance.** Compare the aircraft's weight and balance or weight and loading data to the data listed in the AOI for accuracy. If a discrepancy is found, the aircraft must be re-weighed. Verify that the aircraft has been weighed correctly, and that the CG and its most forward and aft CG limits are established, as applicable and appropriate to the class of aircraft. This is part of the permanent record for the aircraft, and is a basis for the associated operating and performance data located in this documentation.

**Note:** The applicant must document the accurate weight of the aircraft per established weight and balance procedures to determine the aircraft's empty, gross, and most forward and aft CG location, when applicable, including the weight and balance or weight and loading in conjunction with the predetermined manufacturer's data for the initial flight tests to help reduce stall, spin, and other control related accidents. If the aircraft is constructed from a kit, the predetermined manufacturer's data should be used. The completed weight and balance or weight and loading report, including load limits for occupants, oil, fuel, and any cargo carrying capabilities, should be available on the aircraft along with the other applicable placards, listings, and marks required by § 91.9.

(5) **Maintenance and Inspection Procedures.**

(a) Verify that the maintenance and inspection procedures are with the aircraft and that they apply to the make, model and S/N of the aircraft being inspected per § 21.193(e)(3).

(b) Verify the maintenance and inspection procedures address engine/powerplant maintenance. Overhaul procedures for the engine/powerplant are not mandatory. Engine/powerplant procedures may be incorporated within the aircraft maintenance manual entirely or by reference to a separate engine/powerplant manual (such as a manual from the engine OEM). If the engine/powerplant maintenance and overhaul text is in a separate manual, verify that the aircraft maintenance manual includes a reference to the engine/powerplant manual; the reference must specify the unique identification information for the manual, including revision level and date.

(c) Verify that any documents referred to by the aircraft maintenance manual are with the aircraft.

(d) Verify the maintenance and inspection procedures prescribe who can perform each task. The LSA manufacturer is responsible for assigning the level of training and certification required.

(6) **Reporting System.** Verify that the AOI and/or the maintenance and inspection procedures/manual includes a continued airworthiness reporting system that meets § 21.190(c)(5) for § 21.191(i)(2) aircraft kits that are still in production. Verify the reporting system includes instructions for reporting to the manufacturer and retaining a copy of the report in the aircraft records. The system may allow the operator to submit paper or electronic reports or both. If the system relies on electronic media, verify the electronic media and instructions are available as described.

(7) **Aircraft Maintenance Records.** Verify that aircraft maintenance records show:

(a) Compliance with all applicable manufacturers' safety directives. Verify the person making the entry into the logbook has the appropriate level of authorization to perform the task per the safety directive.

(b) Compliance with all applicable ADs. This requirement applies to an AD for a specific LSA make and model and for an AD issued against a type-certificated product or equipment installed in the LSA. If an AD is issued against a type-certificated product installed in any experimental LSA, the manufacturer of the aircraft is required per the FAA-accepted consensus standard to issue a safety directive providing instructions on how to address the AD on the specific aircraft.

(c) Any alteration was performed using data approved by the aircraft manufacturer.

**Note:** An aircraft is not eligible for an airworthiness certificate under § 21.190 or 21.191(i) if there is any alteration, approved by the manufacturer or not, that precludes the aircraft from meeting the definition of an LSA in § 1.1, the eligibility requirements of part 21, or the operating requirements of part 91.

(8) Previously Certificated Special LSA Category Aircraft. Obtain supporting documentation and review the production ground and flight test report acceptance record, the final inspection acceptance record(s), and aircraft maintenance records.

(9) Consistency Among Documents. Verify that data contained in the documentation (such as the maintenance manuals, AOI, placards, and other manuals incorporated by reference) is consistent. For example, the AOI, maintenance manual(s), and aircraft's fuel tank placard all identify the same fuel requirements (with conversion noted).

**d. Inspect Aircraft.** A general airworthiness inspection is accomplished only after the aircraft is complete in every respect and before the issuance of the experimental airworthiness certificate. Do not perform any fabrication, construction, assembly, testing, manufacturer's quality inspections, or closing work on the aircraft. During this inspection, the FAA may only request disassembly when a safety hazard is identified that would endanger the general public.

(1) In preparation for the inspection, ensure that plates, access doors, fairings, and cowlings are open or removed to allow inspection.

(2) Verify the aircraft meets § 1.1 as applicable.

(3) Verify the aircraft N-number marks are per part 45. If an aircraft previously held a special airworthiness certificate in the light-sport category, the "LIGHT-SPORT" mark required by § 45.23(b), must be changed to "EXPERIMENTAL."

(4) Verify the ID plate meets the requirements of § 45.11, as applicable.

(5) Verify the information on the ID plate is correct, matches the information on FAA Form 8130-6, and is per § 45.13, as applicable. Identification data required by § 45.13(a)(1), (2), and (3) are mandatory. Any other optional data that the manufacturer/builder includes on the ID plate must be in such a manner as not to confuse the mandatory data contents.

(6) For kit-built LSA, verify that the LSA is properly assembled per the manufacturer's assembly instructions for that aircraft and the applicable FAA-accepted consensus standard.

(7) Verify the following placard is displayed in the aircraft in full view of all occupants: “PASSENGER WARNING—THIS AIRCRAFT DOES NOT COMPLY WITH FEDERAL SAFETY REGULATIONS FOR STANDARD AIRCRAFT.” This applies to all classes of LSA certificated in experimental purpose for operating LSA.

(8) Verify that installed equipment matches the AOI.

(9) Verify the flight control systems and associated instruments as equipped operate properly and are appropriate for each of the six classes of LSA.

(10) Verify the cockpit instruments are appropriately marked, as specified in the FAA-accepted consensus standard of ASTM, International, (ASTM) for the aircraft class and as found in the aircraft’s AOI, and that placards are installed and placed for easy reference.

(11) Verify that the airspeed indicator marks match the AOI limitations.

(12) Verify the system controls (for example, fuel selector(s) and electrical switches/breakers) are appropriately placed, clearly marked, provide easy access and operation, and function per the manufacturer’s instructions and specification documentation.

(13) Verify airframe emergency parachutes that are ballistic, assisted, or deployable are properly marked and identified. The aircraft must have provisions that provide for clear marking and identification of all explosive devices used in conjunction with ballistic parachutes. Marks indicating the aircraft is equipped with explosive devices must be applied externally and able to be read while standing on the ground. An airworthiness certificate will not be issued before meeting this requirement.

**e. Correction of Discrepancies.** Inform the applicant of any omissions, errors, or other discrepancies identified during your inspections. The applicant/builder is responsible for following the manufacturer’s instructions. However, the applicant/builder is not the LSA manufacturer. Any discrepancies found with supplied instructions, processes and procedures, manuals, and SOCs must be corrected and signed by the aircraft’s manufacturer. If you find discrepancies attributable to a manufacturing issue, contact AIR-100 for further guidance as it may affect all aircraft produced. Only when the required corrections have been made can an airworthiness certificate be issued.

**f. Issue Airworthiness Certificate.** When the airworthiness certificate is to be issued for an unlimited duration, the operating limitations may be prescribed in two phases in the same document per appendix D to this order. Assign phase I flight test durations as follows:

(1) LSA issued original experimental airworthiness certificates for § 21.191(i)(2) LSA must be limited to operation within an assigned flight test area for a minimum of five hours for all classes of LSA to determine aircraft controllability throughout its design limits.

(2) Following any major change, an LSA must be assigned to a flight test area for an appropriate time (minimum should be 5 hours) to conduct a flight test and evaluate that the aircraft is in a condition for safe operation.

(3) Aircraft previously issued a special airworthiness certificate in the light-sport category under § 21.190, applying for an experimental certificate for operating LSA under § 21.191(i)(3), may not be required to complete a flight test program under phase I. The applicant must provide evidence that no unauthorized alterations or changes were made after the issuance of the original special LSA category airworthiness certificate.

## Chapter 18. Special Flight Permits (§ 21.197)

### Section 1. Common Policies and Procedures.

#### 18-1. Introduction.

**a.** An SFP is a special airworthiness certificate issued for a U.S.-registered aircraft that may not currently meet applicable airworthiness requirements but is capable of safe flight. An SFP does not authorize:

- (1) Flight over a foreign country without permission of that country.
- (2) A deviation from a requirement of 14 CFR.

**b.** Section 1 of this chapter provides common policies and procedures for issuing an SFP. Section 2 of this chapter provides additional policies and procedures for issuing SFPs for specific purposes.

**c.** Section [21.197\(c\)](#) applies to air carriers and fractional ownership operators. Procedures for issuing an SFP under § 21.197(c) are contained in FAA Order 8900.1, volume 4, chapter 13, section 1.

#### 18-2. Who May Issue an SFP.

**a.** SFPs for purposes other than production flight testing and customer demonstration flights will be issued by the FSDO, MIDO, or IFO geographically responsible for the area in which the flight is to originate. If the applicant's aircraft is outside the jurisdiction of the FSDO, MIDO, or IFO receiving the request, the applicant should be referred to the appropriate office. This paragraph does not apply to part 121 or part 135 certificate holders.

**b.** For certificated operators who have a continuous authorization and are seeking an SFP for a purpose outside the scope of that authorization, such SFPs normally will be issued by their certificate holding district office (CHDO).

**c.** SFPs issued to certificated operators who do not have a continuous authorization normally will be issued by their CHDO. However, with the CHDO's concurrence, these SFPs may be issued by the office having geographical responsibility.

**d.** Under special conditions, SFPs may be issued to part 145 repair facilities for delivering aircraft from international locations to the United States. In this instance, the SFP will be issued by the CHDO having jurisdiction over the repair facility under the following conditions:

(1) It is a U.S. registered aircraft that currently does not meet the conditions of its standard airworthiness certificate, due to the installation of non-standard auxiliary fuel systems. Auxiliary fuel system installations must be accomplished by an FAA-certificated repair facility which is specifically airframe rated for the desired installation.

(2) Procedures relating to the application and issuance of SFPs, the installation of auxiliary fuel systems, and any conditions and limitations for flight must be incorporated into the repair facility's operations specifications.

**Note:** The FAA office issuing the SFP, under these special conditions, must assure compliance with all other guidelines outlined within this order. The CHDO may request the IFO geographically responsible for the



area in which the flight is to originate to inspect the aircraft before flight using an ASI.

e. The FAA may delegate the issuance of an SFP per 14 CFR part 183 and the applicable designee management order.

**18-3. Purposes.** Section [21.197](#) prescribes the general purposes for which a SFP may be issued. In addition to the specific purposes listed in § 21.197, the following flight operations are considered within the scope of § 21.197:

a. Any flight of a U.S. registered aircraft covered by § 21.197, if the aircraft is capable of safe flight, even though a TC has not been issued.

b. The delivery of an aircraft to the base of the purchaser or operator or to a storage point in the United States.

c. The operation of non-air carrier four engine aircraft with one inoperative engine. The provisions of § 91.611 should be used as a guide.

d. Flying an aircraft whose annual inspection has expired to a base where an annual inspection can be accomplished.

e. Flying an amateur-built aircraft whose condition inspection has expired to a base where the condition inspection can be accomplished.

f. Production flight testing of LSA per § 21.190(c)(7).

g. Flying an aircraft to a base where repairs are to be performed. This may include incidental check flights as necessary to verify the aircraft is safe for flying the aircraft to a base where repairs are to be performed. Such check flights could be included under the SFP to verify proper function of auxiliary fuel tanks, to verify no hydraulic or fuel leaks for aircraft coming out of storage, etc. This provision is not intended to circumvent § 91.407.

#### **18-4. Procedures.**

a. Review and Complete Application.

(1) Review the application per paragraph 2-3.a of this order.

(2) The FAA may assist the applicant by completing FAA Form 8130-6 based on information furnished by the applicant via any media. The name of the applicant should be entered in the space provided for the applicant's signature. A notation as to how the information was received should be entered above the name, for example, "Received by email dated (insert date)."

b. Review FAA Airworthiness Records on File at the Registry. Access the Registry to verify the aircraft is currently registered.

c. Review Aircraft Records and Inspect Aircraft.

(1) Review records and conduct inspections or tests as necessary to ensure the aircraft is capable of safe flight for the intended purpose. Reviews and inspections should include those areas where the aircraft does not meet applicable airworthiness requirements as identified in section VII of the application. The FAA may require a certificated mechanic or repair station to conduct the necessary review of records and aircraft inspection(s) to support issuance of an SFP.

However, the FAA should physically inspect damaged aircraft or an aircraft for which the safety of flight is questionable in any respect.

**Note:** All designees must physically review the records and physically inspect the aircraft to ensure an aircraft is capable of safe flight for the intended purpose.

(2) When the FAA requires the applicant to make the inspection, advise the applicant that such inspections must be—

(a) Accomplished by an appropriately certificated mechanic or repair station familiar with the procedures and requirements of this chapter.

(b) Documented in the aircraft maintenance record by the authorized person who conducted the inspection.

(3) ADs.

(a) For Aircraft. If the AD was published after August 21, 2002 (the effective date of § 39.23) and does not prohibit issuance of an SFP to fly the aircraft to a repair facility to do the work required by the AD, you may issue an SFP per § 39.23.

(b) Not for Aircraft. For the purpose of this paragraph, product means aircraft engine, propeller, or article. If the AD does not allow operation of the product during a flight, then it may not be operated in flight under an SFP. If the aircraft on which the product is installed can be operated safely with that product inoperative, an SFP could be issued per § 21.197(a) with a limitation that the product be rendered inoperative for flight.

**d. Issue Airworthiness Certificate.**

(1) Operating Limitations. Establish operating limitations as necessary for safe operation. Because individual circumstances may vary greatly, a list of limitations applicable in every case cannot be provided. If necessary, solicit the technical assistance of other FAA offices or specialties. Limitations should be clear and concise so they can be easily understood. Consider the following in establishing operating limitations:

(a) Conformity to the aircraft's technical data.

(b) Operational equipment necessary for safe operation of the aircraft.

(c) Special qualifications required of the pilot and crewmembers. For flights that involve long distances over which various weather conditions may be encountered, the PIC also must be appropriately instrument rated.

(d) Aircraft weight limits.

(e) Fuel and fuel distribution limits.

(f) CG limits.

(g) Maneuvers to which the aircraft is limited.

(h) Limits on use of flight equipment, such as autopilots.

(i) Meteorological conditions to be avoided and the inspections required if inadvertently encountered.

(j) Airspeed limits.

(k) Flight operations in an overweight condition must avoid cities, towns, villages, and congested areas, or any other areas where the flights might create hazardous exposure to persons or property.

(l) Runway selections, if considered necessary for safety.

(m) Communications required with airport tower personnel to inform them before takeoff or landing of the non-standard condition of the aircraft.

(n) Intended operations over a foreign country. If the applicant intends to conduct flight operations over another country, inform the applicant of its responsibility to obtain permission from that country prior to such operations. When required to fly over another [member state of ICAO](#), include, when appropriate, the following statement: "This aircraft does not comply with the international standards of Annex 8 to the Convention on International Civil Aviation as follows: *[describe the item(s) which do not comply with the airworthiness requirements for standard aircraft]*"

(o) Any inspection requirements.

(p) Any other limitation that should be prescribed for the particular flight.

(2) Issue the SFP.

(a) When the application for an SFP is found in compliance with all requirements, issue FAA Form 8130-7 per paragraph A-4 of appendix A to this order with operating limitations deemed necessary for safe flight operation. In addition, follow paragraphs D-2.a or D-2.b of appendix D to this order, as applicable, for issuing the operating limitations.

(b) Give the completed airworthiness certificate to the applicant. Except for an SFP for overweight operations, an ASI may transmit the completed and signed SFP to the applicant electronically. A designee must physically provide the SFP to the applicant.

(3) Advise the Applicant.

(a) Review the operating limitations with the applicant to ensure clear understanding of the limitations.

(b) Advise the applicant to display the certificate in the aircraft at the cabin or cockpit entrance so the certificate is legible to passengers or flightcrew per § 91.203(b). The copy of the permit that is displayed in the aircraft at the point of departure will be considered the original permit.

e. If an affirmative, technical determination cannot be made that a particular aircraft is capable of safe flight operation because of insufficient design, inspection, or maintenance, do not issue the SFP.

f. Review and Forward Records. Review your records to verify completeness, accuracy, legibility, and compliance with applicable requirements. Forward and/or maintain records as required by your district or regional office.

**Note:** Reviewing and forwarding certification files to AFS-750 for an SFP is only required for an SFP for overweight operations.

## **Section 2. Additional Policies and Procedures for Particular Purposes.**

**18-5. Production Flight Testing of Aircraft Produced under a TC/PC.** An SFP issued for production flight testing may be used by a manufacturer to meet the requirements of § [91.203](#) when operating new production aircraft for production flight testing, as provided in § [21.197](#). This permit may be used with any valid registration and is transferable from one aircraft to another. Normally, the permit is valid only for production flight testing. However, when deemed appropriate, the MIDO or Certificate Management Office (CMO) may allow both production flight testing and customer demonstration to be entered in block A of FAA Form 8130-7 as explained in paragraph 18-7 of this order. This paragraph provides policies and procedures concerning the issuance of aircraft produced under a TC/PC. For production flight testing LSA, refer to paragraph 18-6 of this order. For production flight testing an Unmanned Aircraft System (UAS), refer to FAA Order 8130.34.

### **a. Eligibility.**

- (1) A manufacturer producing aircraft under part 21, subpart F or G, is eligible to obtain an SFP for production flight testing.
- (2) A manufacturer producing aircraft before issuance of the TC also is eligible for a SFP for production flight testing provided the following conditions are met:
  - (a) The FAA official flight test program is in progress.
  - (b) A prototype aircraft of that model has been flown by the manufacturer under an experimental certificate to ensure there are no adverse flight characteristics and that production test pilots are fully familiar with the aircraft.
  - (c) An FAA-accepted production flight test procedure and checklist for the aircraft involved will be used to ensure all requirements for production flight tests are fulfilled.
  - (d) The aircraft is not being flown by the manufacturer for purposes other than production flight tests, except as identified in paragraph 18-7 of this order.
  - (e) Limitations have been established to define the production flight test area.
- (3) Military Aircraft.
  - (a) Aircraft built under a military contract with military aircraft identification marks do not require registration or the issuance of an airworthiness certificate for flight testing or demonstration before acceptance by the military.
  - (b) There may be cases where a TC/PC holder is building a military aircraft not pursuant to a contract and that are not produced under its PC. The aircraft manufacturer may be eligible for an SFP for production flight testing under § 21.197(a)(3). Ownership of those aircraft must be held by the manufacturer during production flight testing.

### **b. Application and Issue.**

- (1) An eligible manufacturer should apply for as many SFPs for production flight testing as deemed necessary for satisfactory coverage of the aircraft involved. The number of SFPs for production flight testing issued to the manufacturer must be limited to actual need.
- (2) A MIDO that has issued SFPs for production flight testing should maintain suitable records that show expiration dates not exceeding 12 months from the date of issuance

and the number of permits issued to each manufacturer. For tracking purposes, it is recommended that each permit issued be numbered serially in the upper right corner of the airworthiness certificate by the issuing office; for example, SW MIDO 41 #1. The same S/N may be reassigned to a manufacturer each year. The issuing official must sign each permit and associated limitations.

**18-6. Production Flight Testing LSA.** As provided for in § [21.197\(a\)\(3\)](#), an SFP may be used by an LSA manufacturer or dealer in the United States to meet the requirements of §§ [21.190\(c\)\(7\)](#) and [91.203](#) to operate new production aircraft for production flight testing.

**a. Coordination.** The manufacturer must notify the geographic responsible MIDO of its intent to perform production flight testing of its LSA and submit the proposed geographic flight testing locations to the same MIDO at least 30 days before the proposed start of flight testing. The MIDO will coordinate the production flight testing activities with the responsible geographic or assigned FSDO.

**b. Eligibility for Production Flight Testing in the United States.** A manufacturer producing LSA under § 21.190 is eligible to obtain SFPs for production flight testing if:

(1) A prototype aircraft of that LSA model and configuration has been flown by the manufacturer under an experimental R&D certificate to ensure there are no adverse flight characteristics.

(2) The applicant must show evidence acceptable to the FAA that an aircraft of the same make and model was manufactured and issued a special airworthiness certificate in the light-sport category.

(3) The purpose of the operations is production flight testing only.

(4) In conjunction with the applicable consensus standard, a production flight test procedure and checklist for the aircraft involved is used to ensure all requirements for production flight tests are fulfilled and recorded in the aircraft maintenance records.

(5) Limitations have been established to define the production flight test duration and area.

(6) The LSA manufacturer or its agent that has been included in and is operating under the oversight of the manufacturer's quality assurance plan must be the registered owner of each aircraft to be issued a SFP for production flight testing.

**c. Issue SFP.**

(1) Flight Test Area. Define the flight test area in the operating limitations per paragraph 4-7 of this order.

(2) Flight Test Duration. The period of assignment is not established by regulation but is addressed in the applicable consensus standard and by the manufacturers' requirements to ensure the airworthiness of the aircraft. When issuing a SFP for flight testing of LSA, the FAA should assign additional periods of time to flight test areas only as necessary in the interest of safety.

(3) Operating limitations must include the following:

(a) This aircraft may be operated only for production flight testing. These operating limitations are a part of a SFP and are to be carried in the aircraft at all times and be available to the PIC of the aircraft.

(b) All flights must be conducted within the geographical area described as follows. *[Define the area by radius, coordinates, and/or landmarks. The designated area must be over open water or sparsely populated areas having light air traffic. The size of the area must be that required to safely conduct the anticipated maneuvers and tests.]*

(c) All flight tests must be conducted and recorded per an acceptance test procedure that meets the applicable FAA-accepted consensus standard.

(d) This aircraft is to be operated under visual flight rules (VFR), day only.

(e) The production test pilot is to be the sole occupant.

**18-7. Conducting Customer Demonstration Flights.** A SFP may be used by a manufacturer to meet the requirements of § 91.203 when operating a new production aircraft for conducting customer demonstration flights per § 21.197(a)(5). This permit may be used with any valid registration. This permit is normally issued only for customer demonstration. However, as stated in paragraph 18-5 of this order, customer demonstration may be listed in block A of FAA Form 8130-7 along with production flight testing, but will not be issued in conjunction with any other SFP purpose. When both flight purposes are listed in block A of FAA Form 8130-7, the aircraft's operating limitations must clearly state that no customer demonstration flights are allowed until the aircraft has satisfactorily completed its production flight tests. The format for listing both flight purposes is "Production Flight Testing or Customer Demonstration."

**Note:** The meaning of the word "customer" for the purpose of this airworthiness certificate means any person or organization judged by the manufacturer to be an acknowledged or potential aircraft purchaser.

**a. Eligibility.** An SFP for conducting customer demonstration flights may be issued when the following conditions are met:

(1) The new production aircraft was produced under a PC or TC.

(2) The PC/TC holder has satisfactorily completed production flight tests.

Completion of production flight tests indicates acceptance by the production flight test pilot and no further flight tests are required or planned.

**b. Application and Issue.**

(1) A letter from the manufacturer must accompany the application describing the customer demonstration flights to be made if sufficient information cannot be included on the application.

(2) Upon receipt of a properly executed application, inspect the aircraft and prescribe the operating limitations per paragraph 18-4.d(1) of this order and as deemed necessary for safe operation. The demonstration flight area(s) also must be listed on the operating limitations. SFPs may be issued only for the period needed to complete demonstration flights, usually not to exceed 90 days.

(3) If the MIDO determines that a PC holder has procedures in place to safeguard the storage and issuance of SFPs for customer demonstration flights, permits that are transferable

from one aircraft to another may be issued. It is still necessary to prescribe operating limitations per paragraph 18-4.d(1) of this order and as deemed necessary for safe operation. The expiration date shown on FAA Form 8130-7 and the associated limitations must not exceed 12 months from the date of issuance. The number of SFPs for conducting customer demonstration flights issued to a manufacturer must be limited to actual need.

(4) The MIDO issuing SFPs for customer demonstration flights will maintain a copy of the complete file per record retention requirements.

### **18-8. Operation of Overweight Aircraft.**

**a. General.** An SFP may be issued for operation of overweight aircraft for flight beyond the normal range over water, or over land areas where adequate landing facilities or appropriate fuel is not available. The excess weight that may be authorized must be limited to the additional fuel, fuel-carrying facilities, and navigation equipment necessary for the flight.

(1) The FAA has two primary concerns when issuing SFPs for the temporary operation of overweight aircraft:

(a) That the public will be guarded in the event of an accident; and

(b) That when the aircraft is returned to a standard configuration, it has not been rendered unairworthy due to the overweight operations.

(2) With safety being the primary concern, it is essential that the processing office use the technical assistance of other FAA offices or specialties as deemed necessary to ensure the highest degree of safety possible. All installations, for example, a long range fuel system or navigational equipment, must be installed per FAA-approved data.

(3) All applications for rotorcraft must be coordinated with an ACO for an engineering evaluation of the structural integrity, the flight integrity, and for any other provisions deemed necessary.

(4) Applications for which the proposed maximum weight does not exceed 110 percent of the maximum certificated weight, and for which the certificated CG limits are not exceeded, may be processed by district offices without obtaining an engineering evaluation.

(5) Applications for which the proposed maximum weight exceeds 110 percent of the maximum certificated weight, or the CG limits exceed the certificated limits, must be coordinated with an ACO for an engineering evaluation of the structural integrity and for any other provisions deemed necessary.

(6) The processing of an application must encompass a review of the airworthiness status of the basic aircraft, an evaluation of the added installations that constitute the excess weight, required flightcrew member qualifications, and proposed operating limitations.

#### **b. Added Installations.**

(1) Technical Data.

(a) When the submitted application falls under the provisions of paragraph 18-8.a(4) or (5) of this order, any drawings and reports submitted with the application that substantiate structural integrity must be sufficiently detailed to show that the added installations are structurally and functionally safe and to allow for a conformity inspection of the added installations.

(b) The structural report should reference the drawings used for the installation(s).

(2) Record of Installation(s).

(a) The installation(s) added to the aircraft for the intended overweight flight must be recorded per the requirements of § 43.9.

(b) The following statement must be entered in section 3 of FAA Form 337: “No person may operate this aircraft, as altered herein, unless it has within it an appropriate and current special flight permit issued under part 21.”

(3) Auxiliary Fuel System Installations. In the evaluation of the auxiliary fuel system installations, the following items will be considered:

(a) The aircraft and auxiliary fuel system should meet all applicable original airworthiness requirements, except for those the aircraft cannot meet because of its overweight condition. The aircraft and auxiliary fuel system must be found safe for the intended flight.

(b) Fuel tank(s) installed in a pressurized area are vented outside the aircraft and should be tested to show the empty tank(s) can withstand the maximum pressure differential at the maximum operating altitude.

(c) Adequate ventilation must be provided for the fuel tank(s) and the area in which the fuel tank(s) are located to prevent the accumulation of fumes that would be detrimental to the flightcrew or present a fire or explosion hazard.

(d) A means must be provided to readily determine the quantity of fuel in the auxiliary tank(s) before takeoff. In addition, a means must be provided to indicate the quantity of fuel in tanks that have a vapor/excess fuel return line, both before takeoff and during flight.

(e) The location of the fuel tank(s) in the aircraft is a major factor in determining that the aircraft is safe for flight because the added fuel and fuel facilities have the greatest effect on the aircraft's CG. In addition, the fuel system installation must not restrict entrance to or exit from the aircraft as provided by the applicable section of 14 CFR. If required for landing, the aircraft should have an adequate fuel jettison system installed.

(f) Auxiliary fuel systems that are not complete, that is, not connected to the basic aircraft fuel system, may not be considered for issuance of a SFP.

(4) Engine Oil Quantity. The applicant will show that the oil supply provided for each engine is sufficient to ensure satisfactory cooling and system circulation for the duration of the flight. If deemed necessary, an oil transfer system for replenishing the engine oil while the aircraft is in flight must be provided.

(5) Maximum Weight and Center of Gravity Limits.

(a) Section 21.197(b) limits any excess weight over the certificated maximum weight to additional fuel, fuel carrying facilities, and navigational equipment added for the intended flight. It must be determined that this part of the maximum weight complies with this requirement.

(b) When numerous alterations are performed, it may be necessary to weigh the aircraft to establish the aircraft weight and the CG limits. The computations should be evaluated for accuracy. It also may be necessary to require flight testing at the new maximum weight and



CG limits to determine that the aircraft is safe for operation. Computed weight and balance information should be reflected on FAA Form 337, section 8.

(c) Operation of rotorcraft over the certificated maximum weight presents some unique conditions over and above those encountered with fixed wing aircraft. Special attention should be given to this type of aircraft. A careful evaluation should be made to determine what effect the overweight operation may have on the retirement times of critical articles.

(6) Operating limitations must be prescribed as deemed necessary, and may include—

(a) Operation in the overweight condition must be conducted to avoid cities, towns, villages, and congested areas, or any other areas where the flights might create hazards to persons or property.

(b) Runway [*specify*] must be used for overweight takeoff (and landing when appropriate). If an en route stop is scheduled, the following must be added to this limitation: Contact FAA office, [*city, routing symbol, and telephone number*] for runway to be used for overweight takeoff and landing at [*city*].

(c) A copy of FAA Form 337 covering the additional fuel carrying facilities and equipment must be in the aircraft.

(d) Special entries to note required inspection of the aircraft for possible damage due to overweight operation upon completion of overweight flight(s).

**c. Review Records and Forward to the Registry.** Review and forward records per appendix B to this order.

#### **18-9. Aircraft to Which § [91.409\(e\)](#) Is Applicable.**

**a. Eligibility.** An SFP may be issued for certain large aircraft for which part 125, *Certification and Operations: Airplanes Having a Seating Capacity of 20 or More Passengers or a Maximum Payload Capacity of 6,000 Pounds or More*, is not applicable.

#### **b. Application and Issue.**

(1) Verify the application includes a clear and complete status of the aircraft. Verify that section VII of the application describes why the aircraft does not meet the applicable FAA airworthiness requirements, including an assessment of AD compliance, major repair, major alteration status, life-limited parts status, aircraft equipment, and accessory configuration, etc.

(2) Verify the application includes the minimum requirements for the aircraft to be considered safe for operation per established industry practices (e.g., MMEL, Configuration Deviation List, and AFM).

(3) Before you issue the SFP, the applicant must select, identify in the aircraft maintenance records, and use one of the inspection programs specified in § 91.409(f). All such programs must specify the parts and areas of the aircraft, engines, propellers, rotors, and appliances, including survival and emergency equipment that must be inspected. The FAA may specify additional inspections and/or tests required to ensure safe operation. The scope and detail of the inspections and/or tests required to ensure safe operation may vary considerably depending on why the permit is issued and/or the conditions or circumstances surrounding the

subject aircraft. Aircraft that have been routinely maintained and/or inspected under an approved inspection program may not need additional inspections.

**Note:** Only an airworthiness ASI can approve an inspection program under § 91.409(f)(4).

(4) Issue the SFP. Restrict the operation of the aircraft to specific airports and to a specific flight path to discourage unnecessary flight operations. The destination airport is the final location for the purpose of the flight. Specify an appropriate duration.

**Note:** At your discretion, consult an operations ASI, type rated in the same or similar aircraft, concerning the adequacy and appropriateness of the conditions and limitations of the SFP.

(5) Examples. The following examples illustrate how the above procedures may be applied:

**Example 1, Continuous Airworthiness Inspection Program:** ABC Airlines, operating a Boeing 777 aircraft in air carrier service, wishes to lease another Boeing 777 from XYZ Leasing. The aircraft to be leased has been in storage for 1 year. ABC Airlines wishes to operate the aircraft from the point of storage to a maintenance facility before placing the aircraft in service with the airline. ABC Airlines must select an inspection program under § 91.409(f), identify it in the maintenance records, and use it. ABC Airlines selects the inspection program that is part of ABC Airlines' Continuous Airworthiness Maintenance Program (CAMP) for its Boeing 777, as permitted under § 91.409(f)(1). If the CAMP contains provisions for inspection before operation under a special flight permit, those provisions may be used to ensure safe operation of the aircraft. If the CAMP does not contain such provisions, the CAMP may still be selected; however, the FAA may require ABC Airlines to make additional inspections or tests necessary to ensure safe operation as part of the SFP process.

**Example 2, Inspection Program Recommended by the Manufacturer:** XYZ Leasing wishes to operate its Airbus 320 from one storage location to another. When applying for the SFP, XYZ submits a description of the inspections and tests it considers necessary to ensure safe operation of the aircraft. The inspection program selected and identified in the maintenance records is the manufacturer's recommended program that meets § 91.409(f)(3). Upon review and evaluation of the application, the FAA issues the SFP with any specific operational conditions and limitations under which XYZ may operate its aircraft following the satisfactory completion of the inspections and tests described in the selected inspection program. XYZ must comply with all the applicable inspections and tests described in the selected inspection program prior to operating the aircraft.

**Example 3, Other Inspection Program:** XYZ Leasing wishes to operate its Airbus 320 from one storage location to another. When applying for the SFP, XYZ submits a description of the inspections and tests it considers necessary to ensure safe operation of the aircraft. Upon review of the submitted description, the airworthiness ASI approves the

description of the inspections and tests as a one-time use inspection program under § 91.409(f)(4). The FAA issues the SFP with any specific operational conditions and limitations under which XYZ may operate its aircraft following the satisfactory completion of the inspections and tests described. XYZ must identify the inspection and tests approved by the FAA in the maintenance records as the inspection program under which the aircraft is to be operated for the purpose of this flight only.

**c. Special Cases.**

(1) **Aircraft Coming Out of Storage.** For an aircraft that has been out of service for an extended period of time, its storage conditions should be evaluated. In many cases, aircraft in storage have been routinely maintained, inspected, and have had preventive maintenance performed at regular intervals. These aircraft normally would require less attention before any anticipated flight. However, an aircraft that has been in storage for an extended period of time requires, at least, an extensive visual inspection by a properly certificated mechanic, an inspection of the fuel storage and delivery systems for contamination, and operational checks of all systems and equipment that may be required to function on the intended flight. Aircraft that have been stored for an extended period must have had the preservation procedures recommended by the engine manufacturer in place during the storage period. If not, the engine manufacturer must be contacted and a return to service work-scope completed on the installed engines.

(2) **Aircraft Going Into Storage.** In some cases the applicant may not intend to place the aircraft in service following the flight authorized by the SFP. In this case the applicant may wish to use an inspection program as specified in the § 91.409(f)(4) example above. Unless provisions for additional flights are provided for in the FAA-approved program, no additional flights are permitted.

(3) **Damaged Aircraft.** An aircraft that has been damaged may require engineering evaluations or special tests to determine if the aircraft is capable of safe flight.

(4) **Carriage of Passengers.** When the flight characteristics of the aircraft have not been appreciably altered, persons other than flightcrew and/or persons essential to the operation of the aircraft may be carried aboard during non-revenue flight operations authorized by an SFP. In those cases, the passenger carrying requirements of part 91 will apply.

(5) The operation of noise restricted aircraft that do not comply with the requirements of § 91.801 requires a special flight authorization issued per §§ 91.858 or 91.859 and must be obtained by applying 30 days in advance to the Office of Environment and Energy (AEE). An SFP is not required in these instances and will not be issued unless the aircraft does not meet applicable airworthiness standards as provided in § 21.197. All other inspection program requirements apply.

## Chapter 19. Provisional Airworthiness Certificates (14 CFR part 21, Subpart I)

**19-1. Introduction.** This chapter provides policies and procedures for issuing a provisional airworthiness certificate under 14 CFR part 21, subpart I.

**19-2. Procedures for Issuing an Airworthiness Certificate.** Follow the procedures in chapter 4, section 1 of this order, and the following:

### a. Review Application.

(1) Applicant. Verify the applicant meets § [21.213](#):

(a) Aircraft Manufacturer. A manufacturer who is a U.S. citizen may apply for a Class I or Class II provisional airworthiness certificate for an aircraft it manufactured in the United States.

(b) Air Carrier. A holder of an air carrier operating certificate under part 121 who is a U.S. citizen may apply for a Class II provisional airworthiness certificate for a transport category aircraft that has—

1 A current Class II provisional TC or an amendment thereto, or

2 A current provisional amendment to a TC that was preceded by a corresponding Class II provisional TC.

(c) Engine Manufacturer. An aircraft engine manufacturer who is a U.S. citizen and who has altered a type-certificated aircraft by installing a different type-certificated engine it manufactured within the United States may apply for a Class I provisional airworthiness certificate for that aircraft if before alteration, the aircraft was type-certificated in the normal, utility, acrobatic, commuter, or transport category.

(2) Purpose. Verify the intended purpose of the applicant's flight operation is one allowed under § [91.317](#); these purposes are:

(a) Training flightcrew members, including simulated air carrier flight operations.

(b) Demonstration flights by the manufacturer for prospective purchasers.

(c) Market surveys by the manufacturer.

(d) Flight checking of instruments, accessories, and equipment that does not affect the basic airworthiness of the aircraft.

(e) Service testing of aircraft.

(3) Statement of Conformity. Review FAA Form 8130-9, *Statement of Conformity*, to verify proper completion and to verify it contains the information required by §§ [21.221\(c\)](#), [21.223\(c\)](#), or [21.225\(c\)](#), as applicable.

(4) Current TC. Verify the corresponding provisional TC or provisional amendment to the TC is in effect.

**b. Review Aircraft Records.** Review aircraft maintenance records as necessary to verify the aircraft was flown at least five hours by the manufacturer.

### c. Inspect the Aircraft.

(1) Condition for Safe Operation. Because the aircraft normally is one that is being used in the type certification process, the FAA should be familiar with its progress and conformity status. Therefore, per §§ 21.221(a)(2), 21.223(a)(2), or 21.225(a)(2), as applicable, inspect the aircraft as necessary to find that no feature, characteristic, or condition of the aircraft would make the aircraft unsafe when operated per the applicable operating limitations.

(2) Nationality and Registration Marking. Verify the word “PROVISIONAL” is displayed.

(3) Flight Manual and Placards.

(a) For class I or a provisional amendment to a TC, verify the aircraft was supplied with a provisional AFM or other document and appropriate placards containing the applicable operating limitations.

(b) For class II, verify the aircraft was supplied with a provisional AFM containing the applicable operating limitations.

**d. Issue Airworthiness Certificate.**

(1) Operating Limitations. Operating limitations established for the issuance of a provisional TC or provisional amendment to a TC are considered to be a part of the provisional airworthiness certificate issued to an aircraft. Operating limitations which are not included in placards or the provisional flight manual must be issued per appendix D to this order. Based on your inspections and assessment of potential safety hazards, prescribe additional operating limitations you consider necessary in the interest of safety.

(2) Reserved.

## Chapter 20. Import Aircraft

**20-1. Introduction.** This chapter provides policies and procedures for issuing U.S. airworthiness certificates for imported, type-certificated aircraft. Part 21 provides for import of aircraft as follows:

**a. New standard classification aircraft under § [21.183\(c\)](#).** For an application for an airworthiness certificate for a new, imported aircraft in the standard classification, follow the applicable procedures in paragraph 3-5 of this order and this chapter.

**b. Used standard classification aircraft under § [21.183\(d\)](#).** The FAA issues airworthiness certificates under this section for used, standard classification aircraft imported into the United States. For an application for an airworthiness certificate for a used, import aircraft in the standard classification, follow the applicable procedures in paragraph 3-6 of this order and this chapter.

**c. New primary category aircraft under § [21.184\(b\)](#).** For an application for an airworthiness certificate for a new, imported aircraft in the primary category, follow the procedures in paragraph 5-4 of this order and this chapter.

**d. Used primary category aircraft under § [21.184\(d\)](#).** For an application for an airworthiness certificate for a used, imported aircraft in the primary category, follow the procedures in paragraph 5-6 of this order and this chapter.

**e. Restricted category aircraft under § [21.185](#).** For an application for an airworthiness certificate for an import aircraft in the restricted category, follow the procedures in chapter 6 of this order and this chapter.

**20-2. CAA Assistance with U.S. Airworthiness Certificates for New Aircraft Manufactured Outside the United States.** Refer to appendix E of this order for the related procedures.

### **20-3. Export Certificate of Airworthiness (Export C of A).**

**a. Purpose.** An export C of A or other certifying statement issued by an exporting CAA assists the FAA in determining if an imported, type-certificated aircraft is airworthy. An export C of A also helps identify any exceptions that must be corrected before an airworthiness certificate may be issued.

**Note:** An export C of A is not an airworthiness certificate and does not authorize flight operations of an aircraft.

**b. Required for New Aircraft.** An export C of A is mandatory for the import of new standard classification aircraft, new primary category aircraft, and new restricted category aircraft per §§ 21.183(c), 21.184(b), 21.185(c), respectively.

**c. Desirable but Not Mandatory for Used Aircraft.** Although countries with which the United States has concluded bilateral agreements concerning airworthiness have agreed to provide export certificates of airworthiness with used aircraft exported under those agreements, an export C of A is not mandatory. Similarly, an export C of A is not mandatory for used aircraft exported from non-bilateral countries. That is, the FAA may not deny issuance of an airworthiness certificate for a used imported aircraft solely because an export C of A has not been issued. However, without an export C of A for a used aircraft, the applicant's showing and

the FAA's finding of airworthiness may be burdensome, impractical, or not feasible due to the need for conducting a complete conformity inspection and a lack of available design data for such inspections. Advise applicants accordingly. For these reasons and the purposes described in paragraph 20-3.a of this chapter, obtaining an export C of A is always desirable.

**d. Flight Operations Subsequent to Issuance of Export C of A.** The FAA may not be able to issue a U.S. airworthiness certificate for an aircraft operated under the registry of another country subsequent to the issuance of an export C of A by the exporting CAA. Applicants must be able to identify repairs and alterations to the aircraft as well as the equipment installed and maintenance accomplished subsequent to the issuance of the export C of A. The applicant must show that the aircraft has remained in or has been returned to conformity to its FAA TC and is in a condition for safe operation. This may involve extensive inspections accomplished by the FAA, the CAA of the SOM, the CAA of the SOR, the aircraft manufacturer, repair stations, etc., before a U.S. airworthiness certificate can be issued.

**e. Notification of Exceptions.** As specified in our bilateral agreements, a foreign CAA will notify the FAA before issuing an export C of A for an aircraft that is not airworthy. Some bilateral agreements specify that this notification be sent to the geographic responsible Manufacturing Inspection Office (MIO) and others specify that the notification be sent to the geographic responsible FSDO. For a new aircraft, forward the notification to the responsible ACO for disposition. For a used aircraft, forward the notification to the responsible FSDO for disposition. The responsible FAA office may accept all exceptions without further coordination as long as its letter of acceptance includes a statement that the applicant for a U.S. airworthiness certificate for that aircraft is responsible for addressing all exceptions to make the aircraft airworthy. In addition, include in the letter of acceptance a request that the exporting CAA attach the letter of acceptance to the export C of A. Provide this letter to the exporting CAA to enable issuance of the export C of A.

**20-4. Procedures for Issuing an Airworthiness Certificate.** Follow the applicable procedures in paragraph 20-1 of this order and the following:

**a. Review Application.**

(1) Export C of A.

(a) New Aircraft. As required by §§ 21.183(c), 21.184(b), and 21.185(c) for a new standard classification aircraft, new primary category aircraft, and new restricted category aircraft, respectively, verify that the export C of A or other certifying statement from the exporting CAA states conformity to the applicable U.S. TC and condition for safe operation.

(b) Used Aircraft. For a used aircraft, verify the export C of A or other certifying statement issued by the exporting CAA states conformity to a U.S. TC and condition for safe operation.

1 Returning U.S. SOM Aircraft. If available, for U.S. SOM aircraft returning to the United States, review the U.S. export C of A issued when the aircraft was originally exported from the United States; this provides a baseline for the airworthiness determination and also identifies any exceptions listed on that export C of A that may require corrective action.

2 Third Country Aircraft. If available, for used, third country aircraft, review the export C of A or other certifying statement issued by the CAA of the SOM when the aircraft was originally exported from the SOM to identify any exceptions listed on that export C of A

that may require corrective action. Note that any exceptions listed may be exceptions to conformity to the TC of another country, not the FAA's TC.

(c) Verify that any statement(s) required by the applicable bilateral agreement and the aircraft TCDS is included on the export C of A.

(d) Verify the FAA accepted in writing any exceptions on the export C of A per the procedures in the applicable bilateral agreement and that this acceptance is included with the export C of A.

(e) In all cases, you are required by 49 USC to make a finding that the aircraft conforms to an FAA-approved TC and is in a condition for safe operation before issuing an airworthiness certificate for that aircraft.

(2) Bilateral Agreements.

(a) For imported new, standard classification and new restricted category aircraft, verify the United States has an agreement for the acceptance of that aircraft as required by § 21.183(c) and § 21.185(c), respectively.

**Note:** Part 21 does not require a bilateral agreement with the exporting CAA for acceptance of any used aircraft or a new, primary category aircraft.

(b) For all aircraft imported under a bilateral agreement, verify the aircraft category selected on the application is eligible for import into the United States under the applicable bilateral agreement. For an agreement with *Implementation Procedures for Airworthiness (IPA)*, this information is found in section II of the IPA, *Scope of These Implementation Procedures*. Note that the scope of acceptance of some IPAs also specifies acceptable aircraft makes and models.

(c) Review the applicable bilateral agreement to determine what findings the other CAA may make on the FAA's behalf, such as for acceptance of design data for repairs or alterations.

(d) For third-country aircraft, verify the applicable bilateral agreement includes provisions for acceptance of third-country aircraft. If so, consult the agreement to determine what documentation must be provided by the applicant and the extent of the findings the exporting CAA may make on behalf of the FAA. An export C of A issued by an exporting country for which the United States does not have a third-country provision may be acceptable if it was endorsed or validated by the CAA of the SOM, and the product is within the scope of a bilateral agreement between the SOM and the United States.

(e) Service documents such as service bulletins and structural repair manuals approved by the bilateral CAA where an affected product is manufactured are considered to be FAA-approved data unless otherwise noted, provided the United States has a bilateral agreement with that country. However, service bulletins or other similar instructions classified as "mandatory" by the CAA are not mandatory in the U.S. regulatory system unless required by an AD. Therefore, owners or operators of affected U.S.-registered aircraft are not required to comply with service documents or directives issued by the CAAs of other countries unless an FAA AD is issued under part 39, *Airworthiness Directives*. However, for type-certificated products not currently registered in the United States, alternate procedures have been established



involving the processing of foreign Mandatory Continuing Airworthiness Information (MCAI) that may affect the way the airworthiness certification requirements are met. The MCAI process is described in paragraph 20-5 of this order.

(3) TCDS. Verify that any import requirements on the U.S. TCDS have been met.

**b. Review Aircraft Records.**

(1) Evidence of Conformity. Review the applicant's evidence (for example, export C of A, maintenance records, and historical records) used to show the aircraft is entitled to the airworthiness certificate requested.

(a) When an export C of A or equivalent statement identifies exceptions to the FAA TC (for example, alterations and major repairs that have had no prior FAA approval), verify the applicant resolved the exceptions by either having the exceptions approved by the FAA or removing the nonconforming items to establish full conformity to the FAA TC.

(b) Verify that any major alteration and major repair performed while the aircraft was under a foreign SOR was accomplished in compliance with FAA-approved data and that the aircraft conforms to its TC. Under certain bilateral agreements, the FAA has determined that the other CAA may approve design data associated with major alterations or repairs that do not rise to the level of an amended TC or STC on certain categories of aircraft for which either country is the State of Design (SOD). When these data are approved directly by the CAA, or by a delegated individual or organization, they would then be subsequently recognized as FAA-approved data per the provisions of the bilateral agreement; in such cases, do not require the applicant to seek additional FAA approval(s) unless there is clear evidence that the data are erroneous or otherwise unreliable. In all other situations, use of an FAA designated engineering representative (DER) to expedite the design approval process should be encouraged for any major alteration or repair that may have been incorporated without FAA approval. Persons authorized under § 43.7 must record in the maintenance records that the major alterations or repairs conform to FAA-approved data.

(c) Verify that any maintenance performed while the aircraft was under a foreign SOR was performed per methods acceptable to the FAA and that the aircraft conforms to its approved TC or properly altered condition.

(d) Verify that any aircraft article repaired while the aircraft was operating under a foreign SOR was accomplished per methods acceptable to the FAA and that the article conforms to its TC. When this cannot be shown, the article must be removed.

(2) 100-Hour Inspection for Used Aircraft. In addition to the persons listed in paragraph 3-6.a(1) of this order, an inspection performed by a foreign maintenance organization meets § 21.183(d)(2) if all of the following are met:

(a) The United States has a bilateral agreement with implementation procedures (IP) with the exporting country that includes acceptance of this aircraft category by the United States for import.

(b) The inspection was performed by a maintenance organization appropriately certificated by the exporting CAA.

(c) The inspection was completed while the aircraft was operated on the registry of the exporting CAA and within 60 days of submitting the application for a U.S. airworthiness certificate.

(d) The aircraft inspection records demonstrate that the scope of the inspection meets § 43.15.

**c. Inspect Aircraft.**

(1) Verify that no changes or alterations have been made, and that the condition of the aircraft has not deteriorated subsequent to issuance of the export C of A or other certifying statement by the CAA.

(2) If the aircraft was disassembled for shipment and reassembled, flight testing under § 21.191(b) may be required before issuance of the requested, category-specific airworthiness certificate.

**20-5. Aircraft with Mandatory Continuing Airworthiness Information (MCAI).**

a. When an unsafe condition is found to exist in a U.S. type-certificated product that is not currently on the U.S. registry, ACOs may use an alternate procedure concerning the issuance of ADs. Under this alternate procedure each MCAI received will be reviewed to determine whether it meets established criteria for required corrective action. No further action will be taken for an MCAI that does not meet these criteria. An AD will be issued for an MCAI that meets these criteria if there is one or more aircraft of the affected design currently registered in the United States. If no aircraft of the affected design are currently registered in the United States, the FAA may elect to defer publishing any ADs on the MCAIs that meet those criteria until an aircraft of that design becomes U.S.-registered. A list of each MCAI that is deferred will be maintained by the geographically responsible AIR directorate. A statement similar to the following will be found in the *Eligible Serial Numbers* section of the TCDS for an aircraft design on which ADs have not been issued for some or all of the required MCAIs:

“For issuance of an airworthiness certificate the [*airworthiness authority of the SOD*] must certify that the aircraft conforms to the U.S. type certificate and is in a condition for safe operation. In that regard, [*airworthiness authority of the SOD*] will certify that the aircraft complies with all applicable MCAIs it has issued. Also, the FAA must find that the product conforms to its U.S. type certificate and is in a condition for safe operation. To make that finding, all actions required by deferred MCAIs must be accomplished per each MCAI required compliance time, except as noted on the TCDS. Deferred MCAIs must be included in the operator’s airplane maintenance or inspection program to ensure they will be accomplished within the required compliance time. All inspections or alterations required by MCAI that have surpassed the initial compliance time must be accomplished before issuance of the airworthiness certificate.”

b. In some instances, the TCDS also will indicate that certain ADs have been issued for the affected model. Compliance with any applicable AD is required, in addition to compliance with the MCAI.

c. After the first aircraft is U.S. certificated, the geographically responsible directorate will amend the TCDS to list the required MCAIs (formerly found on the responsible directorate’s

listing). Compliance must be shown before subsequent aircraft can be found to be in a condition for safe operation and issued an airworthiness certificate. The directorate will issue ADs for any subsequent MCAIs that meet the required criteria for corrective action and will not issue any retroactive ADs for any MCAIs listed as effective before the first aircraft being certificated.

**d.** This alternative procedure also may be used when an aircraft of the affected model previously was registered in the United States, but currently is not.

**Note:** This procedure is not considered appropriate at this time for other products, for example, engines and propellers, because there is no reliable means to ensure none of these products have been imported and installed in U.S. registered aircraft.

## Chapter 21. Issuing an Export Certificate of Airworthiness (§ 21.329)

### 21-1. Introduction.

**a.** This chapter provides policies and procedures for issuing FAA Form 8130-4, *Export Certificate of Airworthiness*, (export C of A) for certain type-certificated aircraft as provided for under § 21.329. The FAA issues an export C of A to facilitate the acceptance of complete aircraft by other importing CAAs.

**b.** An export C of A only attests to the airworthiness of an aircraft. An export C of A does not:

- (1) Authorize operation of an aircraft.
- (2) Make any attestation concerning any agreement between the exporter and importer.
- (3) Make any attestation concerning compliance with applicable regulations of other Federal agencies such as export restrictions. In issuing an export C of A, you are not responsible for making findings to the regulations of other Federal agencies.

**c.** FAA ASIs are authorized to issue export C of As. The FAA may delegate the issuance of an export C of A per 14 CFR part 183 and the applicable designee management order.

### 21-2. Procedures for Issuing an Export C of A.

#### **a. Review Application.**

(1) FAA Form 8130-1. Verify FAA Form 8130-1, *Application for Export Certificate of Airworthiness*, has been completed per section 6 of appendix A to this order.

(2) Eligibility.

(a) Verify the aircraft is in the normal, utility, acrobatic, commuter, transport, primary, or restricted category; a manned free balloon; or special class of aircraft. Per § 21.329, other aircraft categories are not eligible for an export C of A.

(b) Review the applicable bilateral agreement to determine if the importing country accepts the category of aircraft being exported. Some bilateral agreements require a special arrangement between the FAA and the importing CAA to export primary or restricted category aircraft; if applicable, contact the International Division (AIR-400) for assistance in developing a special arrangement.

**b. Aircraft Manufactured Under Part 21 Subpart F or G.** Per § 21.329(a)(1), verify the aircraft meets the applicable requirements for an airworthiness certificate:

(1) For a standard classification aircraft without a U.S. standard airworthiness certificate, follow the applicable procedures of chapter 3 of this order to verify the aircraft meets the requirements for that certificate.

(2) For a primary category aircraft without a U.S. special airworthiness certificate in the primary category, follow the applicable procedures of chapter 5 of this order to verify the aircraft meets the requirements for that certificate.

(3) For a restricted category aircraft without a U.S. special airworthiness certificate in the restricted category, follow the applicable requirements of chapter 6 of this order to verify the aircraft meets the requirements for that certificate.

(4) For a standard, primary, or restricted category aircraft manufactured under part 21 subpart F or G and that has an airworthiness certificate, verify the certificate is valid per the procedures of paragraphs 21-2.c(1) through (4) of this chapter.

**c. Aircraft Not Manufactured Under Part 21 Subpart F or G.** Per § 21.329(a)(2), an exporter may obtain an export C of A for an aircraft that was not manufactured under part 21 subpart F or G if the aircraft has a valid standard airworthiness certificate or special airworthiness certificate in the primary or restricted category. For such an aircraft, verify the airworthiness certificate is valid:

(1) Registration. Verify the aircraft is currently registered.

(2) Maintenance. Inspect maintenance records to verify that all maintenance required as of the date you inspect the aircraft is complete, including compliance with applicable ADs and component life limits.

(3) ID Plates/Marks. Inspect the aircraft and engine ID plates and propeller marks to verify the information matches the application.

(4) Other. Conduct any other inspections as necessary to verify the airworthiness certificate is valid.

**d. Comply with the Bilateral Agreement.** Review the applicable bilateral agreement to identify and comply with applicable requirements of the importing CAA. Requirements may include:

(1) Type Certificate. Many importing CAAs require a finding of conformity to the TC of the importing country and a corresponding statement on the export C of A. This may include approval by the importing authority of repairs and alterations and verification of compliance to foreign ADs.

(2) Special Import Requirements (SIR). Many importing CAAs require the FAA to verify that the exporter has complied with their SIR. These requirements are not related to the airworthiness of the aircraft but must be satisfied as a condition of shipment at the time of export. SIR may include, for example, the requirement for FAA Form 8130-4 and copies of maintenance records, flight manuals, and other documents. These requirements may be found in FAA AC 21-2, *Complying with the Requirements of Importing Countries or Jurisdictions When Exporting U.S. Products, Articles, or Parts*; appendix 2, [Special Requirements of Importing Countries](#). Identify any SIR applicable to this export.

**Note:** If inconsistencies are identified between a bilateral agreement and a SIR in the course of preparing an export C of A, contact AIR-400 for guidance. FAA ASIs and designees should not contact the importing CAA directly to resolve these inconsistencies. AIR-400 will contact the importing CAA and determine whether a particular export transaction is consistent with the importing CAA's expectations. If necessary, AIR-400 may also determine whether amendments to bilateral agreements and SIRs are necessary and pursue that action with the affected CAA.

(3) Required Statements on the Export C of A. Identify any applicable statements that need to be included on the export C of A as required by the bilateral agreement, the U.S. TCDS, the foreign TCDS, and appendix 2 to FAA AC 21-2.

**e. No Bilateral Agreement.** Although unnecessary, the FAA may issue an export C of A to export an aircraft to a country with which the United States does not have a bilateral agreement; in such cases, the export C of A may only certify conformity to the U.S. TC.

**f. Coordinate Exceptions.** If the aircraft does not conform to the applicable TC, the aircraft is not in a condition for safe operation, or the exporter will not meet the SIR of the importing country, obtain from the exporter a written description of all such nonconformities and noncompliances [hereafter, exceptions]. If the CAA has not previously provided acceptance of all exceptions, an FAA ASI must prepare an accompanying cover letter on FAA letterhead to the importing CAA, requesting the CAA's acceptance of the exceptions and a return reply to the FAA. The responsible FAA office transmits the letter to the importing CAA; electronic transmissions may be used to expedite this process as long as the FAA confirms that the reply is from an authorized person within the importing CAA. Do not issue the export C of A without written acceptance of all exceptions from the importing CAA.

**Note:** For countries with which the United States has a bilateral agreement with separate implementation procedures (IP), instructions for transmittal of requests for acceptance of exceptions are contained in the IP paragraph concerning coordination of exceptions for an export C of A. For countries with which the United States has a Bilateral Airworthiness Agreement (BAA), the requests for acceptance of exceptions should be directed to the importing CAA's appropriate contact identified on the AIR-400 [global contacts list](#). For all non-bilateral countries, if an appropriate recipient and address is unknown, contact AIR-400 for assistance.

**g. Issue the Export C of A.** Upon finding the applicant meets applicable requirements, issue the export C of A as follows:

(1) E-Card. Complete Aeronautical Center Form 8050-72, *Export Certificate Number Assignment Card*, (E-Card) from the information on the application. Enter the E-card number (E-number), on the application and the export C of A. The E-number facilitates the identification and recording of the official export files in AFS-750.

(2) Export C of A.

(a) Complete FAA Form 8130-4, *Export Certificate of Airworthiness*, per the instructions in section 7 of appendix A to this order.

(b) If applicable, attach a copy of the written statement of acceptance of exceptions from the importing CAA of any nonconformity to the TC or noncompliance to SIR of the importing country. Note the original statement of acceptance will be included in the files forwarded to AFS-750. Written CAA acceptance of exceptions transmitted electronically are acceptable for attaching to the export C of A.

(3) Application. Complete block 21 of the application.

(4) Make a maintenance record entry. Although not required, you should make a maintenance record entry to facilitate a finding of airworthiness should this aircraft return to the

U.S registry: “This aircraft was issued an export certificate of airworthiness on [enter date] with E-card serial number [enter E-card S/N] to facilitate export from the United States. [Signature: Jane Doe, Aviation Safety Inspector, SW 41]”

(5) Review with Applicant. Give the applicant the completed export C of A and, if applicable, a copy of the importing CAA’s written acceptance of exceptions. Remind the exporter to comply with § 21.335. When exporting an unassembled aircraft, advise the exporter to forward the manufacturer’s assembly instructions and, if applicable, an FAA-approved flight test checkoff form to the importer.

**h. Review Records and Forward to the Registry.**

(1) Review your records to verify completeness, accuracy, legibility, and compliance with applicable requirements.

(2) Review and forward certification files per appendix B to this order.

**21-3. Unassembled Aircraft.** Verify the importing country has no prohibition on importing unassembled aircraft. In exporting a new, unassembled aircraft manufactured under a PC, the exporter must provide the importer the manufacturer’s assembly instructions and the FAA-approved flight test procedures. This information should also be provided for other unassembled aircraft.

**21-4. Approval of Alterations.** In many instances, an aircraft that conforms to the TC may be modified before export per the purchaser’s requirements. The responsibility for approval and recording of such alterations primarily depends on the registration status of the aircraft:

**a.** If the aircraft is altered while registered in the United States, the applicable requirements of 14 CFR concerning approval of alterations apply. For example, depending on whether any airworthiness certificate had been issued, any necessary flight testing would require the issuance of an experimental certificate.

**b.** If the aircraft is altered after it has been removed from the U.S. registry, approval of the alteration becomes the responsibility of the CAA of the SOR or intended registry. The applicant or exporter is responsible for obtaining the approval. Any flight testing in the United States would require the issuance of an SFA.

**21-5. Multiple Categories.** To retain eligibility for issuance of an export C of A as a standard aircraft after having been operated in the restricted category, the following items apply:

**a.** While being operated in the restricted category, any changes made to the aircraft that are to be retained when in normal category operation, or any operations that are outside of the standard classification operating limitations, must be approved per the regulations and procedures applicable to an aircraft having a standard airworthiness certificate.

**b.** If the TCDS for an aircraft includes both standard and restricted category, and the maximum gross weight and/or other operating limitations for the restricted category are higher than that for standard classification, the aircraft is not eligible for issuance of an export C of A as a standard aircraft, after having been operated in the restricted category, unless—

(1) The TCDS specifically states that the aircraft is eligible for operation under a standard airworthiness certificate after having been operated at the limitations applicable to the restricted category; or

(2) If the TCDS does not have such a note or other reference, the operations outside of the standard classification operating limitations, including increased gross weight, had been approved as appropriate for an aircraft having a standard airworthiness certificate.

**21-6. Lost FAA Form 8130-4.**

**a.** When FAA Form 8130-4 has been declared lost, the following information is required:

(1) A written statement from the importer stating the form has been lost; and

(2) Evidence of previous export, traceable by invoice to the aircraft make, model, and S/N from the exporter.

**b.** When these actions have been taken, a copy of the original form can be provided if available and if the aircraft make, model, and S/N on that copy matches the request.



## Chapter 22. Special Flight Authorizations for Foreign Civil Aircraft (§ 91.715)

**22-1. Introduction.** This chapter provides policies and procedures for issuing a special flight authorization (SFA) for foreign civil aircraft, per the requirements of § [91.715](#).

**a.** The navigation of foreign registered civil aircraft in the United States is permitted under 49 USC 41703(a) as implemented by [part 375](#), *Navigation of Foreign Civil Aircraft within the United States*. Part 375 specifies that a foreign civil aircraft being operated in the United States must carry a current and effective registration and airworthiness certificate issued or rendered valid by the SOR. Part 375 also allows the operation of foreign aircraft that do not carry current airworthiness certificates, but that have been issued an SFA by the FAA.

**b.** Foreign civil aircraft that do not have a current airworthiness certificate issued by the SOR meeting Annex 8 to the ICAO Convention require an SFA issued by the FAA per § 91.715(a).

**c.** An aircraft registered in a country that is not an [ICAO member state](#) always requires an [authorization from the Department of Transportation \(DOT\)](#) and an SFA issued by the FAA before operating in the United States.

**d.** Advise prospective applicants to review FAA AC 20-65, *U.S. Airworthiness Certificates and Authorizations for Operation of Domestic and Foreign Aircraft*, for guidance concerning an application for an SFA.

**e.** FAA ASIs are authorized to issue SFAs.

**22-2. Eligibility.** Foreign civil aircraft are eligible for an SFA as follows:

**a.** Section 91.715 is applicable to foreign aircraft that do not have a current airworthiness certificate, or an equivalent to a U.S. standard airworthiness certificate, that indicates that the aircraft complies with a detailed and comprehensive airworthiness code as provided by Annex 8 to the ICAO Convention.

**b.** An SFA is required for an aircraft carrying an airworthiness certificate, flight permit, or similar document issued by the SOR that is equivalent to a U.S. special airworthiness certificate.

**c.** An SFA is required for either of the following scenarios:

(1) The aircraft is registered in an ICAO member state but does not have an airworthiness certificate attesting that the aircraft complies with Annex 8 to the ICAO Convention, or it has an invalid airworthiness certificate.

(2) The aircraft is registered in a non-ICAO member state regardless of the type of airworthiness certificate issued or its planned operation.

**d.** An SFA must not be issued for the following:

(1) Foreign Military Aircraft. Refer an applicant requesting an SFA for a foreign military aircraft to the U.S. [Department of State](#). Such aircraft may enter the United States only with a diplomatic clearance that would be issued solely on a government-to-government, non-commercial basis.

(2) Special Interest Flight. The aircraft is registered in a country that has special overflight approval requirements under the U.S. Department of State Special Interest Flight (SIF)

program. For requests involving aircraft identified under the SIF program, the foreign owner/operator must receive overflight clearance from the U.S. Department of State. For further information, contact FAA Air Traffic System Operation, AJR-2, or refer to part 3 of the latest [Notice to Airmen](#).

- (3) A Canadian Owner–Maintenance category aircraft.

### **22-3. Procedures.**

#### **a. Application and Document Review.**

- (1) General. The application for an SFA may be in the form of a letter, email, or fax from the owner or operator. If the aircraft is located in the United States, the local FAA office is responsible for processing the SFA. If the aircraft is not in the United States, the region or directorate having jurisdiction over FAA matters in that country is the office responsible for processing the application.

- (2) Aviation Events. The application may be made to the AFS division manager or AIR directorate manager of the FAA region in which the event is located. Aviation events encompass many different activities. Refer to FAA Order 8900.1 for additional information.

- (3) SFA for Operation of Canadian-Registered, Recreational Aircraft in the United States. Operation in the United States of Canadian-registered, amateur-built aircraft or basic/advanced ultralight aeroplanes is permitted by the issuance of an SFA under § 91.715. The SFA must be obtained before operation in the United States is permitted. An SFA may be obtained from the FAA for operation of these aircraft in U.S. airspace by following the [instructions](#) on the FAA website.

- (4) Applications for Individual Aircraft Authorizations. An application for an SFA must contain the following information, as applicable, and any other information deemed appropriate by the issuing FAA field office:

- (a) The name and address of the applicant.
- (b) The name and address of the aircraft owner.
- (c) The purpose for which the SFA is requested, including-

- 1 Whether the aircraft will be used as a test aircraft in the development of a U.S. STC and will require flight testing for showing compliance with regulations; and

- 2 If flying the aircraft to a base where repairs or maintenance are to be performed, a description of the needed repairs and the operating limitations, if any, assigned by the SOR.

- (d) The type of airworthiness document, if any, issued for the aircraft by the SOR.

- (e) Information such as total aircraft time, maintenance status, date of last inspection, type of inspection, and the name and title of the person performing the inspection. This information is necessary to establish that the requested flight(s) will not adversely affect safety.

- (f) The make, model, and S/N of the aircraft.

- (g) The assigned nationality and registration marks and a valid copy of the registration document issued by the SOR.

## (h) Itinerary.

- 1 The country of origin.
- 2 The base of operations for the proposed flights and the areas where the flights will be conducted.
- 3 The proposed U.S. point of entry and the itinerary while operating in the United States.
- 4 The proposed U.S. point of departure and the ultimate destination.

## (i) The duration for which the SFA is requested.

(5) Applications for Blanket Authorizations. A blanket SFA may be requested for an operation that will be conducted many times during a given period or for a number of aircraft engaged in the same operation, for example, an export delivery flight. A blanket SFA may be issued when deemed appropriate by the issuing office manager. An application for a blanket SFA should contain the following information:

(a) The name and address of the promotion sponsor; or the name and address of the manufacturer, when the purpose is for export.

(b) The purpose(s) for which the blanket SFA is requested and the number of signed copies required to meet operating needs.

(c) Enough information to establish that the flights will not adversely affect safety.

(d) For aviation events, the name and address of the owner or operator, make, model, S/N, registration number, type of airworthiness certificate carried, reason why the aircraft does not comply with standard airworthiness requirements, and aircraft maintenance provisions. The listing of owners, pilots, and aircraft participating may be provided separately.

(e) Any other information deemed appropriate by the ASI.

**b. Aircraft and Record Inspection.** The aircraft may need to be inspected before issuance of the SFA to ensure it is capable of safe flight for the intended purpose(s). The ASI may make, or require the applicant to make, appropriate inspections or tests considered necessary for safety.

**c. Issuance of an SFA and Operating Limitations.**

(1) Numbering. Each SFA issued must be assigned a number (beginning with "01") that is prefixed by the appropriate location identifier code of the FAA office, for example, AGL-MKE-FSDO-13 01 or ASW-OKC-MIDO-41 01. If an SFA is extended, a new SFA must be issued using the number assigned to the original followed by the letter "A," for example, AGL-MKE-FSDO-13 01A. In some cases an SFA may require extension more than once. The second extension would still use the original number followed by the letter "B."

(2) Duration. The SFA is usually issued with the duration requested by the applicant. However, the issuing office may issue the SFA with a different duration. For example, if the purpose is one for which delays may be expected, such as in STC projects, the office may establish a longer duration than was requested to preclude the need for extensions.

(3) Blanket SFA: When issuing multiple copies of a blanket SFA to an applicant, advise the applicant that the applicant is accountable for each signed copy. Refer to figures F-4 and F-6 of this order for examples of blanket authorizations.

(4) Operating Limitations. Because an SFA is issued to cover operation of an aircraft that may not meet the airworthiness standards established by ICAO, appropriate operating limitations must be prescribed to minimize hazards to persons or property. Appendix F of this order includes examples of operating limitations for SFAs for specific flight operations; these examples are not intended to be prescriptive or exhaustive. You may prescribe additional limitations deemed necessary in the interest of safety. In certain circumstances, such as a flight for export delivery, additional limitations may not be necessary. The limitations should be similar to what you would issue to a comparable U.S.-registered aircraft. Minimum operating limitations include the following:

(a) General. The following are applicable to all SFAs issued unless otherwise noted:

- 1 A copy of this authorization must be available to the pilot in command when operating under the terms of this SFA.
- 2 You must comply with all limitations imposed by the SOR and this authorization.
- 3 Persons or property must not be carried for compensation or hire.
- 4 This authorization is valid in the United States only.
- 5 Upon request, this authorization must be made available to an FAA inspector.
- 6 This authorization is valid until [*insert expiration date*] unless superseded or rescinded.

(b) Damaged Aircraft.

1 Aircraft Located in the United States. The determination that the aircraft has been damaged to the extent that the airworthiness certificate is ineffective is the responsibility of the SOR. Under Annex 8 to the ICAO Convention, the SOR may either prohibit further flights of the aircraft until it is restored to an airworthy condition, or may prescribe limitations under which the aircraft would be safe to fly to a base where repairs can be made. In the event the SOR requests the FAA to inspect the aircraft on its behalf, the regional office or directorate should arrange for inspection of the aircraft by personnel from the nearest FSDO or MIDO. Any limitations considered necessary because of the inspection must be prescribed as special limitations in addition to the minimum limitations.

2 Aircraft Located Outside the United States. An applicant with a foreign registered aircraft needing repair, who wants the repair to be accomplished at a manufacturer or repair facility in the United States, may do so regardless of the country in which the damage was sustained. The SOR remains responsible for inspection of the aircraft and for establishing any necessary special operating conditions and limitations.

(c) Change in Nationality. This paragraph applies when an airworthiness certificate has been invalidated by the new SOR. If the aircraft complies with U.S. and/or ICAO

airworthiness requirements, except for the invalid airworthiness certificate, it may not be necessary to prescribe additional operating limitations. Note that the aircraft need not have a registration issued by the country of the foreign buyer, but must bear the ID marks issued by the SOR or intended registry.

(d) Flight Testing. The ASI must evaluate the reasons the flight test must be conducted in the United States, the qualifications of the individual or company in the United States who will be primarily responsible for the flight test operations, and the nature of the flight tests. The conclusions reached from that evaluation are an important factor in determining the special operating limitations that must be prescribed in addition to the minimum limitations. The following operating limitations would generally be applicable, but may be altered or added to as deemed appropriate:

- 1 All flight tests must be conducted in compliance with § 91.305.
- 2 All maintenance and inspection of the aircraft must be conducted under the direct supervision of qualified personnel holding appropriate licenses issued or rendered valid by the [*insert SOR*] CAA and according to [*insert SOR*] aircraft maintenance requirements.
- 3 Except for flight tests conducted according to the terms of this authorization, additional flights within the United States must be limited to those necessary to proceed from [*specify origin*] to [*insert the name of the airport or other area from which the flight test will be conducted*], and return to [*specify destination*] by the most practical direct route, considering safety risks.

(e) Flight Training of Customers, Employees, or Designees. In most cases, an SFA issued for this purpose would be a blanket authorization issued to an aircraft manufacturer. The following operating limitations, in addition to the required standard limitations, are worded to indicate that more than one aircraft is involved. If an SFA under this paragraph is issued for a single aircraft, an appropriate change must be made.

1 Each aircraft operated for customer crew training flights must carry this SFA attached to a statement that includes the name and address of the aircraft owner, the aircraft's assigned nationality and registration marks, and the dates on which the customer crew training flights are scheduled to begin and end. This limitation applies only if a blanket authorization has been issued.

2 All customer crew training and aircraft maintenance must be conducted under the direct supervision of [*insert name of manufacturer*] personnel.

(f) Ferrying an Aircraft for Export Delivery.

1 Individual Aircraft Authorizations. The limitations below may be omitted if the aircraft has a valid FAA export C of A with no major exceptions listed, and is not carrying extra fuel or navigational equipment. If temporary fuel system(s)/equipment are installed and/or the aircraft is to be operated in excess of its maximum certificated takeoff weight, the limitations below must be included as applicable:

(aa) Operation in the overweight condition must avoid cities, towns, villages, and congested areas, or any other areas where the flights might create hazards to persons or property.

(bb) The aircraft must not be operated with temporary fuel system(s) or temporary navigation equipment installed, or at a weight in excess of its maximum certificated takeoff weight, unless approved in writing by the CAA of the SOR.

2 Blanket Authorization. The limitations applicable to an individual aircraft authorization generally apply to a blanket authorization. Because the manufacturer is authorized to issue copies without individual FAA review, the blanket authorization must be worded so any possible situation will be covered by each copy issued. When issuing multiple copies for a blanket SFA, add a limitation requiring the applicant to attach a statement to the SFA including the name and address of the aircraft owner; nationality and registration marks displayed on the aircraft; make, model, and S/N of the aircraft; date the copy is issued for the aircraft; and signature of authorized representative. Refer to figures F-4 and F-6 of this order for examples of blanket authorizations.

(g) Demonstration or Test. The issuing office should find that the applicant for an SFA for demonstration has satisfied, as applicable, the items listed in part 91. Persons having an interest in the demonstration, for example, customers, may be carried in an aircraft issued an SFA for demonstration.

(5) Examples. Examples of SFAs for various flight operations are shown in appendix F to this order.

**d. Review and Maintain Records.**

(1) Review your records to verify completeness, accuracy, legibility, and compliance with applicable requirements.

(2) The issuing office must establish a permanent file for the record and must keep at least one copy of each SFA issued. This file also serves as a control in assigning sequential numbers to new issuances. An alternate system for control may be used at the office's discretion.

## Chapter 23. Other Policies and Procedures

### Section 1. Introduction

**23-1. Introduction.** This chapter contains other miscellaneous policies and procedures related to issuing an airworthiness certificate.

### Section 2. Miscellaneous

#### 23-2. Public Aircraft Operations (PAO).

- a. Public aircraft are defined in [49 USC 40102\(a\)\(41\)](#).
- b. If an applicant intends to perform both public and civil aircraft operations, advise them that when changing from a public status to a civil status, the aircraft must meet all civil requirements. Depending on the complexity of the public operations, it is recommended that an operator have written instructions on how it transitions from public to civil status.
- c. Note that a civil airworthiness certificate issued under 14 CFR is not in effect during PAO.
- d. For additional information, refer to FAA Order 8900.1, [Flight Standards Information Management System](#) (FSIMS), volume 3, chapter 14; and FAA AC 00-1.1, *Public Aircraft Operations*.

**23-3. Production Flight Testing of Aircraft Built Under Military Contract.** Aircraft built under a military contract with military aircraft identification marks do not require FAA registration or the issuance of an airworthiness certificate for flight testing or demonstration before acceptance by the military. However, aircraft of military design built independently by manufacturers and not having military identification are required to obtain FAA registration and an airworthiness certificate because these aircraft are considered civil aircraft.

#### 23-4. Operation of Civil Aircraft with a Door Open or Removed.

- a. Owners or operators who are interested in obtaining authorization for operation of aircraft with a door open or removed for parachuting or other special operations must forward a written request to the FSDO having jurisdiction over the area in which the operations are to be conducted. The request must contain the following information:
  - (1) Name and address of the registered aircraft owner;
  - (2) Make, model, serial, and N-number of the aircraft;
  - (3) Location where the aircraft is normally based; and
  - (4) Reason for operating the aircraft with a door removed.
- b. Aircraft may be approved to operate with a door open or removed by TC, amended TC, STC, authorization in the AFM, or field approval.
  - (1) Aircraft approved to operate with a door open or removed by TC, amended TC, STC, or authorization in the AFM do not require any additional limitations or authorization from the FSDO.

(2) Aircraft approved to operate by issuance of FAA Form 337, *Major Repair and Alteration*, must have operating limitations issued. As necessary, refer to FAA Order 8300.16, *Major Repair and Alteration Data Approval*, for related policies and procedures. The FAA must note on the operating limitations the aircraft make, model, N-number, and S/N; type of operation authorized; date of issuance; name; and district office number. For an aircraft that requires removal or opening of a particular door, specify in the limitations which door may be removed or opened.

**Note:** A copy of the limitations must be forwarded to AFS-750.

c. Removal or installation of a cabin door for the specified aircraft is considered maintenance and as such must be accomplished by persons authorized under § 43.3.

d. If operations of rotorcraft with the doors opened or removed obstructs the N-number marks from view, the operator must notify the appropriate managing office in writing detailing the nature of the proposed operation and the proposed dates of operation with doors removed. The managing office will then instruct the operator to affix temporary N-number marks on an authorized surface required by § [45.27\(a\)](#). The size of the marks must comply with § [45.29\(b\)](#) unless no authorized surface is large enough for display of marks meeting the size requirements of this section. The rotorcraft would then be marked on the largest authorized surface with marks as large as practicable, as allowed by § 45.29(f). Any remnants of the permanent N-number marks must be obliterated so as not to confuse identification of the rotorcraft with temporary marks. The temporary marks must be able to endure flight operations in various weather conditions. Flight operations must be authorized in writing by the managing office for a specified time and purpose. The managing office will verify the temporary marks comply with part 45 and that the rotorcraft is returned to its permanent marking scheme.

e. Under appendix A to part 43, paragraph (c)(15), a pilot may be authorized to remove or reinstall passenger seats. Removal or installation of control sticks and wheels must be performed per the applicable sections of part 43.

f. Refer to figure G-1 of appendix G to this order for sample limitations for the operation of an aircraft with a door removed.

### **23-5. Replacement ID Plates.**

a. When a replacement ID plate is required, the owner or the owner's authorized representative will contact their local FAA office. The FAA determines whether the request is valid and provides a letter to the applicant with the FAA's finding. If the FAA finds that the request is valid, the applicant includes the FAA letter with their request for the replacement ID plate from the appropriate manufacturer.

b. Upon notification by the applicant, which must include the FAA's letter, the product manufacturer may then issue the replacement ID plate.

c. The old ID plate, when available, must be voluntarily surrendered by the owner with a written statement to the FAA office that authorized the replacement. The FAA office must make a copy of the plate and then either physically destroy it or, if requested by the manufacturer, return it to the manufacturer via certified mail. The FAA office must then send a letter to AFS-750 stating that the surrendered plate has been destroyed. AFS-750 will include the letter in the permanent aircraft records file.



**23-6. New Aircraft Manufactured Under § 21.6(b).** If you receive an application for an airworthiness certificate for a new aircraft manufactured under § 21.6(b), contact AIR-113 for assistance.

### **Section 3. Military Surplus Flight Safety Critical Aircraft Parts, Engines, & Propellers**

#### **23-7. Evaluation.**

**a.** This paragraph provides guidance for use in evaluating and determining the eligibility of U.S. military surplus Flight Safety Critical Aircraft Parts (FSCAP), engines, and propellers for installation on FAA type-certificated products. Many military surplus FSCAPs have the potential to be approved for installation on aircraft that hold special or standard airworthiness certificates.

**b.** Military engines, propellers, and articles are categorized as new or used and fall into one of the following categories:

- (1) Dual use FSCAPs;
- (2) Military unique FSCAPs;
- (3) Dual use military surplus engines, propellers, and articles; and
- (4) Military unique surplus engines, propellers, and articles.

**c.** Before these military engines, propellers, and articles are installed on type-certificated products, the installer must determine that they are—

- (1) Eligible for installation, and
- (2) Airworthy.

**d.** There are certain unique design considerations and FAA certification requirements for engines and propellers. Therefore, the eligibility and evaluation processes for military surplus engines, propellers, and articles are described separately in paragraph 23-10 of this order.

**Note:** For eligibility and evaluation of non-flight safety critical articles, safety critical aircraft articles, engines/propellers, and their articles, use FAA AC 20-62, *Eligibility, Quality, and Identification of Aeronautical Replacement Parts*.

#### **23-8. Dual Use FSCAP (New or Used).**

**a. Eligibility Screening.** New or used dual use FSCAPs may be eligible for installation on FAA type-certificated products with standard or special airworthiness certificates. The eligibility determination is made based on a review of the following pertinent Department of Defense (DOD) historical records:

- (1) FSCAP identification: part number, DOD National Stock Number, and S/N.
- (2) Manufacturer, DOD Commercial and Government Entity (CAGE) code, and date of manufacture.
- (3) Total time in service.
- (4) Current status of life limited FSCAPs.

(5) Time since the last overhaul of each FSCAP that is required to be overhauled on a specified time basis.

(6) Identification of current inspection status, including time since last required inspection or maintenance performed.

(7) Current status of applicable AD and DOD directives (for example, engineering changes, technical orders, or maintenance work orders) including the date and method of compliance. If the AD involves recurring action, the current status includes the time and date when the next action is required.

(8) A list of current major alterations or repairs for each FSCAP.

(9) Date any work was accomplished.

(10) Work authentication.

**b. Airworthiness Determination.** After determining the FSCAP is eligible to be installed on a type-certificated product, the FSCAP must be evaluated to determine whether it is airworthy.

(1) New Dual Use FSCAP.

(a) For an FSCAP to be installed on products with standard airworthiness certificates, the FSCAP must be airworthy.

(b) For an FSCAP to be installed on products with special airworthiness certificates, the FSCAP must be cited in the FAA-accepted maintenance manual and illustrated parts catalog (IPC) specified on the applicable TCDS, and must be in a condition for safe operation.

(2) Used Dual Use FSCAP.

(a) For an FSCAP to be installed on products with standard or special airworthiness certificates, the FSCAP must be evaluated using the procedures for new dual use FSCAPs above, as appropriate, to determine the FSCAP's airworthiness per § 43.13.

(b) The FSCAP also must be evaluated by persons authorized under §§ 43.7(a), (c), (d), or (e) by using the following applicable methods, means, or data sources:

1 Differences between military and civil versions (for example, possible DOD alterations or repairs performed);

2 Current manufacturer or DOD technical data and procedures to perform tests and inspections, including current life limited articles list;

3 Comparison of military time and/or cycle count for accumulated operational time versus civil (for example, "Did the military use a different method than civil operators to account for accumulated operational time?");

4 Nondestructive tests, as required;

5 Bench test or functional test, as required;

6 Results of tests and inspections recorded;

- 7 Complete alteration or repair records;
- 8 Manufacturer's ID plate;
- 9 Flight, maintenance, and/or structural manual(s), and IPC; and
- 10 Instructions for Continued Airworthiness (ICA).

**c. Approval for Installation.** Persons authorized under § 43.7 may approve dual use FSCAPs for installation on type-certificated products if the FSCAP successfully completed the eligibility screening and airworthiness evaluation. The installer must be able to determine that the installation of the FSCAP will leave the product in compliance with all regulations and in a condition for safe operation. The authorized individual completing the eligibility screening and/or airworthiness evaluation must make a maintenance record entry that clearly documents the results of the evaluation. Each maintenance record entry per § 43.9 should include a description of the work performed, the completion date of the work performed, and the name of the person performing the work or authorized to sign.

### **23-9. Military Unique FSCAP.**

**a. Eligibility Screening.** New or used military unique FSCAPs may be eligible for installation on civil aircraft with special airworthiness certificates under § 21.305(c) in conjunction with type certification procedures for a product or per a TCDS. Military unique FSCAPs are not eligible for installation on a civil aircraft with a standard airworthiness certificate. The eligibility determination is made based on a review of the following pertinent DOD historical records:

- (1) FSCAP identification: part number, DOD National Stock Number, and S/N.
- (2) Manufacturer, DOD CAGE code, and date of manufacture.
- (3) Total time in service.
- (4) Current status of life limited FSCAPs.
- (5) Time since the last overhaul of each FSCAP that is required to be overhauled on a specified time basis.
- (6) Identification of current inspection status, including time since last required inspection or maintenance performed.
- (7) Current status of applicable ADs and DOD directives, (for example, engineering changes, technical orders, or maintenance work orders) including the date and method of compliance. If the AD involves recurring action, the current status includes the time and date when the next action is required.
- (8) A list of current major alterations or repairs for each FSCAP.
- (9) Date any work was accomplished.
- (10) Work authentication.

**b. Airworthiness Determination.** After determining the FSCAP is eligible to be installed on a type-certificated product with a special airworthiness certificate, the FSCAP must be evaluated to determine whether it is airworthy.

(1) New Military Unique FSCAP. The FSCAP must be cited in the FAA-accepted, military-approved maintenance manual and IPC specified on the applicable aircraft TCDS and must be in a condition for safe operation.

(2) Used Military Unique FSCAP.

(a) The FSCAP must be cited in the FAA-accepted, military-approved maintenance manual and IPC specified on the applicable aircraft TCDS and must be in a condition for safe operation.

(b) The FSCAP also must be evaluated to determine airworthiness per § 43.13, by using the following applicable methods, means, or data sources:

- 1 Special equipment or test apparatus, as required;
- 2 Current manufacturer or DOD technical data and procedures to perform tests and inspections;
- 3 Comparison of military time and/or cycle count for accumulated operational time versus civil time (for example, “Did the military use a different method than civil operators to account for accumulated operational time?”);
- 4 Nondestructive tests, as required;
- 5 Bench test or functional test, as required;
- 6 Results of tests and inspections recorded;
- 7 Complete alteration or repair records;
- 8 Manufacturer’s ID plate;
- 9 Flight, maintenance, and/or structural manual(s), and IPC; and
- 10 ICA.

**c. Approval for Installation.** Persons authorized under § 43.7 may approve military unique FSCAPs for installation on type-certificated products if the FSCAP successfully completed the eligibility screening and the airworthiness evaluation. The installer must be able to determine that the installation of the FSCAP will leave the product in compliance with the TCDS and in a condition for safe operation. The authorized individual completing the eligibility screening and/or airworthiness evaluation must make a maintenance record entry that clearly documents the results of the evaluation. Each maintenance record entry per § 43.9 should include a description of the work performed, the completion date of the work performed, and the name of the person performing the work or authorized to sign.

### **23-10. Dual Use & Unique Military Surplus Engines, Propellers, & Their Articles.**

**a.** New, used, or parted out military surplus engines, propellers, and articles should not be presumed to be eligible for installation on FAA type-certificated aircraft. Military surplus engines, propellers, and articles are either dual use or military unique.

**b.** The pertinent accompanying historical records documentation is essential for—

(1) The Defense Reutilization and Marketing Office’s public sale of engines, propellers, and articles;

- (2) Categorizing the engines, propellers, and articles as dual use or military unique; and
- (3) Establishing the eligibility and airworthiness of the engine, propeller, and articles.

**c.** Military surplus engines and propellers may be type-certificated under § 21.17, which requires issuance of a new TC and compliance with the applicable requirements, such as part 33, Airworthiness Standards: Aircraft Engines, for engines and part 35, Airworthiness Standards: Propellers, for propellers. For a military aircraft issued a TC under §§ 21.25 or 21.27, the applicable engine or propeller is not required to be issued a separate TC. However, note that the engine and propeller cannot be certificated separately under these two sections. Any eligible military surplus engines or propellers will be referenced on the aircraft's TCDS. However, military unique surplus engines, propellers, and articles may be eligible for installation only on civil military surplus aircraft with special airworthiness certificates.

**d.** Engines, propellers, and articles are deemed flight safety critical if their failure, malfunction, or absence could cause a catastrophic failure resulting in loss or serious damage to the aircraft or an uncommanded engine shutdown resulting in an unsafe condition. Such conditions include, but are not limited to, release of engine or propeller debris, propeller separation, and, in rotorcraft, a transient or continuous power loss, or loss of power response. Examples of flight safety critical engine and propeller articles are life limited articles, rotating articles, and, for rotorcraft, actuating articles.

**e.** Dual Use Military Surplus Engines, Propellers, and Articles. Dual use military surplus engines and propellers that hold a TC, and their articles, may be eligible for installation on civil products per the applicable regulations. The authorized individual completing the eligibility screening and/or the airworthiness evaluation should make a record entry to document the result(s).

(1) Eligibility Screening. New or used dual use engines, propellers, and articles may be eligible for installation on FAA type-certificated civil or surplus military aircraft with standard or special airworthiness certification. A U.S. TC must have been issued for a corresponding civil model engine or propeller under § 21.21 at the time of manufacture, or a U.S. aircraft TC must have been issued and the engines or propellers referenced in the aircraft TCDS under §§ 21.27 or 21.25. The eligibility determination is made based on a review of the following pertinent historical records:

- (a) Engine, propeller, and article ID (article part number and S/N and manufacturer).
- (b) Contract or purchase order number under which the engine, propeller, or article was manufactured.
- (c) Evidence of engine, propeller, and article status, for example, serviceable or unserviceable, per DOD Form (DD Form) 1574-1, *Serviceable Label Materiel*, or Department of the Army (DA) Form 2410, *Component Removal/Repair/Install/Gain/Loss Record*.
- (d) Complete historical records maintained by the military, the manufacturer, and any other prior owner(s), pertaining to inspection, repair, alteration, maintenance, and operation of the engine from the time of acceptance by the military, including, but not limited to, DA Form 2408-5, *Equipment Modification Record*, and DA Form 2408-6, *Aircraft Component*

*Historical Record.* The maintenance records should also include the date on which the work was accomplished and work authentication.

(e) Current status of applicable ADs and DOD directives (for example, engineering changes, technical orders, or maintenance work orders) including the date and method of compliance; and, if the AD involves recurring action, the time and date when the next action is required.

(2) Airworthiness Determination. After determining the article is eligible to be installed on a type-certificated product, the article must be evaluated to determine whether it is airworthy.

(a) New Dual Use Engines, Propellers, and Articles.

1 For engines, propellers, and articles to be installed on aircraft with standard airworthiness certificates, each engine, propeller, and article must conform to the approved TC, must have been manufactured under an FAA-approved production system, and must be in a condition for safe operation.

2 For engines, propellers, and articles to be installed for aircraft with special airworthiness certificates, each engine, propeller, and article must be listed in the FAA-accepted, military-approved maintenance manual or FAA-accepted civil maintenance manual and IPC specified on the TCDS, and must be in a condition for safe operation.

(b) Used Dual Use Engines, Propellers, and Articles.

1 For engines, propellers, and articles to be installed on aircraft with standard airworthiness certificates, an evaluation should be performed by an FAA engineer or an appropriately authorized DER. When a DER is used, the DER's recommendations or decisions must be substantiated in writing using FAA Form 8110-3, *Statement of Compliance With Airworthiness Standards*, and include supporting documents. Each engine, propeller, and article must conform to the approved TC, have been manufactured under an FAA-approved production system, and be in a condition for safe operation. In addition, the following should be evaluated:

(aa) Operational differences between military and civil versions (for example, possible DOD alteration or repair performed) in performance standards as listed in the TCDS (for example, thrust, shaft horsepower, revolutions per minute (RPM), and ratings), and in specifications, as listed in the TCDS and the maintenance manuals (for example, fuel type, oil, weight).

(bb) Complete historical operational records. This includes extreme operational conditions such as accidents, fires, or exceeding engine operating limits.

(cc) Complete historical maintenance records; for example, alterations and repairs, and complete documentation of work performed by an FAA-approved facility that was properly rated for the work performed and that conformed to the FAA-approved data.

(dd) ICA.

(ee) Emission requirements as stated in the TCDS (engine only).

(ff) Comparison of military time and/or cycle count for accumulated operational time and cycle versus civil (for example, "Did the military use a different method than civil operators to account for accumulated operational time and what are the expended

equivalent civil cycles of the articles, taking into account their past operational history and mission profile?”).

(gg) Current manufacturer’s technical data to perform tests or inspections.

(hh) Written results of inspections performed (for example, maintenance record entry; FAA Form 8130-3, *Authorized Release Certificate*; or FAA Form 337 for approval for return to service) and a completed FAA Form 8130-9, *Statement of Conformity*.

(ii) The application of the identifying marking requirements per §§ 45.11 and 45.13, as applicable.

(jj) Engine, propeller, or article overhaul records, including overhaul per civil engine/propeller manuals.

(kk) Verification that the engine, propeller, or article was produced by an FAA production approval holder (PAH).

2 For engines, propellers, and articles to be installed on aircraft with special airworthiness certificates, an evaluation should be performed by an FAA engineer or an appropriately authorized DER. When a DER is used, the DER’s recommendations or decisions must be substantiated in writing using FAA Form 8110-3, *Statement of Compliance With Airworthiness Standards*, and include supporting documents. Each engine, propeller, and article must be listed in the FAA-accepted, military-approved maintenance manual or FAA-accepted maintenance manual and IPC specified on the TCDS, and be in a condition for safe operation. In addition, the following should be evaluated:

(aa) Complete historical operational records. This includes extreme operational conditions such as accidents, fires, or engine exceeding operating limits.

(bb) Complete historical maintenance records; for example, alterations and repairs, and complete documentation of the work performed.

(cc) ICA.

(dd) Emission requirements as stated in the TCDS (engine only).

(ee) Comparison of military versus civil time and/or cycle count for accumulated operational time and cycle (for example, “Did the military use a different method than civil operators to account for accumulated operational time and what are the expended equivalent civil cycles of the articles, taking into account their past operational history and mission profile?”).

(ff) Current manufacturer’s technical data to perform tests or inspections.

(gg) Written results of inspections performed (for example, maintenance record entry, FAA Form 8130-3, or FAA Form 337, for approval, for return to service) and a completed FAA Form 8130-9, signed by an authorized person.

(hh) The application of the identifying marking requirements per §§ 45.11 and 45.13, as applicable.

(ii) Engine, propeller, or article overhaul records, including overhaul per civil engine/propeller manuals.

(jj) Verification that the engine, propeller, or article was produced by an FAA PAH.

(3) Approval for Installation. Persons authorized under § 43.7 may determine dual use engines, propellers, or articles for installation if the engine, propeller, or article has successfully completed the eligibility screening and airworthiness evaluation. The installer must be able to determine that the use of the engine or propeller, and/or the installation of the article, will leave the aircraft in compliance with pertinent regulations and in a condition for safe operation. The authorized individual completing the eligibility screening and/or airworthiness evaluation must make a maintenance record entry that clearly documents the results of the evaluation. Each maintenance record entry per § 43.9 should include a description of the work performed, the completion date of the work performed, and the name of the person performing the work or authorized to sign.

**f. Military Unique Engines, Propellers, and Their Military Unique Articles.** Military unique engines, propellers, and articles are FSCAPs that were specifically and uniquely designed and manufactured for the U.S. military for which there originally was no corresponding FAA-approved PAH engine, propeller, or article for civil application.

(1) Eligibility Screening. New or used military unique engines, propellers, and articles may be eligible for installation on surplus U.S. military aircraft type-certificated under § 21.25(a)(2). The eligibility determination is made based on a review of the following pertinent DOD historical records:

(a) Engine, propeller, article ID (article part number and S/N and manufacturer).

(b) Contract or purchase order number under which the engine, propeller, or article was manufactured.

(c) Evidence of engine, propeller, and article status; for example, serviceable or unserviceable, per DD Form 1574-1 or DA Form 2410.

(d) Complete historical records maintained by the military, the manufacturer, and any other prior owner(s), pertaining to inspection, repair, alteration, maintenance, and operation of the engine from the time of acceptance by the military, including, but not limited to, DA Form 2408-5 and DA Form 2408-16. The maintenance records also should include the date that the work was accomplished and work authentication.

(e) Current status of applicable ADs and DOD directives (for example, engineering change, technical order, maintenance work order), including the date and method of compliance; and, if the AD involves recurring action, the time and date when the next action is required.

(2) Airworthiness Determination. After determining that the engine, propeller, or article is eligible to be installed on a surplus military aircraft with special airworthiness certificates, each engine, propeller, or article must be evaluated to determine whether it is airworthy.

(a) New Military Unique Engines, Propellers, and Articles. For new military unique engines, propellers, and their associated articles to be installed on surplus military aircraft with special airworthiness certificates, each engine, propeller, and article must be listed in the FAA-accepted, military-approved maintenance manual or FAA-accepted civil maintenance manual and IPC specified on the TCDS, and must be in a condition for safe operation.



(b) Used Military Unique Engines, Propellers, and Articles. For used military unique engines, propellers, and articles to be installed on surplus military aircraft with special airworthiness certificates, each engine, propeller, and article must be evaluated by an FAA engineer or an appropriately authorized DER. When a DER is used, the DER's recommendations or decisions must be substantiated in writing using FAA Form 8110-3, and include supporting documents. Each engine, propeller, accessory, and associated article must be listed in the FAA-accepted, military-approved maintenance manual or FAA-accepted civil maintenance manual and the IPC specified on the TCDS, and must be in a condition for safe operation.

(3) Approval for Installation. Persons authorized under § 43.7 may approve military unique engines, propellers, or articles for installation on surplus military aircraft with special airworthiness certificates if they have successfully completed the eligibility screening and airworthiness evaluation. The installer must be able to determine that the use of the engine or propeller, and/or the installation of the article, will leave the product in compliance with the TCDS and in a condition for safe operation. The authorized individual completing the eligibility screening and/or airworthiness evaluation must make a maintenance record entry that clearly documents the results of the evaluation. Each maintenance record entry per § 43.9 should include a description of the work performed, the completion date of the work performed, and the name of the person performing the work or authorized to sign.

## Appendix A. Completing and Reviewing FAA Forms

### Section 1. General Procedures.

#### A-1. General.

**a.** This appendix provides instructions for completing and reviewing certain forms under this order.

**b.** Information entered on these documents by the FAA under this order should be typewritten when possible. The use of pencil, erasures, strikeovers, etc., on airworthiness forms other than applications is not permitted. The use of correction fluid or correction tape is prohibited. Application forms may be corrected by the applicant or the FAA, provided the person making the changes initials beside the correction.

**c.** When the reverse side of the certificate is used, the statement "See Reverse Side" must be typed on the face of the certificate and the word "-END-" must be typed in the center of the page below the last line of information of the reverse side.

**d.** The signature of the FAA on any original FAA certificate or FAA form must be made in permanent blue or black ink. Per appendix 38, *Digital Signatures*, to FAA Order 1370.121, *FAA Information Security and Privacy Program & Policy*, the FAA also recognizes the digital signature associated with the personal identification verification card the FAA issues to employees and contractors as the only acceptable digital signature for users signing FAA documents. Use of personal, company, or non-PIV card digital signatures to sign FAA documents is prohibited unless approved in writing by the FAA Chief Information Officer.

**e.** Dates on certificates should be in DD MMM YYYY or DD Mmm YYYY format; for example, "25 DEC 2016" or "25 Dec 2016."

**f.** When copies are required under this order and obtaining a copy is impractical, you may issue a certificate or form in duplicate instead; in such cases, annotate the signed, duplicate certificate with the word, "Duplicate."

### Section 2. Application for U.S. Airworthiness Certificate.

**A-2. Completion of FAA Form 8130-6, *Application for U.S. Airworthiness Certificate.*** FAA Form 8130-6 is required whenever an airworthiness certificate is requested, including any request for amendment or modification to a current airworthiness certificate, including operating limitations. AC 21-12 provides instructions to applicants for completion of FAA Form 8130-6. Except when issuing a denial, the FAA completes sections V and VIII of FAA Form 8130-6 as follows:

**a. Section V. FAA Representative Certification.** This section must be completed by the ASI or designee that inspects the aircraft and issues the certificate. For unmanned aircraft, only an FAA ASI may complete section V.

- (1) Check all applicable blocks in items A and B.

(2) MIDO/FSDO. An ASI must enter the appropriate MIDO or FSDO office designation (that is, the current MIDO/FSDO or branch identifier). Designees must enter the designation of the MIDO or FSDO office geographically responsible for overseeing their activities.

(3) FAA Inspector's Signature or Designee's Signature and Number. The FAA inspector, designee, or unit member of a manufacturer's Organization Designation Authorization (ODA) who issued the certificate must sign here. For an ODA, enter "ODA" followed by the ODA number. The Designated Manufacturing Inspection Representative (DMIR), Designated Airworthiness Representative (DAR), or ODA unit member signature must be signed above the typed or printed name. The ASI's name must be typed or printed with the signature; the typed name and signature must be legible and must not obliterate preprinted information on FAA Form 8130-6.

(4) ASI's Certification File Review Signature. Spot check the certification file per appendix B to this order. A completed certification file review is indicated by the signature of the reviewing ASI above the typed or printed name in this block.

**b. Section VIII. Airworthiness Documentation.** This section must be completed by the ASI or designee who inspects the aircraft and issues the airworthiness certificate. However, this section is not applicable when a special flight permit is being issued.

(1) Item A. Operating Limitations and Markings in Compliance With 14 CFR Section 91.9, As Applicable. This block applies to all aircraft covered by this section. The FAA should check this block when an FAA-approved AFM, listing of operation limitation, placards, etc., as applicable to the category of certificate requested, are in the aircraft per § 91.9.

(2) Item B. Current Operating Limitations Attached. Check this block when operating limitations have been issued and a copy is attached for retention in the permanent record. This only applies to issuance of a special airworthiness certificate.

(3) Items C and D. Self-explanatory. Check all blocks that are applicable.

(4) Item E. Check this box and attach FAA Form 337 if the approved alteration changes the aircraft category, model, or compliance to Annex 8 of the ICAO Convention. Do not include referenced data forming the basis for approval of the repair or alteration.

(5) Item F. This Inspection Recorded in Aircraft Records. Check this block after making the maintenance record entry required under paragraph 2-3.g(3) or 18-6.b(4) of this order.

(6) Item G. Statement of Conformity, FAA Form 8130-9 (*Attach when required*). Check the block to indicate FAA Form 8130-9 is attached when required.

(7) Item H. Foreign Airworthiness Certification for Import Aircraft (*Attach when required*). Check the block to indicate that certification of another country is required for the certification action and that a copy is attached for retention in the aircraft's permanent record.

(8) Item I. Previous Airworthiness Certificate Issued in Accordance With 14 CFR or CAR. If applicable, enter the appropriate CFR or CAR under which the last airworthiness certificate was issued, and check the block to indicate that the original of that certificate is attached. If the previously issued certificate is not available, the FAA should state the reason on

an attachment. This block does not apply to certificates to be issued under paragraph 10-3 of this order when temporarily holding an airworthiness certificate in suspension.

(9) Item J. Current Airworthiness Certificate Issuance in Accordance With 14 CFR. Check the box and enter the applicable paragraph from part 21, subpart H. For an amendment, enter § 21.177.

(10) Item K. Light-Sport Aircraft SOC, FAA Form 8130-15 (*Attach when required*). Check the block to indicate that a completed applicable copy of the manufacturer's SOC, FAA Form 8130-15, is attached for retention in the aircraft's permanent record.

### **Section 3. Standard Airworthiness Certificate.**

**A-3. Completion of FAA Form 8100-2, *Standard Airworthiness Certificate*.** Complete FAA Form 8100-2 using applicable information from the completed FAA Form 8130-6. You may use the preprinted paper forms until the stock is depleted. Figure A-1 of this appendix is an example of a completed standard airworthiness certificate using the portable document format (PDF) fillable form.

**a. Nationality and Registration Marks.** Enter the capital letter "N" followed by the registration number assigned to the aircraft. For antique or replica aircraft displaying marks as provided for under § 45.22(b), do not include the additional symbols allowed for marking the aircraft in this block.

**b. Manufacturer and Model.** This information must exactly match the information on the aircraft ID plate. For surplus military aircraft, enter the military model in parentheses after the civil model designation.

**c. Aircraft Serial Number.** Self-explanatory. For surplus military aircraft, enter the military S/N in parentheses after the civil S/N.

**d. Category.** Enter the appropriate category or categories, as applicable, from the application. If there is no category, as in the case of aircraft certificated before adoption of the regulations that established categories, enter the aircraft specification, TCDS, or listing number as applicable. For example, "CAR 4a" for a Bellanca 14-13; "ATC 614" for an Aeronca LC; and "Aero Bulletin 7A" for a Douglas DC3. For very light aircraft (VLA) type-certificated under § 21.17(b), enter, "VLA-Special Class." For an import VLA, enter, "VLA-Import."

**e. Date of Issuance.**

(1) Prefix. When a certificate is being amended, exchanged or replaced, insert the letter "A" or "E" or "R," respectively, before the date.

(2) Date. For a replacement or exchanged certificate, enter the date of the original certificate. Otherwise, enter the date the certificate is issued.

**f. FAA Representative.** The typed name and signature of the FAA representative issuing the certificate must be legible. The PDF version of the form includes two fields in the FAA representative block, one for a digital signature and the other for entering the name of the person signing the form; use only one of those fields.

**g. Designation Number.** Depending on who issues the certificate, enter the following applicable information:

- (1) ASI. The office identifier can be the current MIDO/FSDO or branch identifier, for example, SW-MIDO-41 or ANM-108;
- (2) DMIR or DAR. The unique designee identification number;
- (3) ODA. The letters "ODA" followed by the ODA number.

**h.** When printing a certificate using the PDF version of the form, set the page scaling to none, or actual size. The printed form should be approximately 5½” by 3-3/8”. Use white 8½” by 11” paper (if the applicant wishes, they may trim the document to size) or appropriate size card stock. You should use a heavy weight paper or cardstock. The forms will print in grayscale; using a color printer is not required. Laser print may be subject to displacement. Encourage applicants to protect the document by lamination or other document protection processes.

**Figure A-1. Sample FAA Form 8100-2, Standard Airworthiness Certificate**

UNITED STATES OF AMERICA DEPARTMENT OF TRANSPORTATION-FEDERAL AVIATION ADMINISTRATION <b>STANDARD AIRWORTHINESS CERTIFICATE</b>			
1 NATIONALITY AND REGISTRATION MARKS N54321	2 MANUFACTURER AND MODEL Cirrus Design Corporation SR20	3 AIRCRAFT SERIAL NUMBER 9876	4 CATEGORY Normal
5 AUTHORITY AND BASIS FOR ISSUANCE This airworthiness certificate is issued pursuant to 49 U.S.C. § 44704 and certifies that, as of the date of issuance, this aircraft has been inspected and found to conform to its type certificate and be in a condition for safe operation. This aircraft meets the requirements of the applicable airworthiness standards in Annex 8 to the Convention on International Civil Aviation, except as follows: None.			
6 TERMS AND CONDITIONS Unless sooner surrendered, suspended, revoked, or a termination date is otherwise established by the FAA, this airworthiness certificate is effective as long as maintenance, preventative maintenance, and alterations are performed per the applicable Federal Aviation Regulations and the aircraft is registered in the United States.			
DATE OF ISSUANCE 22 Feb 2017	FAA REPRESENTATIVE JAMES EDWARD NEWBERGER	Digitally signed by JAMES EDWARD NEWBERGER Date: 2017.02.22 10:27:26 -05'00'	DESIGNATION NUMBER AIR-113
Any alteration, misuse, or reproduction of this certificate for a fraudulent purpose may be punishable by certificate revocation, fine, and / or imprisonment. THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT PER THE APPLICABLE FEDERAL AVIATION REGULATIONS.			
FAA Form 8100-2 (11-2016) Previous Edition Dated 04-11 May be Used Until Depleted			

## Section 4. Special Airworthiness Certificate

**A-4. Completion of FAA Form 8130-7, *Special Airworthiness Certificate*.** Complete FAA Form 8130-7 using applicable information from the completed FAA Form 8130-6. You may use the preprinted paper forms until the stock is depleted. Refer to examples using the PDF fillable form in figures A-2 through A-6 of this appendix.

**a. Category/Designation.** Enter the appropriate category/designation from the application: restricted, limited, primary, light-sport, experimental, provisional, or special flight permit. For experimentally certificated LSA, enter “Experimental,” not “Light-sport.”

**b. Purpose.** Enter the operating purpose for which the certificate is being issued, as shown by the blocks checked by the applicant under section II, block B, on FAA Form 8130-6.

(1) Limited. For a limited category airworthiness certificate, enter “N/A.”

(2) LSA.

(a) For light-sport category aircraft under § 21.190, enter one of the five classes of LSA: airplane, glider, powered parachute, weight-shift control, and lighter-than-air aircraft (balloons and airships).

(b) For experimental LSA, enter “Operating light-sport aircraft (*enter class*).” There are six classes of experimental LSA: airplanes, gliders, powered parachutes, weight-shift control aircraft, lighter-than-air aircraft (balloons and airships), and gyroplanes. For example, an LSA glider will be listed in the purpose as “Operating light-sport aircraft (glider).” Because of the limited space available on the purpose line, the following abbreviations may be used: “PPC” for powered parachute, “WSC” for weight-shift control.

(3) Experimental. You may abbreviate experimental purposes as follows: “R&D” for research and development and “show compliance” for showing compliance with regulations.

**c. Manufacturer.** Enter the name and address of the manufacturer only if the application is for a SFP for the purpose(s) of production flight testing and/or customer demonstration. In all other cases, enter “N/A” in both spaces under this section.

**d. Flight From/To.**

(1) For an SFP for purposes other than production flight testing, the flight “From” and flight “To” spaces must be the same as that shown on FAA Form 8130-6, section VII, item B.

(2) For an SFP production flight testing or multiple purpose of production flight testing and customer demonstration, enter “N/A” in both spaces.

(3) Otherwise, enter “N/A” in both spaces.

**e. N-Number, Serial No., Builder, and Model.**

(1) Production Flight Testing.

(a) Not LSA. For an aircraft that is not LSA and for the purpose production flight testing or for multiple purpose of production flight testing and customer demonstration, enter “N/A” in all spaces.

(b) LSA. For production flight testing of light-sport category aircraft, enter the registration number, aircraft S/N, and aircraft model.

(2) All Others. For all other categories and purposes, information to complete this section would be contained in section I of the application for airworthiness certificate.

(3) For antique or replica aircraft displaying marks as provided for under § 45.22(b), do not include the additional symbols allowed for marking the aircraft in the aircraft registration number on the airworthiness certificate.

**f. Date of Issuance.**

(1) Prefix. When a certificate is being amended, exchanged or replaced, insert the letter “A” or “E” or “R,” respectively, before the date.

(2) Date. For a replacement or exchanged certificate, enter the date of the original certificate. Otherwise, enter the date the certificate is issued.

**g. Expiry.** Enter the date of expiry or “unlimited,” as applicable.

(1) Enter the date of expiry for an SFP.

(2) An experimental certificate for R&D, showing compliance with regulations, crew training, or market surveys is effective for 1 year after the date of issue or renewal, unless a shorter period is deemed necessary.

(3) The duration of light-sport, amateur-built, exhibition, and air racing experimental certificates is unlimited unless good cause exists to establish a specific period.

(4) For a provisional certificate, the entry should be per § [21.217](#).

**h. Operating Limitations Dated \_\_\_\_\_ Are a Part of This Certificate.** This paragraph does not apply when using the PDF version of FAA Form 8130-7. Enter the date of the operating limitations. Enter “N/A” if the limitations on the reverse side of the certificate are adequate for the purpose.

**i. Signature of FAA Representative: Designation or Office No.** Complete this block for all categories and purposes per paragraphs A-3.f and A-3.g of this appendix.

**j. Conditions and Limitations.** Draft the operating limitations per appendix D to this order. When using the paper, GPO pad version of FAA Form 8130-7, attach the completed operating limitations to the completed certificate. When using the PDF version of FAA Form 8130-7, copy the operating limitations into the *Conditions and Limitations* section of FAA Form 8130-7.

**k.** Except for the size of the printed form, refer to paragraph A-3.h of this appendix for instructions for printing a certificate using the PDF version of the form. When the printed certificate spans multiple pages, write in blue or black ink the aircraft S/N, as applicable, at the bottom of pages 2 and up and your initials in the lower righthand corner of pages 2 and up except on the last page where the initials are to be located next to “END.” Attach the pages together.

**l.** Advise the applicant that it may not alter or cut the certificate and that it is acceptable to fold the certificate so that only the top half of the first page is visible when displaying the certificate per § 91.203.

**Figure A-2. Sample FAA Form 8130-7, Special Airworthiness Certificate for Restricted Category Aircraft**

UNITED STATES OF AMERICA DEPARTMENT OF TRANSPORTATION-FEDERAL AVIATION ADMINISTRATION <b>SPECIAL AIRWORTHINESS CERTIFICATE</b>			
CATEGORY/DESIGNATION Restricted			
PURPOSE Agricultural			
MANU-FACTURER	NAME	N/A	
	ADDRESS	N/A	
FLIGHT	FROM	N/A	
	TO	N/A	
N 54321	MODEL	S2R-H80	SERIAL NO. H80-9999
BUILDER Thrush Aircraft, Inc.			DATE OF ISSUANCE 15 Mar 2017
Unless sooner surrendered, suspended, revoked, or the termination date of <b>unlimited</b> , this airworthiness certificate is effective under the conditions prescribed in 14 CFR, Part 21, Section 21.181 or 21.217.			
SIGNATURE OF FAA REPRESENTATIVE <i>Johnna Thompson</i> Johnna Thompson			DESIGNATION OR OFFICE NO. CE-XX
This airworthiness certificate is issued under the authority of Title 49 United States Code 44704 and Title 14 Code of Federal Regulations. Any alteration, misuse or reproduction for a fraudulent purpose of this certificate may be punishable by certificate revocation, fine, and / or imprisonment. THIS PORTION OF THE CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT PER THE APPLICABLE REGULATIONS.			

**Figure A-3. Sample FAA Form 8130-7, Special Airworthiness Certificate for Research and Development**

UNITED STATES OF AMERICA DEPARTMENT OF TRANSPORTATION-FEDERAL AVIATION ADMINISTRATION <b>SPECIAL AIRWORTHINESS CERTIFICATE</b>			
CATEGORY/DESIGNATION Experimental			
PURPOSE Research and development			
MANU-FACTURER	NAME	N/A	
	ADDRESS	N/A	
FLIGHT	FROM	N/A	
	TO	N/A	
N 54321	MODEL	A-4K	SERIAL NO. 654321
BUILDER Douglas Aircraft Company			DATE OF ISSUANCE 21 Mar 2017
Unless sooner surrendered, suspended, revoked, or the termination date of <b>21 Sep 2017</b> , this airworthiness certificate is effective under the conditions prescribed in 14 CFR, Part 21, Section 21.181 or 21.217.			
SIGNATURE OF FAA REPRESENTATIVE <i>Robert G. Smith</i> Robert G. Smith			DESIGNATION OR OFFICE NO. CE-XX
This airworthiness certificate is issued under the authority of Title 49 United States Code 44704 and Title 14 Code of Federal Regulations. Any alteration, misuse or reproduction for a fraudulent purpose of this certificate may be punishable by certificate revocation, fine, and / or imprisonment. THIS PORTION OF THE CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT PER THE APPLICABLE REGULATIONS.			



**Figure A-4. Sample FAA Form 8130-7, Special Flight Permit for Production Flight Test and Customer Demonstration**

UNITED STATES OF AMERICA DEPARTMENT OF TRANSPORTATION-FEDERAL AVIATION ADMINISTRATION <b>SPECIAL AIRWORTHINESS CERTIFICATE</b>			
CATEGORY/DESIGNATION Special Flight Permit			
PURPOSE Production flight test or customer demonstration			
MANU-FACTURER	NAME	The Boeing Company	
	ADDRESS	1901 Oakesdale Ave SW, Renton, WA 98057-2623	
FLIGHT	FROM	N/A	
	TO	N/A	
N N/A	MODEL	N/A	SERIAL NO. N/A
BUILDER	N/A	DATE OF ISSUANCE	27 Mar 2017
Unless sooner surrendered, suspended, revoked, or the termination date of <b>27 Apr 2017</b> , this airworthiness certificate is effective under the conditions prescribed in 14 CFR, Part 21, Section 21.181 or 21.217.			
SIGNATURE OF FAA REPRESENTATIVE  <i>Amy Garner</i> Amy Garner			DESIGNATION OR OFFICE NO.  NM-XX
This airworthiness certificate is issued under the authority of Title 49 United States Code 44704 and Title 14 Code of Federal Regulations. Any alteration, misuse or reproduction for a fraudulent purpose of this certificate may be punishable by certificate revocation, fine, and / or imprisonment. THIS PORTION OF THE CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT PER THE APPLICABLE REGULATIONS.			

**Figure A-5. Sample FAA Form 8130-7, Special Airworthiness Certificate for Light-Sport Category Aircraft Certificated Under § 21.190**

UNITED STATES OF AMERICA DEPARTMENT OF TRANSPORTATION-FEDERAL AVIATION ADMINISTRATION <b>SPECIAL AIRWORTHINESS CERTIFICATE</b>			
CATEGORY/DESIGNATION Light-Sport			
PURPOSE Airplane			
MANU-FACTURER	NAME	N/A	
	ADDRESS	N/A	
FLIGHT	FROM	N/A	
	TO	N/A	
N 54321	MODEL	CTSW	SERIAL NO. 9876
BUILDER	Flight Design GmbH	DATE OF ISSUANCE	29 Mar 2017
Unless sooner surrendered, suspended, revoked, or the termination date of <b>unlimited</b> , this airworthiness certificate is effective under the conditions prescribed in 14 CFR, Part 21, Section 21.181 or 21.217.			
SIGNATURE OF FAA REPRESENTATIVE  <i>Steve Zahrt</i> Steven Zahrt			DESIGNATION OR OFFICE NO.  NE-XX
This airworthiness certificate is issued under the authority of Title 49 United States Code 44704 and Title 14 Code of Federal Regulations. Any alteration, misuse or reproduction for a fraudulent purpose of this certificate may be punishable by certificate revocation, fine, and / or imprisonment. THIS PORTION OF THE CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT PER THE APPLICABLE REGULATIONS.			

**Figure A-6. Sample FAA Form 8130-7, Special Airworthiness Certificate for Experimental LSA Certificated Under § 21.191**

UNITED STATES OF AMERICA DEPARTMENT OF TRANSPORTATION-FEDERAL AVIATION ADMINISTRATION <b>SPECIAL AIRWORTHINESS CERTIFICATE</b>			
CATEGORY/DESIGNATION Experimental			
PURPOSE Operating light-sport aircraft (PPC)			
MANU-FACTURER	NAME	N/A	
	ADDRESS	N/A	
FLIGHT	FROM	N/A	
	TO	N/A	
N 54321	MODEL	Pegasus	SERIAL NO. 999
BUILDER	Powrachute	DATE OF ISSUANCE	23 Mar 2017
Unless sooner surrendered, suspended, revoked, or the termination date of <u>unlimited</u> , this airworthiness certificate is effective under the conditions prescribed in 14 CFR, Part 21, Section 21.181 or 21.217.			
SIGNATURE OF FAA REPRESENTATIVE		DESIGNATION OR OFFICE NO.	
John S. Mulsow		SW-XX	
This airworthiness certificate is issued under the authority of Title 49 United States Code 44704 and Title 14 Code of Federal Regulations. Any alteration, misuse or reproduction for a fraudulent purpose of this certificate may be punishable by certificate revocation, fine, and / or imprisonment. THIS PORTION OF THE CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT PER THE APPLICABLE REGULATIONS.			

**Section 5. LSA Statement of Compliance.**

**A-5. Reviewing FAA Form 8130-15, LSA Statement of Compliance.** This form is used for manufactured LSA including kit LSA and ELSA. All information provided below, including the block-by-block instructions, apply to all LSA, unless otherwise indicated. Figure A-7 shows an example of a completed FAA Form 8130-15 for a special LSA. Figure A-8 shows an example of a completed LSA SOC for an ELSA kit.

**a. General Principles.** In reviewing the aircraft manufacturer's LSA SOC, be mindful of the accuracy and completeness of the form per § 21.190(b)(1)). Verify that any changes or additions to the information on the form were made by the person authorized by the manufacturer in their quality assurance system.

(1) Verify the manufacturer used the correct form. Check the lower left hand corner of FAA Form 8130-15 for the correct number and revision.

(2) Examine the contents of blocks 1 through 10. Verify the information is correct and appropriate for the aircraft identified by the application, registration, the required documentation, and the physical inspection of the aircraft and the aircraft's ID plate.

(3) Foreign SOM. If the SOM is not the United States (block 3)—

(a) Verify that the aircraft was manufactured in a country with which the United States has a [bilateral agreement](#) concerning airplanes. The scope of that bilateral agreement must include the acceptance of new, type-certificated airplanes from the LSA SOM. A bilateral agreement whose scope is limited to acceptance of used aircraft from the prospective LSA SOM is insufficient in meeting this requirement.

(b) If there are questions regarding the SOM, contact AFS-750 with reference to Aeronautical Center Form 8050-88A.

(c) The SOM and data must match Aeronautical Center Form 8050-88A and FAA Form 8130-15. If the SOM does not match or does not have a bilateral agreement with a scope that includes airplanes, then the aircraft cannot be certificated in LSA.

(d) Verify the manufacturer made a statement in the aircraft documentation that the aircraft would have been eligible for an airworthiness certificate, flight authorization, or other similar certification aircraft, had it remained in the manufacturer's country.

(4) Verify that the identified consensus standards and user manual information (standard number, revision number, and title) are correct and for the proper aircraft. Manufacturers must use [current FAA-accepted consensus standards](#). However, manufacturers may use the previously accepted consensus standard until the [notice of availability](#) (NOA) "may not be used" date. Compare the date of manufacture located in block 4, of FAA Form 8130-15 with the consensus standards listed in the odd numbered blocks between 11 and 29.

**Note:** FAA employess may view electronic copies of the consensus standards through the [Flight Standards Information Management System](#) (FSIMS). To navigate to the ASTM International (ASTM) consensus standards, go to the Related Info drop down menu, Other Sites, subcategory Advisory Publications, ASTM, ASTM Custom Portal, then search by consensus standard number, and open the appropriate standard.

(5) Examine the contents of FAA Form 8130-15 contained in the Certification block. This section of the form (affidavit) contains certifying statements and the name(s) with title(s), and signature(s) of those who attest to the construction, testing, quality assurance system, design, condition for safe operation, and FAA access to the manufacturer's facility. Verify the S/N entered in block 5 and in the certification statement are the same and the S/N of the aircraft's ID plate and the registration match. Check to ensure that at a minimum, the certification statements are worded correctly and fully contained in this portion of the form.

(6) Examine the signature blocks of FAA Form 8130-15. Verify the name, signature, title, and date areas are filled in (a minimum of one name is required). The person signing the form must be designated in the manufacturer's quality assurance system. If the process documentation does not specifically identify the person authorized to sign FAA Form 8130-15, the form cannot be accepted for certification. FAA Form 8130-15 cannot be accepted if it is signed by a person not authorized in the manufacturer's quality assurance system.

**b.** Blocks 1 through 10, Aircraft Identification. These blocks must contain the aircraft information as shown on the aircraft ID plate, and the aircraft or kit documentation and records. All data must be consistent throughout and match the accompanying aircraft.

(1) Block 1, Manufacturer Name. (Official legal name.)

(2) Block 2, Manufacturer Address. (Physical location.)

(3) Block 3, Country of Manufacture. If located outside the United States, the country must have a BAA concerning airplanes or Bilateral Aviation Safety Agreement (BASA) with associated IPA concerning airplanes, or an equivalent airworthiness agreement, with the United States.

(4) Block 4, Date of Aircraft or Aircraft Kit Manufacture. (Formatted “mm/dd/yyyy”) For ELSA kits, the date of manufacture is the date the light-sport kit was completed by the manufacturer.

(5) Block 5, Aircraft Serial Number.

(6) Block 6, Aircraft Make.

(7) Block 7, Aircraft Model.

(8) Block 8, Maximum Takeoff Weight. (Specify in pounds or kilograms.)

(9) Block 9,  $V_H$ . Indicate the maximum airspeed in level flight with maximum continuous power under standard atmospheric conditions at sea level (knots calibrated airspeed).

(10) Block 10,  $V_{S1}$ . Indicate the maximum stalling speed or minimum steady flight speed without the use of lift-enhancing devices at the aircraft’s maximum certificated takeoff weight and most critical center of gravity (knots calibrated airspeed).

**Note 1:** This section also contains boxes that must be completed for class and type of LSA as manufactured.

**Note 2:** Check all applicable items. Checking the box for “First of Make/Model” indicates that this make/model combination has not previously been issued a special LSA airworthiness certificate. Do not check this box for ELSA kits.

**c. Blocks 11 through 30, Standards and Documentation.**

(1) FAA Applicable Accepted Standard(s). Each standard identified should contain the standard source, standard number, and standard revision, for example, “ASTM Standard F2506-05.” The title or a description of the consensus standard may also be included. Identify all appropriate standards in each block for which compliance has been validated. More than one consensus standard may apply and some consensus standards can cover more than one topic and may be listed more than once.

**Note 1:** The standard revision identified must be the current FAA-accepted revision at the time of the date of manufacture identified in Block 4. For historical and [current FAA-accepted consensus standards](#) with effective dates, refer to the related FAA [NOA](#).

**Note 2:** CAUTION: All of the consensus standards referred to in this appendix are examples only and not necessarily the latest revision accepted by the FAA. Always refer to the FAA-Accepted ASTM Consensus Standards document listing when reviewing an LSA SOC.

(a) Block 11, Design and Performance. The FAA-accepted consensus standard for the design and performance of the aircraft/kit should be listed in this block. For example, the entry would be “ASTM Standard F2317/F2317M 10 for a weight-shift control (WSC) aircraft/kit.” Include in this block any other design and performance standard or optional standard not identified elsewhere on this form. The title of the standard also may be included. For example—

1 If the propeller requires a standard, the entry would be “ASTM Standard F2506-10 (propeller).”

2 If an airframe emergency parachute is installed, the entry would be “ASTM Standard F2316-08 (airframe emergency parachute).”

3 If declaring compliance with audit requirements, the entry would be “ASTM Standard F2839-11 (compliance audits).”

4 For a powered parachute, include “ASTM Standard F2426-05a (wing interface)” in this block.

(b) Block 13, Required Equipment. The FAA-accepted consensus standard for required equipment should be listed in this block. For example, the entry would be “ASTM Standard F2317/F2317M-10 for a weight-shift control (WSC) aircraft/kit.”

(c) Block 15, Quality Assurance. The FAA-accepted consensus standard for quality assurance should be listed in this block. For example, the entry would be “ASTM Standard F2972-12 for a weight-shift control (WSC) aircraft/kit.”

(d) Block 17, Production Acceptance Tests. The FAA-accepted consensus standard for production acceptance tests for any class of special LSA should be listed in this block. For example, the entry would be “ASTM Standard F2447-05 for a weight-shift control (WSC) aircraft.”

**Note 1:** For any class of ELSA kit, enter “N/A” in this block.

**Note 2:** ELSA kit manufacturers are not required to meet a production acceptance test procedure for the kit. Instead, the ELSA kit manufacturer must make a statement of compliance with the applicable consensus standard identifying assembly instructions for the aircraft. (Refer to block 23 of this form.)

(e) Block 19, Maintenance & Inspection Procedures. The FAA-accepted consensus standard for maintenance and inspection procedures should be listed in this block. For example, the entry would be “ASTM Standard F2483-05 for any class of special LSA or any class of experimental LSA kit.”

(f) Block 21, Continued Airworthiness. The FAA-accepted consensus standard for continued airworthiness should be listed in this block. For example, the entry would be “ASTM Standard F2425-05a for a weight-shift control (WSC) aircraft/kit.”

**Note:** Aircraft assembled from ELSA kits are not required to be maintained in compliance with the manufacturer’s continued airworthiness system; however, ELSA kit manufacturers are still required to comply with the requirements of the consensus standard for a continued airworthiness system.

(g) Block 23, Manufacturer’s Assembly Instructions (Experimental LSA Kits Only). The FAA-accepted consensus standard for manufacturer’s assembly instructions should be listed in this block. For example, the entry would be “ASTM Standard F2563-06 for any class of experimental LSA kit.”

**Note:** For any class of special LSA, enter “N/A” in this block.

(h) Block 25, Powerplant or Motor System. The FAA-accepted consensus standard for powerplant or motor system should be listed in this block. For example, the entry would be “ASTM Standard F2339-06 for a reciprocating spark ignition engine installation on any class of special LSA or any class of experimental LSA kit.”

(i) Block 27, Flight Training Supplement. The FAA-accepted consensus standard for the flight training supplement should be listed in this block. For example, the entry would be “ASTM Standard F2457-05 for a weight-shift control (WSC) aircraft/kit.”

(j) Block 29, Pilot’s Operating Handbook/Aircraft Operating Instructions. The FAA-accepted consensus standard for the POH/AOI should be listed in this block. For example, the entry would be “ASTM Standard F2457-05 for a weight-shift control (WSC) aircraft/kit.”

(2) Manufacturer’s Documentation. Each block should contain the specific manufacturer’s document by title or company identifier with the revision and issue date that meets the identified consensus standard. For example, a proper entry would be “Express Works Design Package 01082009-1, N/C, 02/14/2010.”

(a) Block 12, Design and Performance. The manufacturer’s documentation for the design and performance of the aircraft should be listed in this block. For example, the entry would be “Express Works Design Package 01082009-1, N/C, 02/14/2010.” (Refer to sample form.)

(b) Block 14, Required Equipment Listing. The manufacturer’s documentation for the required equipment listing of the aircraft should be listed in this block. For example, the entry would be “Terradon Plus Listing-Rev C2, 03/17/2010.” (Refer to sample form.)

(c) Block 16, Manufacturer’s Quality Assurance System. The manufacturer’s documentation for the quality assurance system of the aircraft should be listed in this block. For example, the entry would be “Express Works QA manual, Rev H, 04/01/2010.” (Refer to sample form.)

(d) Block 18, Manufacturer’s Production Acceptance Tests. The manufacturer’s documentation for the production acceptance tests of any class of special LSA should be listed in this block. For example, the entry would be “Express Works ATP.001, N/C, 05/05/2011.” (Refer to sample form.)

**Note 1:** For any class of ELSA kit, enter “N/A” in this block.

**Note 2:** ELSA kit manufacturers are not required to meet a production acceptance test procedure for the kit. Instead, the ELSA kit manufacturer must provide assembly instructions for the aircraft. (Refer to block 24 of this form.)

(e) Block 20, Aircraft Maintenance and Inspection Procedures. The manufacturer’s documentation for the aircraft maintenance and inspection procedures of the aircraft should be listed in this block. For example, the entry would be “Terradon Plus Maintenance Manual, Rev 10, 06/14/2011.” (Refer to sample form.)

(f) Block 22, Manufacturer’s Continued Airworthiness System. The manufacturer’s documentation for the manufacturer’s continued airworthiness system of the aircraft should be listed in this block. For example, the entry would be “Terradon Plus QA Manual, Rev 10, 06/14/2011.” (Refer to sample form.)

**Note:** Aircraft assembled from ELSA kits are not required to be maintained in compliance with the manufacturer's continued airworthiness system; however, ELSA kit manufacturers are still required to provide a continued airworthiness system for these aircraft.

(g) Block 24, Manufacturer's Assembly Instructions (ELSA Kits only). The manufacturer's documentation for the assembly instructions of the aircraft should be listed in this block. For example, the entry would be "Terradon Plus Assembly and Test Procedures, N/C, 07/04/2011, and Terradon Plus Break-in & Inspection Checklist, N/C, 07/04/2011." (Refer to sample form.)

**Note:** For any class of special LSA, enter "N/A" in this block.

(h) Block 26, Powerplant or Motor System. The manufacturer's documentation for the powerplant or motor system of the aircraft should be listed in this block. For example, the entry would be "Express Works Design Package 01082009-1, N/C, 02/14/2010, and Express Works Manufacturing PCS.02, Rev C 09/05/2011." (Refer to sample form.)

(i) Block 28, Aircraft Flight Training Supplement. The manufacturer's documentation for the aircraft flight training supplement of the aircraft should be listed in this block. For example, the entry would be "Express Works Flying Book, 8th English Edition, 09/11/2011." (Refer to sample form.)

(j) Block 30, Pilot's Operating Handbook/Aircraft Operating Instructions. The manufacturer's documentation for the POH/AOI of the aircraft should be listed in this block. For example, the entry would be "Express Works Flying Book, 8th English Edition, 09/11/2011." (Refer to sample form.)

**d. Comments.** This block and any attachment(s) should provide any additional, appropriate information not contained elsewhere on the form. It may be used to expand on the information contained in blocks 11 through 30 or to provide other information the manufacturer deems necessary. For all ELSA kit SOCs, this block should be used to provide evidence that an aircraft of the same make and model was manufactured and assembled by the aircraft kit manufacturer and issued a U.S. special airworthiness certificate in the light-sport category. Applicable standards for which the manufacturer is declaring compliance not referenced elsewhere on this form may also be listed in the comments section. Such standards may be listed whether they have been FAA-accepted or not. For example, standards related to the design, alteration, and certification of electrical wiring systems, inspection and maintenance of electrical wiring, or certification of personnel may be listed in this block.

**e. Certification.**

(1) Certification Statement. Provide the aircraft or kit S/N in the blank provided.

**Note:** The ELSA kit manufacturer is not required to provide a certification statement for ground and flight testing the aircraft or to certify the aircraft is in a condition for safe operation. For this reason, these portions of the certification statement are marked as "N/A for kit." It is the responsibility of the person completing the assembly of the ELSA kit to ground and flight test the aircraft and make a determination that it is in a condition for safe operation. The kit LSA assembler cannot sign or amend FAA Form 8130-15.

(2) Primary Signature Block. In most cases, a single signature will meet the requirement for the issuance of an airworthiness certificate.

(a) Name. This block should provide the name of the manufacturer's representative (for example, the chief executive officer or chief quality officer) or the manufacturer's authorized agent.

(b) Signature. This block should provide the signature of the manufacturer's representative (for example, the chief executive officer or chief quality officer) or the manufacturer's authorized agent. The person(s) who signs in the manufacturer's certification section must be able to verify compliance with all applicable standards. Authorization for signature should be in writing from the manufacturer with all signatory names and titles specified within the manufacturer's quality system process documentation (for example, quality manual or other quality documentation), including any authorized agent(s).

(c) Title. This block should provide the title of the properly authorized individual.

(d) Date. This block should provide the date the form was signed.

(3) Additional Signature Block. In some cases, the manufacturer's quality assurance system may require two signatures, one at the production facility and one at an extension facility (that is, satellite manufacturing, assembly, and/or distribution facility) for any reassembly after transport or shipment, and/or flight testing, assembly, and installations as part of precertification work. FAA Form 8130-15 should never be signed by anyone except the manufacturer or its authorized agent(s).

(a) Name. This block should provide the name of the manufacturer's extension facility authorized quality person or the manufacturer's authorized agent.

(b) Signature. This block should provide the signature of the manufacturer's extension facility authorized quality person or the manufacturer's authorized agent. The person(s) who signs in the manufacturer's certification section must be able to verify compliance with all applicable standards. Authorization for signature should be in writing from the manufacturer with all signatory names and titles specified within the manufacturer's quality system process documentation (for example, quality manual or other quality documentation), including any authorized agent(s).

(c) Title. This block should provide the title of the properly authorized individual.

(d) Date. This block should provide the date the form was signed.




### Figure A-7. Sample FAA Form 8130-15, Light-Sport Aircraft Statement of Compliance

Form Approved  
OMB No. 2120-0690 Exp. 08/31/2015

Light-Sport Aircraft / Kit Statement of Compliance		INSTRUCTIONS - Print or type. If additional space is required, use an attachment. Present original to an authorized FAA Representative. Retain this form in the aircraft's permanent records.			
1. Manufacturer Name ACME Company LLC.		2. Manufacturer Address (street, city, state, zip) 307 Pine Street, Barnett, MO 65011			
3. Country of Manufacture USA		4. Date of Manufacture 10/23/2011		5. Aircraft Serial No. 0001	
6. Aircraft Make ACME	7. Aircraft Model Flyer I		8. Max. Take-off Weight 1430 lbs	9. V <sub>H</sub> 120 KCAS	10. V <sub>S1</sub> 45 KCAS
Check applicable items: <input checked="" type="checkbox"/> First of Make or Model <input checked="" type="checkbox"/> Aircraft (§21.190) <input type="checkbox"/> Kit (§21.191(i)(2)) <input checked="" type="checkbox"/> Operation on Water					
<input checked="" type="checkbox"/> Airplane <input type="checkbox"/> Powered Parachute <input type="checkbox"/> Weight-Shift-Control <input type="checkbox"/> Glider <input type="checkbox"/> Lighter-Than-Air <input type="checkbox"/> Gyroplane					
FAA Applicable Accepted Standard(s) (with Dash Number)			Manufacturer's Documentation (with Revision and Issue Date)		
11. Design and Performance ASTM Standard F2245- 10C ASTM Standard F2626- 007			12. Design and Performance ACME-D&P-Rev A, 09/17/2010		
13. Required Equipment ASTM Standard F2245- 10C			14. Required Equipment Listing ACME-Flyer I Listing-Rev C., 10/17/2010		
15. Quality Assurance ASTM Standard F2972- 06			16. Manufacturer's Quality Assurance System ACME-QCS.01, 08/10/2011		
17. Production Acceptance Tests ASTM Standard F2279- 06 ASTM Standard F2506- 10			18. Manufacturer's Production Acceptance Tests ACME-QCS.02-ATP, 04/28/2011 ACME-QCS.03-ATP, 05/15/2011		
19. Maintenance & Inspection Procedures ASTM Standard F2483- 05			20. Aircraft Maintenance & Inspection Procedures ACME-MM1st Edition, 08/15/2011		
21. Continued Airworthiness ASTM Standard F2295- 06			22. Manufacturer's Continued Airworthiness System ACME-QCS.04-CAS, 04/29/2011		
23. Manufacturer's Assembly Instructions N/A			24. Manufacturer's Assembly Instructions (LSA Kit) N/A		
25. Power plant or Motor System ASTM Standard F2339- 06			26. Power plant or Motor System ACME-QCS.05-D&M, 06/02/2011 ACME-MFG.02-Rev C, 08/12/2011		
27. Flight Training Supplement ASTM Standard F2245- 10C			28. Aircraft Flight Training Supplement ACME-FTS 1st Edition, 06/19/2011		
29. Pilot's Operating Handbook/Aircraft Operating Instructions ASTM Standard F2746- 09			30. Pilot's Operating Handbook/Aircraft Operating Instructions ACME-AOI 1st Edition, 08/20/2011		
<b>Comments</b> (additional comments may be stated on the reverse side of this form or an attached document) The aircraft flight test is recorded in the aircraft records per 14 CFR section 91.417, and an airframe time of 5 hours is attributed to flight testing. All applicable service directives to date have been incorporated and annotated in the aircraft records.					
I hereby certify that aircraft/kit serial number 0001 as equipped, complies with the Title 14 of the Code of Federal Regulations part 1, Definitions and Abbreviations, § 1.1 definition for light-sport aircraft, and the applicable portions of the consensus standards identified on this statement of compliance for U.S. airworthiness certification. The manufacturer will monitor and correct safety-of-flight issues through the issuance of safety directives and the manufacturer's continued airworthiness system to support the aircraft throughout its life. This aircraft/kit (1) was manufactured following the consensus standards procedures and manufacturer's quality assurance system identified on this statement, (2) conforms to the manufacturer's design data, (3) was ground and flight tested successfully [N/A for kit], and (4) is in a condition for safe operation [N/A for kit]. Additionally, at the request of the FAA the manufacturer will provide unrestricted access to its facilities, and will make available to any interested person the aircraft's operating instructions, maintenance and inspection procedures, and flight training supplement.					
I hereby certify that all statements and answers provided by me on this form are complete and true to the best of my knowledge, and I agree that they are to be considered part of the basis for issuance of any FAA certificate.					
Name: Irving M. Himm		Signature: <i>I. M. Himm</i>			
Title: President ACME Co. LLC		Date: 09/10/2011			
Name: Joseph Doaks		Signature: <i>Joseph Doaks</i>			
Title: US Distributor, Authorized Manufacturer's Flight Testing		Date: 10/23/2011			

FAA Form 8130-15 (04-2015) Previous editions obsolete

**Figure A-8. Sample FAA Form 8130-15,  
Light-Sport Kit-Built Aircraft Statement of Compliance**

 <b>Light-Sport Aircraft / Kit Statement of Compliance</b>		Form Approved OMB No. 2120-0690 Exp.08/31/2015		
<b>1. Manufacturer Name</b> Express Works Ltd.		<b>2. Manufacturer Address (street, city, state, zip)</b> Prujezdna 310/51, Praha, 225 99		
<b>3. Country of Manufacture</b> Czech Republic		<b>4. Date of Manufacture</b> 10/23/2011	<b>5. Aircraft Serial No.</b> EALSA-0102	
<b>6. Aircraft Make</b> Express	<b>7. Aircraft Model</b> Terradon Plus	<b>8. Max. Take-off Weight</b> 780 lbs	<b>9. V<sub>H</sub></b> 80 KCAS	<b>10. V<sub>S1</sub></b> 30 KCAS
Check applicable items: <input type="checkbox"/> First of Make or Model <input type="checkbox"/> Aircraft (§21.190) <input checked="" type="checkbox"/> Kit (§21.191(i)(2)) <input type="checkbox"/> Operation on Water				
<input type="checkbox"/> Airplane <input type="checkbox"/> Powered Parachute <input checked="" type="checkbox"/> Weight-Shift-Control <input type="checkbox"/> Glider <input type="checkbox"/> Lighter-Than-Air <input type="checkbox"/> Gyroplane				
<b>FAA Applicable Accepted Standard(s) (with Dash Number)</b>		<b>Manufacturer's Documentation (with Revision and Issue Date)</b>		
<b>11. Design and Performance</b> ASTM Standard F2317- 10 ASTM Standard F2626- 07		<b>12. Design and Performance</b> EW Design Package 01082009-1, N/C, 02/14/2010		
<b>13. Required Equipment</b> ASTM Standard F2457- 05		<b>14. Required Equipment Listing</b> Terradon Plus Listing-Rev C2., 03/17/2010		
<b>15. Quality Assurance</b> ASTM Standard F2448- 04		<b>16. Manufacturer's Quality Assurance System</b> Express Works QA Manual, rev H, 04/01/2010		
<b>17. Production Acceptance Tests</b> ASTM Standard F2447- 05 ASTM Standard F2506- 10		<b>18. Manufacturer's Production Acceptance Tests</b> PWATP.001, 05/05/2011		
<b>19. Maintenance &amp; Inspection Procedures</b> ASTM Standard F2483- 05		<b>20. Aircraft Maintenance &amp; Inspection Procedures</b> Terradon Plus Maintenance Manual, Rev 10, 06/14/2011		
<b>21. Continued Airworthiness</b> ASTM Standard F2425- 05a		<b>22. Manufacturer's Continued Airworthiness System</b> Terradon Plus QA Manual, Rev 10, 06/14/2011		
<b>23. Manufacturer's Assembly Instructions</b> ASTM Standard F2563- 06 ASTM Standard F2447- 05		<b>24. Manufacturer's Assembly Instructions (LSA Kit)</b> Terradon Plus Assembly and Test Procedures, 07/04/2011 Terradon Plus Break-in & Inspection Checklist, 07/04/2011		
<b>25. Power plant or Motor System</b> ASTM Standard F2339- 06		<b>26. Power plant or Motor System</b> EW Design Package 01082009-1, N/C, 02/14/2010 EW Manufacturing PCS.02, Rev C, 09/05/2011		
<b>27. Flight Training Supplement</b> ASTM Standard F2457- 05		<b>28. Aircraft Flight Training Supplement</b> EW Flying Book, 8th English Edition, 09/10/2011		
<b>29. Pilot's Operating Handbook/Aircraft Operating Instructions</b> ASTM Standard F2457- 05		<b>30. Pilot's Operating Handbook/Aircraft Operating Instructions</b> EW Flying Book, 8th English Edition, 09/10/2011		
<b>Comments</b> (additional comments may be stated on the reverse side of this form or an attached document) Express Works Ltd. Terradon Plus aircraft serial number EALSA-0003. N45EW was certificated in the U.S. special light sport category on 09/28/2011. The aircraft/kit was manufactured in a country that the United States has a bilateral airworthiness agreement concerning airplanes and is eligible for a flight authorization, or similar certification in its country of manufacture.				
I hereby certify that aircraft/kit serial number EALSA-0102 as equipped, complies with the Title 14 of the Code of Federal Regulations part 1, Definitions and Abbreviations, § 1.1 definition for light-sport aircraft, and the applicable portions of the consensus standards identified on this statement of compliance for U.S. airworthiness certification. The manufacturer will monitor and correct safety-of-flight issues through the issuance of safety directives and the manufacturer's continued airworthiness system to support the aircraft throughout its life. This aircraft/kit (1) was manufactured following the consensus standards procedures and manufacturer's quality assurance system identified on this statement, (2) conforms to the manufacturer's design data, (3) <del>was ground and flight tested successfully</del> [N/A for kit], and (4) <del>is in a condition for safe operation</del> [N/A for kit]. Additionally, at the request of the FAA the manufacturer will provide unrestricted access to its facilities and will make available to any interested person the aircraft's operating instructions, maintenance and inspection procedures, and flight training supplement.				
I hereby certify that all statements and answers provided by me on this form are complete and true to the best of my knowledge and I agree that they are to be considered part of the basis for issuance of any FAA certificate.				
<b>Name:</b> Igor Lubner		<b>Signature:</b> Igor Lubner		
<b>Title:</b> Director of Quality, Express Works Ltd.		<b>Date:</b> 10/23/2011		
<b>Name:</b>		<b>Signature:</b>		
<b>Title:</b>		<b>Date:</b>		

FAA Form 8130-15 (04-2015) Previous editions obsolete

### Application for Export Certificate of Airworthiness

**A-6. Completion of FAA Form 8130-1, *Application for Export C of A*.** The applicant must complete part I of the application. Part II is no longer applicable because an export C of A is no longer issued for aircraft engines, propellers, or articles; refer to FAA Order 8130.21 for procedures for the application and issuance of export approvals for aircraft engines, propellers, and articles. Part III is for FAA use only. Instructions for completing part I are intended to help the FAA review submitted applications.

**a.** Export Certificate No. This block is left blank by the applicant. The FAA must enter the *Export Certificate Number Assignment Card* number (E-number) from Aeronautical Center Form 8050-72.

**b.** Part I (For Aircraft).

(1) Item Nos. 1 through 4. Self-explanatory.

(2) Item No. 5. Description of Product(s). Self-explanatory, except as follows:

(a) Under Identification No., enter the N-number for an aircraft displaying an N-number. For an aircraft displaying foreign marks as permitted under § [45.31](#), enter the nationality and registration marks from the intended SOR. Any questions concerning the marking requirements of the importing country must be resolved among the exporter, importer, and the importing CAA.

(b) Under FAA Spec. No., enter the specification number, TCDS number, or aircraft certification eligibility process identifier number used, as applicable.

(c) Under Operating Time (Hours) Total, enter the total time in service for new and used aircraft. Aircraft engines and propellers are not required to be new, as long as the importing country accepts the aircraft with used engines and propellers. For aircraft, the blocks for engine(s) and propeller(s) must be completed to reflect the required information, as applicable.

(3) Item Nos. 6 and 7. These items are self-explanatory; however, if the “No” box is checked, explain the deviations in item No. 10 and attach the original or a copy of the documents from the importing CAA stating that the product will be acceptable with the deviations listed.

(4) Item No. 8. This item provides a means of establishing the date that ownership is expected to pass to the purchaser.

(5) Item No. 9. This item provides a means of documenting the preservation and packaging methods used to protect against corrosion and damage. When an aircraft is delivered via flying that aircraft, an entry such as “fly-away delivery” is acceptable.

(6) Item No. 10. This space may be used to convey the information required under item Nos. 6 and 7. This space also may be used by the exporter to convey any other information pertinent to the issuance of the export airworthiness approval. Additional sheets may be attached, as necessary, and appropriately cross-referenced.

(7) Item No. 11. The applicant or authorized representative of the exporter must sign this certificate and ensure it is dated. The typed name, title, and signature must be legible.

c. Part II (For Aircraft Engines, Propellers, and Articles). An export C of A is no longer issued for aircraft engines, propellers, or articles. Refer to FAA Order 8130.21 for procedures for issuance of export approvals for aircraft engines, propellers, and articles.

d. Part III. Approval (For FAA Use Only).

(1) Item No. 21. Sign the form. Enter typed or printed name and sign the form. The number should be the office identifier or designee number. An ODA must use its authorization number as assigned by the FAA. Signing an application received with the applicant's original signature, or as a paper copy, fax, or PDF copy is acceptable.

(2) Item No. 22. Not applicable to issuing an export C of A for aircraft.

(3) Item No. 23. Spot check the certification file per paragraph B-2 of appendix B to this order. A completed spot check of the file is indicated by the signature of the reviewing ASI above the typed or printed name along with the district or regional office number and date.

(4) The district or regional office number and date must be entered in the appropriate boxes.

## Section 7. Export Certificate of Airworthiness.

### A-7. Completion of FAA Form 8130-4, *Export Certificate of Airworthiness*.

a. General.

(1) Use FAA Form 8130-4, *Export Certificate of Airworthiness*, GPO pad only.

(2) See figure A-9 of this appendix for a completed, sample FAA Form 8130-4.

(3) All entries must be typewritten, and no erasures or strikeovers are permitted.

b. No. Block. Enter the E-number from Aeronautical Center Form 8050-72.

c. Certifying Statement. Enter the specification or TCDS for the aircraft, aircraft engine, and propeller, as applicable, in the space provided in the certifying statement.

d. Product, Manufacturer, Model, Serial Number. Enter the manufacturer, model, and S/N of the aircraft and each installed engine and propeller.

e. Exceptions.

(1) Nonconformities and Noncompliances. List each nonconformity to the applicable TC(s) and each noncompliance to the SIR of the importing country. If there are no exceptions, enter "None."

(2) Additional Information. As necessary, enter "Additional Information" in the Exceptions block. Include any additional statements required by the applicable TCDS, applicable bilateral agreement, or FAA AC 21-2, appendix 2, *Special Requirements of Importing Countries*. For example, some importing CAAs require the FAA to find conformity and include a statement certifying conformity to the approved TC of the importing CAA.

(3) Temporary Installations. The following instructions apply to preparation of the export C of A when temporary installations, such as provisions for extra fuel or navigational equipment, have been made for export delivery:

(a) If the export C of A is issued after the installation has been made, either by the manufacturer or by other persons, the following statement or equivalent should be inserted under Exceptions: “A temporary [*insert type of installation*] has been installed in this aircraft in conformity with [*insert drawing numbers, or other data to which conformity was shown*] to facilitate its delivery flight. This certificate is valid when the temporary installation is removed.” Copies of all referenced drawings and data should accompany the original export C of A when it is submitted to the applicant or the applicant’s representative.

(b) If the export C of A is issued before making the temporary installation, such as at the manufacturer’s plant, and the aircraft is then flown to another location for installation of the temporary equipment, the export C of A should reflect the configuration of the aircraft at the time the certificate was issued. It then becomes the responsibility of the exporter and importer to secure the installation documents or data required by the importing CAA. The U.S. export C of A may not be amended, reissued, or revalidated after original issuance.

(4) Third Country Aircraft. When a third country aircraft is being exported to a country with which the United States has a bilateral agreement but no third country provision in that agreement, the following statement must be inserted on the export C of A under Exceptions: “This aircraft was not manufactured in the United States and this certificate is not issued pursuant to the bilateral agreement providing for the reciprocal recognition of airworthiness certificates between the United States and [*Country name*], which has stated its willingness to accept this certificate under these conditions, as indicated in their communication, reference \_\_\_\_\_, dated \_\_\_\_\_.”

(5) Primary or Restricted Category Aircraft. Include the following comment under Exceptions: “The above is a [*primary/restricted*] category aircraft. This aircraft has not been determined to meet the international standards concerning the airworthiness of aircraft as provided for in Annex 8 to the Convention on International Civil Aviation.”

**f.** New/Used Blocks. Mark the applicable block to specify whether the aircraft is new or used.

**g.** Country Block. Enter the official name of the importing country as indicated in the applicable bilateral agreement; for example, People’s Republic of China, Canada, and Federative Republic of Brazil.

**h.** Signature of Authorized Representative.

(1) Signature of Authorized Representative. Type the name and FAA authority of the person signing the form adjacent to or under the signature.

(2) Date. Enter the date the aircraft was inspected by the FAA, found to comply with the applicable requirements, and determined to be airworthy.

(3) District Office or Designee Number.

(a) An ASI must enter the district office designation.

(b) An individual designee must enter his or her designee number.

(c) An ODA must enter the name of the company, “ODA,” and their ODA number.

**Figure A-9. Sample FAA Form 8130-4,  
Export Certificate of Airworthiness**

The United States of America  
Department of Transportation  
Federal Aviation Administration  
Washington, D.C.

No. 123456789

**Export Certificate of Airworthiness**

This certifies that the product identified below and particularly described in Specification(s)<sup>1</sup> of the Federal Aviation Administration, Numbered A00009CH, E3SO, and P37EA has been examined as of the date of this certificate, is considered airworthy in accordance with a comprehensive and detailed airworthiness code of the United States Government, and is in compliance with those special requirements of the importing country filed with the United States Government, except as noted below. The certificate in no way attests to compliance with any agreements or contracts between the vendor and purchaser, nor does it constitute authority to operate an aircraft.

Product:	<u>Aircraft</u>	<u>Engine</u>	<u>Propeller</u>
Manufacturer:	Cirrus Design Corporation	Teledyne Continental	Hartzell Propeller Inc.
Model:	SR22	IO-550-N	BHC-J2YF-1BF/F7694
Serial No:	9999	9999	9999
New:	X	Used:	

Country to which exported: The United Kingdom

Exceptions: None. Additional Information: The SR22 covered by this certificate conforms to the type design approved under EASA Type Certificate Number EASA.IM.A.007 and is found to be in a condition for safe operation.

Kimberly Edwardo

*Kimberly Edwardo, ASI*

Signature of Authorized Representative

20 NOV 2016

Date

CE-46

District Office or Designee Number

<sup>1</sup> For complete aircraft, list applicable specification or type certificate data sheet for the aircraft, engine, and propeller. Applicable specification or type certificate data sheet, if not attached to this export certificate, will have been forwarded to the appropriate governmental office of the importing country.

## Appendix B. Documents for Review and Forwarding

**B-1. Introduction.** This appendix provides procedures for reviewing and forwarding airworthiness certification files. For each certificate or denial issued by a designee, the applicable managing office must ensure all relevant records are obtained from that designee.

**B-2. Airworthiness Certification Files.** For the purposes of forwarding documents to AFS-750, certification files consist of the following:

**a. Standard Airworthiness Certificate.** Documents supporting the issuance of a standard airworthiness certificate as listed in table B-1 of this appendix.

**b. Special Airworthiness Certificates.** Documents supporting the issuance of a special airworthiness certificate as listed in table B-2 of this appendix.

**c. Imports.** For imported aircraft, certification files must also include a copy of the export C of A, if provided by the applicant, including any written acceptance of exceptions from the FAA, and, if available, the last foreign airworthiness certificate issued for that aircraft.

**d. Denials.** The application and a copy of the denial letter.

**e. Export C of A.** Documents supporting the issuance of an export C of A include:

- (1) The original FAA Form 8130-1.
- (2) The original or copy of the statement of acceptance from an importing country listing the specific nonconformities to the approved TC and noncompliance(s) to special requirements of the importing country, as applicable. If the importing CAA provided this acceptance electronically, a copy of that acceptance is acceptable for the certification file.

(3) The original Aeronautical Center Form 8050-72.

(4) A copy of the completed FAA Form 8130-4.

### B-3. Review Certification Files.

**Note:** This paragraph does not apply to issuance of a letter of denial.

**a.** If an ASI issued the certificate, the issuing ASI may conduct the file review; however, it is preferable for another ASI to conduct the file review. If a designee issued the certificate, the managing specialist or another ASI from the managing office conducts the certification file review.

**b.** Review each certification file to ensure:

(1) Accuracy, completeness, legibility, and compliance with applicable requirements, including all necessary attachments.

(2) Only documents required under this appendix are included. For example, do not include FAA Form 8100-1 in the certification file for AFS-750.

(3) No proprietary information from the applicant is included.

**c.** The reviewing ASI completes the certification file review block of the application per paragraph A-2.a(4) of appendix A to this order.

**B-4. Forward Certification Files to AFS-750.** After completing the certification file review, as applicable, the issuing or managing office will forward the certification files required under paragraph B-2 of this appendix to AFS-750 no later than 30 calendar days after issuance of the certificate. Regardless, offices are strongly encouraged to review and forward records, especially for denials, as soon as possible to make those records available to other stakeholders.



**Table B-1. Standard Airworthiness Certificates: Documents for Review and Forwarding to the Registry**

Document/Record	R	R	*	*	A	*	A	*	A	A	A	A	A	A	A	A	
Amend Certificate	R	R	*	*	A	*	A	*	A	A	A	A	A	A	A	A	
Exchange Certificate	*	R	*	*	A	*	A	*	A	A	A	A	A	A	A	A	
Replace Certificate	R	*	*	*	A	A	A	*	A	A	A	A	A	A	A	A	
Surplus Aircraft of the U.S. Armed Forces	R	R	*	*	A	*	A	*	A	A	A	A	A	A	A	R	
Used	R	R	*	R	A	*	A	*	A	A	A	A	A	A	A	*	
Manufactured in a Bilateral Country	R	R	*	R	A	*	A	*	A	A	A	A	A	A	*	*	
Manufactured Under a TC	R	R	R	*	A	*	A	A	A	A	A	A	A	A	*	*	
Manufactured Under a PC	R	R	*	*	A	*	A	A	A	A	A	A	A	A	*	*	
<p><b>Notes:</b>                      "R" means required for forwarding to the Registry, AFS-750                      "A" means should be available during the process for issuing the certificate                      "*" means not applicable</p> <p>Original FAA Form 8130-6, <i>Application for U.S. Airworthiness Certification</i>. For a replacement, a signed statement is acceptable in lieu of FAA Form 8130-6.</p> <p>Notarized letter or copy of the original notarized letter authorizing an agent to sign for the registered owner</p> <p>Original FAA Form 8130-9, <i>Statement of Conformity</i></p> <p>For imports under a bilateral agreement, export C of A or other certifying statement of conformity to the U.S. TC and the statement of acceptance of exceptions from the FAA, if applicable.</p> <p>AC Form 8050-3, <i>Certificate of Aircraft Registration</i>, or other acceptable evidence of registration</p> <p>AC Form 8050-64, <i>Assignment of Special Registration Numbers</i> (only required for change to N Number)</p> <p>TCDS, maintenance manuals, technical data, ADs, flight manuals, equipment lists, and other pertinent information necessary to support the certification process</p> <p>TC data (for example, drawings and specifications) and manufacturing records</p> <p>Current weight and balance information</p> <p>Maintenance records showing all maintenance is current</p> <p>FAA-approved flight checkoff form to verify flight test completion</p> <p>Evidence that the aircraft conforms to its FAA-approved TC, including any repairs and alterations</p> <p>Evidence that the aircraft has been inspected per the performance rules for 100 hour inspections as set forth in § 43.15 and found to be airworthy</p> <p>FAA Form 8130-10, <i>Surplus Military Aircraft Inspection Record</i></p>																	

**Table B-1. Standard Airworthiness Certificates: Documents for Review and Forwarding to the Registry (Continued)**

Amend Certificate	*	R	R	R	A
Exchange Certificate	*	*	R	R	*
Replace Certificate	*	*	R	R	*
Surplus Aircraft of the U.S. Armed Forces	R	R	R	R	A
Used	*	R	R	R	A
Manufactured in a Bilateral Country	*	*	R	*	A
Manufactured Under a TC	*	*	R	*	A
Manufactured Under a PC	*	*	R	*	A
<b>Document/Record</b>					
<b>Notes:</b> "R" means required for forwarding to the Registry, AFS-750 "A" means should be available during the process for issuing the certificate "*" means not applicable					
FAA Form 8130-31, <i>Statement of Conformity—Military</i>					
FAA Form 337 if the approved alteration changes the aircraft category, model, or compliance to Annex 8 of the ICAO Convention. Do not include referenced data forming the basis for approval of the repair or alteration.					
Copy of FAA Form 8100-2, <i>Standard Airworthiness Certificate</i>					
Superseded, terminated, or canceled airworthiness certificates must be included and marked accordingly if a recurrent certificate is issued. Does not apply when replacing a lost certificate.					
FAA Form 8100-1, <i>Conformity Inspection Record</i> (Retained for district office files only)					

**Table B-2. Special Airworthiness Certificates: Documents for Review and Forwarding to the Registry**

Amended Certificate	R	R	*	*	R	A	*	*	A	A	A	R	R
Exchange Certificate	*	R	*	*	*	A	*	*	*	*	*	*	R
Replacement Certificate	*	*	*	*	*	A	A	*	*	*	*	*	R
Provisional	R	R	R	*	*	A	*	*	A	A	A	*	R
SFP for overweight operations	R	R	*	*	*	A	*	*	A	A	*	*	*
Experimental	ELSA previous SLSA	R	R	*	*	R	A	*	*	A	A	*	R
	ELSA Kit-Built	R	R	*	*	R	A	*	*	A	A	*	R
	Primary Kit-Built	R	R	*	*	R	A	*	*	A	A	*	R
	Amateur-Built	R	R	*	*	R	A	*	*	A	A	*	R
	Market Survey	R	R	*	*	R	A	*	*	A	A	*	R
	Air Racing	R	R	*	*	R	A	*	*	A	A	*	R
	Exhibition	R	R	*	*	R	A	*	*	A	A	*	R
	Crew Training	R	R	*	*	R	A	*	*	A	A	*	R
	Show Compliance	R	R	*	*	R	A	*	A	A	A	*	R
	R&D	R	R	*	*	R	A	*	A	A	A	*	R
SLSA	R	R	*	*	*	A	*	*	A	A	*	R	
Limited	R	R	*	*	*	A	*	*	A	A	A	R	
Multiple Certificates	R	R	R	R	*	A	*	A	A	A	A	R	
Restricted	R	R	R	R	*	A	*	A	A	A	A	R	
Primary	R	R	R	R	*	A	*	A	A	A	A	R	
<b>Document/Record</b> <b>Notes:</b> "R" means required for forwarding to the Registry, AFS-750 "A" means should be available during the process for issuing the certificate "*)" means not applicable	Original FAA Form 8130-6. For a replacement, a signed statement is acceptable in lieu of FAA Form 8130-6. Notarized letter or copy of the original notarized letter authorizing an agent to sign for the registered owner Original FAA Form 8130-9, <i>Statement of Conformity</i> , for new aircraft manufactured under a TC only For aircraft imported under a bilateral agreement, export C of A and the statement of acceptance of exceptions from the FAA, if applicable Applicant's program letter. AC Form 8050-3, <i>Certificate of Aircraft Registration</i> , or other acceptable evidence of registration AC Form 8050-64, <i>Assignment of Special Registration Numbers</i> (only for changing N-number) TC data (for example, TCDS, STCs, drawings and specifications) and manufacturing records for new aircraft or prototype alterations Maintenance records, historical records, repairs, and alterations Current weight and balance records Parts catalogs, maintenance manuals, technical data, CAR/CAM, ADs, flight manuals, equipment lists, and other pertinent information necessary to support the certification process FAA Form 337 if the approved alteration changes the aircraft category or model. Do not include referenced data forming the basis for approval of the repair or alteration. Copy of FAA Form 8130-7, <i>Special Airworthiness Certificate</i>												

**Table B-2. Special Airworthiness Certificates: Documents for Review and Forwarding to the Registry (Continued)**

Amended Certificate	R	R	A	*	*	*	*	A	A	*	*
Exchange Certificate	*	R	*	*	*	*	*	*	*	*	*
Replacement Certificate	*	R	*	*	*	*	*	*	*	*	*
Provisional	R	R	A	*	*	*	*	*	*	*	*
SFP for overweight operations	A	*	A	*	*	*	*	*	*	*	*
Experimental	ELSA previous SLSA	R	R	A	*	*	*	*	*	*	*
	ELSA Kit-Built	R	*	A	*	*	*	*	*	*	*
	Primary Kit-Built	R	*	A	*	*	*	*	*	*	*
	Amateur-Built	R	*	A	R	R	A	A	A	*	*
	Market Survey	R	*	A	*	*	*	A	A	A	*
	Air Racing	R	*	A	*	*	*	A	A	A	*
	Exhibition	R	*	A	*	*	*	A	A	A	*
	Crew Training	R	*	A	*	*	*	A	A	A	*
	Show Compliance	R	*	A	*	*	*	A	A	A	*
R&D	R	*	A	*	*	*	A	A	A	*	
SLSA	R	R	A	*	*	*	*	*	*	*	
Limited	R	*	A	*	*	*	*	*	*	*	
Multiple Certificates	R	*	A	*	*	*	*	*	*	*	
Restricted	R	R	A	*	*	*	*	*	*	*	
Primary	R	R	A	*	*	*	*	*	*	A	
<b>Document/Record</b>											
<b>Notes:</b> "R" means required for forwarding to the Registry, AFS-750 "A" means should be available during the process for issuing the certificate "*" means not applicable											
Copy of operating limitations											
Superseded, terminated, or canceled airworthiness certificates must be included and marked accordingly if a recurrent certificate is issued. N/A to replacing a lost certificate.											
FAA Form 8100-1, <i>Conformity Inspection Record</i> (Retained for district office files only)											
FAA Form 8130-12, <i>Eligibility Statement, Amateur Built Aircraft</i>											
Amateur-Built Aircraft FAA Form 8000-38, <i>Fabrication/Assembly Operation Checklist</i> , as appropriate											
Aircraft builder's log or equivalent											
Documentation of completed in-process and pre cover inspections											
For turbine powered aircraft, an inspection program selected, established, identified, and used per § 91.409(e) through (h)											
FSDO approved inspection program, to include ejection seat maintenance and jettisonable stores (if fitted) or required											
For former-military aircraft imported with weapons, ATF Forms 6 and 6A											
Submittal of a special inspection and preventive maintenance program											

**Table B-2. Special Airworthiness Certificates: Documents for Review and Forwarding to the Registry (Continued)**

Amended Certificate	*	*	*	*	*	*
Exchange Certificate	*	*	*	*	*	*
Replacement Certificate	*	*	*	*	*	*
Provisional	*	*	*	*	*	*
SFP for overweight operations	*	*	*	*	*	*
Experimental	ELSA previous SLSA	R	A	A	*	*
	ELSA Kit-Built	R	*	A	*	*
	Primary Kit-Built	*	*	*	*	*
	Amateur-Built	*	*	*	*	*
	Market Survey	*	*	*	*	*
	Air Racing	*	*	*	*	*
	Exhibition	*	*	*	*	*
	Crew Training	*	*	*	*	*
	Show Compliance	*	*	*	*	*
	R&D	*	*	*	*	*
SLSA	R	R	A	A	A	
Limited	*	*	*	*	*	
Multiple Certificates	*	*	*	*	*	
Restricted	*	*	*	*	*	
Primary	*	*	*	*	*	
<b>Document/Record</b>	<p><b>Notes:</b>                      "R" means required for forwarding to the Registry. AFS-750                      "A" means should be available during the process for issuing the certificate                      "(*)" means not applicable</p> <p>A copy of FAA Form 8130-15, <i>Light-Sport Aircraft/Kit SOC</i>, for SLSA and kit ELSA</p> <p>A copy of the manufacturer's production flight test record(s) for SLSA</p> <p>AOI, maintenance and inspection procedures, and a flight training supplement written in the English language</p> <p>Statement that the aircraft was not altered and/or modified without manufacturer approval. When the manufacturer's approval is given, it will be in written form and be S/N-specific. (ELSA &gt; LSA)</p> <p>Evidence that required maintenance and inspections were accomplished and documented in the aircraft's records per part 43 for the SLSA configuration. Proof the aircraft was inspected and is in a condition for safe operation. (ELSA &gt; LSA)</p> <p>Manufacturer's assembly instructions, approved flight test procedures, and final inspection acceptance record(s)</p>					

## Appendix C. Program Letters

**C-1. General.** The applicant must provide the information required by §§ [21.193\(a\) through \(d\)](#). It is important that the information provided in the program letter have sufficient detail to permit the FAA to prescribe the limitations necessary to ensure safe operation of the aircraft. This appendix is not intended to prescribe what must be contained in every program letter, but to provide items for consideration in determining if the applicant's letter is acceptable. In addition to the policies and procedures in paragraph 4-6.a(1) of this order, use the following to determine if a program letter includes sufficient information to establish whether an applicant is eligible for a specific experimental purpose.

### C-2. Program Letter Content.

**a. R&D.** For each project, the program letter should—

- (1) Describe the project in sufficient detail to demonstrate it meets the regulatory requirements of § [21.191\(a\)](#).
- (2) Include the number of aircraft required.
- (3) Include the duration.
- (4) Include the number of flights and/or flight hours.
- (5) Describe the area and airports in which the aircraft will be operated.
- (6) Provide contact information of the customer, if the project will be performed under contract.

**Note 1:** An applicant may be seeking a project with another company, but may not yet have been awarded a specific contract to conduct the R&D. The applicant may still submit an application that includes information about the project they intend to conduct. The operating limitations issued should be specific and only valid for that project.

**Note 2:** To add new projects, the applicant should submit a new application. Depending on the specifics of the new project, the certificated may have to be amended to issue new operating limitations.

**b. Exhibition.** The program letter should—

- (1) Provide event names and dates for the events at which the aircraft will be exhibited.
- (2) Propose route(s) of flight to and from the events.
- (3) For proficiency and/or maintenance flights, include the estimated number of flight hours and the intended area and airports in which the aircraft will be operated.

**c. Crew Training.** The program letter should describe the training plan as follows:

- (1) For pilot transition training that leads to a pilot authorization, provide—
  - (a) The name of the person within the company who will provide the training and that person's qualifications (for example, instructor pilot training received),

- (b) A training syllabus,
  - (c) The time needed to complete the training (that is, approximate number of hours over a defined period of time),
  - (d) The estimated number of pilots to be trained, and
  - (e) The airport(s) and area(s) of operation where the training will be conducted.
- (2) For recurrent or revalidation training, provide—
- (a) The name of the person within the company who will provide the training and that person's qualifications (for example, instructor pilot training received),
  - (b) When a pilot would need this training (for example, every six months, annually, or after a specified period of inactivity),
  - (c) A training syllabus,
  - (d) The time needed to complete the training (that is, approximate number of hours over a defined period of time),
  - (e) The performance standards to complete the training, and
  - (f) The airport(s) and area(s) of operation where the training will be conducted.

**Note 1:** The Airline Transport Pilot and Aircraft Type Rating Practical Test Standards should also be used as a guide for the tasks taught and flightcrew performance standards.

**Note 2:** For training in a former-military aircraft, the training syllabus for instructor pilots and line pilots should follow an appropriate military training standard (for example, Naval Air Training and Operating Procedures Standardization (NATOPS)) or other appropriate training standard deemed acceptable.

**Note 3:** The operating limitations should only permit training flights necessary to complete the training plan. The operating limitations must state that the occupants of the aircraft must be flightcrew employees of the company/applicant.

- d. Market Survey. The program letter should—
  - (1) Describe the market survey in detail.
  - (2) Describe the area and airports in which the aircraft will be operated.
  - (3) Identify intended customers.
  - (4) Specify dates for the market survey activity.
- e. Air Racing. The program letter should—
  - (1) Provide event names and dates for the applicable air races.
  - (2) Include route(s) of flight to and from the races.
  - (3) Describe the area and airports in which the aircraft will be operated for races and for proficiency and maintenance flights.

(4) Include the estimated number of hours for proficiency flying and/or maintenance flights.

(5) Describe any major alterations that have been made to the aircraft.

**f. Aircraft That Could Perform Public or Military Aircraft Operations.** An applicant for a civil experimental airworthiness certificate that may also perform public or military operations for a domestic or foreign government or military entity should include additional information in its program letter for the FAA to understand all the operations to be conducted. Operations and configurations in the non-civil arena may impact the operating limitations for the civil airworthiness certificate. It is common for a DOD contractor to apply for a civil airworthiness certificate to fulfill contract requirements; this is not a valid reason for the issuance of a certificate.

**Note:** FAA AC 00-1.1A, *Public Aircraft Operations*, provides guidance for determining whether government or government-contracted aircraft operations conducted within the territory of the United States constitute public aircraft operations (PAO) under the statutory definition of “public aircraft,” in 49 USC 40102(a)(41) and 40125.

- (1) Identify the government/military customer.
  - (a) Provide the name of the government/military entity and a point of contact.
  - (b) Include the length of the contract.
- (2) Describe the types of operations/intended use of this aircraft.
  - (a) Be specific in the type of aerial work to be conducted.
  - (b) Include the number of aircraft your operation will need to support the contract.
  - (c) Describe the area of operation, including airports in and out of which the aircraft operates.
  - (d) Describe operating capability requirements.
  - (e) Include any other information relevant to how the aircraft will be operated.
- (3) For operations in the United States, indicate whether you have or intend to obtain a declaration of PAO from your government contracting entity. For international operations, please indicate whether the operation will be covered under a diplomatic clearance.
- (4) Estimate the percentage of flight time intended for state/public/military service and flight time while operating when the special airworthiness certificate would be in effect.
- (5) Describe any configuration or operating changes in state/public/military use that may affect the airworthiness of the aircraft on return to civil status; for example, under civil status, any external stores/pods may not be releasable during aircraft operations.
- (6) Describe how/when the aircraft would return to operations using its FAA-issued special airworthiness certificate.
  - (a) Describe any configuration changes.
  - (b) Describe any operations that may cause a flight to be operated outside of the normal flight envelope (or the reduced flight envelope of the special airworthiness certificate).



- (c) Describe the method, to include inspections, etc., to establish airworthiness.

**Note 1:** Public/state/military aircraft operations are not covered under an FAA airworthiness certificate. The contracting entity assumes responsibility for the flight.

**Note 2:** The information gathered concerning public/state/military operations should be used to better determine appropriate operating limitations. For example, if a military operation will require the aircraft to exceed a g-load limit in the operating limitations, an additional limitation may need to be added that requires an inspection and maintenance record entry before operations under the FAA certificate.

**g. Additional Information.**

(1) Operating Area. A written description or annotated map is acceptable. Specifically describe the area. Stating “North America” or “worldwide” is not acceptable. Assigning an operating area of “the United States” may be acceptable for low-risk aircraft. The FAA may establish boundaries of the flight test area, including takeoff, departure, and landing approach routing to minimize hazards to persons, property, and other air traffic. However, it is the operator’s responsibility to ensure safe flight of the aircraft.

(2) Multiple Purpose Use. If the applicant intends to use the aircraft for multiple purposes or roles, the program letter should—

(a) Document all operations for each purpose.

(b) Describe any configuration changes that will occur between each purpose, such as adding or removing external stores and enabling or disabling systems.

(c) Include each purpose in a separate section. For example, an aircraft could have an experimental airworthiness certificate for the purposes of R&D and exhibition. The same aircraft may also conduct military/state operations or PAO. In this example, the program letter must describe all three roles with the same level of detail. Although the airworthiness certificate is not in effect, and the FAA cannot prescribe limitations for PAO, the FAA cannot determine the appropriate certification for the aircraft without knowledge of how the aircraft is used.

**Figure C-1. Sample R&D/Exhibition/PAO Applicant Program Letter  
for a Special Airworthiness Certificate**

1. Registered Owner (as shown on the registration)  
*NAME: Brand X Support Services, Inc.*  
*ADDRESS: 123 Airport Street*  
*Any Town, USA 00010-0001*
2. Aircraft Description
  - a. Registration Marks: *N12345*
  - b. Aircraft Yr. Mfg.: *1972*
  - c. Aircraft Serial No.: *52*
  - d. Aircraft Model Designation: *Aero Vodochody, L-39 Albatros*

R&D

3. Describe program purpose for which the aircraft is to be used (§ 21.193(d)(1)).  
*R&D providing chase for Major Airplane Manufacturer for certification testing of their next bizjet. Aircraft Certification Office X is the project office. The assigned project number is ACOXzzz.*
4. Provide the following information as it pertains to your Program Letter.
  - a. List estimated flight hours required for program. Hrs.: *unknown*
  - b. List estimated number of flights required for program. No. Flts: *50*
  - c. List estimated duration for programs (§ 21.193(d)(2)). *150 days*
5. Describe the areas over which the flights are to be conducted, and address of base operation (§ 21.193(d)(3)).  
*The flights will take place within 150nm of airport KAAA, excluding the airspace over City-X. The maximum altitude is FL240. The base of operations is Major Airplane Manufacturer Hangar, 12345 Tower Drive, City-X, 00025.*
6. Describe the aircraft configuration (attach three-view drawings or three-view dimensioned photographs of the aircraft (§ 21.193(d)(4) and include a description of how the configuration is different from the other purposes listed). *See attached.*

Exhibition

7. Describe program purpose for which the aircraft is to be used (§ 21.193(d)(1)).  
*Exhibition at the following events over the next eight months:*  
*AirVenture – KOSH, August 1, 2013*  
*Billy Bob's Air Event – KAAA, June 30, 2013*
8. Provide the following information as it pertains to your Program Letter.
  - a. List estimated flight hours required. Hrs.: *13 hours exhibition, including the flights to and from the events. 10 hours for crew training.*
  - b. List estimated number of flights required. No. Flts: *unknown*

**Figure C-1. Sample R&D/Exhibition/PAO Applicant Program Letter  
for a Special Airworthiness Certificate (Continued)**

9. Describe the areas over which the flights are to be conducted, and address of base operation (§ 21.193(d)(3)).

*Crew training flights will take place within 125 nm of AnyTown, United States, airport with a maximum altitude of 10,000 ft. The base of operations is the address listed above.*

10. Describe the aircraft configuration (attach three-view drawings or three-view dimensioned photographs of the aircraft (§ 21.193(d)(4) and include a description of how the configuration is different from the other purposes listed). *See attached.*

Military/State/Public Aircraft Operations

*The aircraft will provide contract support for the U.S. Department of Defense and People's Liberation Army Air Force. The contracts call for towing targets, aerial survey, serve as aggressor for pilot training, aerial gunnery/missile launch and dropping bombs.*

*The flight area extends from the Qinghai Province to Greenland. The maximum altitude is FL410. The flight profiles call for a maximum g-force of 10.*

*A picture of the aircraft as configured for PAO is attached. Note the addition of an external store. We also will enable the ability to release external stores during these operations.*

11. Date, Name, and Title (Print or Type), and Signature.

## Appendix D. Issuing Operating Limitations for Non-Standard Aircraft

D-1. **Introduction.** This appendix provides procedures for issuing operating limitations for non-standard aircraft.

### D-2. General.

#### a. GPO Pad Version of FAA Form 8130-7.

(1) Operating limitations generally applicable to non-standard aircraft are printed on the back side of the paper, GPO pad version of FAA Form 8130-7, *Special Airworthiness Certificate*.

(2) Additional operating limitations will be listed and numbered on a separate sheet, dated, signed, and attached to FAA Form 8130-7. At least the first page of the operating limitations should be typed on FAA-branded paper. FAA-branded paper or an electronic template may be provided to FAA designees for the sole purpose of issuing aircraft operating limitations.

**b.** PDF Version of FAA Form 8130-7. Operating limitations generally applicable to non-standard aircraft are included by default in the *Conditions and Limitations* section of the PDF version of this form. Edit these conditions and limitations as follows:

(1) If the certificate is not for a production flight test, delete paragraph concerning production flight tests.

(2) If the certificate is not for a SFP, delete “This airworthiness certificate authorizes the flight specified for the purpose shown.”

(3) Copy additional operating limitations into the *Conditions and Limitations* section of the form.

(4) When issuing a replacement certificate for a certificate previously issued with the GPO pad version of FAA Form 8130-7, and the original operating limitations are available, you may retain the default operating limitation concerning Annex 8 of the ICAO Convention from the PDF version of the certificate, delete the other default conditions and limitations, and add a statement such as, “The attached operating limitations dated [*insert date*] are part of this certificate.”

(5) After the last condition & limitation, place “-END-” approximately centered on the page as included by default in the form.

#### c. Additional Operating Limitations.

(1) Table D-1. Additional operating limitations must include the applicable limitations from table D-1 of this appendix. However, operating limitations involving certificate holders who have demonstrated a high degree of competence in manufacturing and/or operations (for example, an original equipment manufacturer that has an ODA, PC, or TC) should be considered for variances from the standard limitations when appropriate.

(2) Other. The operating limitations of table D-1 of this appendix are not sufficient to mitigate every safety risk you may encounter with a particular aircraft or operation. Operating limitations must be designed to fit the specific situation encountered, which may vary depending

on the aircraft type, aircraft configuration, aircraft condition, operating area, air traffic, operator capabilities, and intended use. Based on your inspections and assessment of potential safety hazards, prescribe additional operating limitations you consider necessary for safe operation.

**d.** USC or 14 CFR Requirements. Do not paraphrase or quote requirements from 49 USC or 14 CFR in the operating limitations.

**e.** Job Aid. For assistance in drafting operating limitations, a job aid with a fillable template is posted with this order on [RGL](#). You must compare operating limitations generated using the job aid with this appendix to verify the listing of operating limitations is complete and correct.

**D-3. Phased Operating Limitations.** Experimental certificates for exhibition, air racing, operating amateur-built aircraft, or operating light-sport aircraft (LSA) may have operating limitations issued in two phases. Phase I operating limitations are for the applicant to demonstrate compliance with § 91.319(b). This includes a limitation requiring the owner/operator to endorse the aircraft maintenance records with a statement certifying that the prescribed flight hours and/or landings have been completed, and the aircraft has been shown to comply with § 91.319(b). The owner/operator may then operate per phase II operating limitations. Usually phase I and phase II operating limitations are issued for an unlimited duration during the initial airworthiness certification. The FAA may elect to issue phase I and phase II limitations together or separately as necessary in the interest of safety.

#### **D-4. Procedures.**

**a.** Do not place the operator's or applicant's name on the limitations.

**b.** Do not incorporate the applicant's program letter by reference.

**c.** Do not incorporate the provisions, conditions, or limitations of an exemption applicable to this aircraft or the current owner/operator.

**d.** Use the following section numbers from 14 CFR to identify the applicable operating limitations in table D-1 of this appendix:

- (1) Section 21.184—Primary.
- (2) Section 21.185—Restricted.
- (3) Section 21.187—Multiple (one of which is always restricted category).
- (4) Section 21.189—Limited.
- (5) Section 21.190—LSA.
- (6) Section 21.191—Experimental.
  - (a) Paragraph (a), R&D.
  - (b) Paragraph (b), Showing compliance with regulations.
  - (c) Paragraph (c), Crew training.
  - (d) Paragraph (d), Exhibition.
  - (e) Paragraph (e), Air racing.
  - (f) Paragraph (f), Market surveys.

- (g) Paragraph (g), Operating amateur-built aircraft.
- (h) Paragraph (h), Operating primary kit-built aircraft.
- (i) Paragraph (i), Operating LSA.

**e.** Start at the top of the table and work down. If the certification basis and/or the notes apply to the aircraft, issue the limitation as worded in the table. Number the limitations sequentially starting with “1,” and place the number of the limitation from the order in parentheses at the end of the limitation. Some limitations have multiple statements with different applicabilities; in these cases, issue the appropriate segment(s) of the limitation.

**f.** Aircraft with very high risk factors or safety of flight issues must have those factors properly mitigated. Restrict operations to a specified geographical area, and prohibit the carriage of passengers, flight over densely populated areas, and night or instrument flight rules (unless restricted to visual meteorological conditions (VMC)) operations for any of the following conditions:

- (1) Aircraft for which the applicant has surrendered a special LSA airworthiness certificate (§ 21.190) and is applying for an experimental airworthiness certificate (§ 21.191) for the first time, and is not in compliance with § 91.327(b)(3) or (4);
- (2) Aircraft for which the manufacturer’s or country of origin’s emergency checklist requires bailout or ejection in the event of an engine or other system failure;
- (3) Any aircraft in which a single system failure will render the aircraft uncontrollable, such as an airplane with a hydraulic flight control system with only one hydraulic pump;
- (4) Aircraft unable to comply with § 91.117(a) in normal cruise configuration; and
- (5) Rocket-powered aircraft.

**g.** Aircraft to be Operated Over a Foreign Country. No person may operate an aircraft with a special airworthiness certificate over any foreign country without permission from that country.

- (1) Aircraft Based in the United States. For any operating limitation that specifies a geographic area for flight operations, do not include a geographic area over a foreign country.
- (2) Aircraft Based in a Foreign Country. Remove any operating limitation that specifies a geographic area for flight operations.

**h.** After the last limitation, sign and date the document.

#### **D-5. Coordination.**

**a.** R&D or Showing Compliance. Questions about a specific limitation in table D-1 of this appendix or change to that limitation for the purposes of R&D or showing compliance with regulations should be directed to the local manufacturing office or ACO as appropriate; the local manufacturing office may approve changes to limitations for the purposes of R&D or showing compliance with regulations.

**b.** Purposes Other Than R&D or Showing Compliance. Questions about a specific limitation in table D-1 of this appendix or changes to that limitation, for purposes other than R&D or showing compliance with regulations, should be directed to the responsible office for

that limitation. The responsible office is AFS-800 unless otherwise specified in table D-1 of this appendix.

**c. Additional Limitations for Certain Purposes.** You may prescribe additional limitations for the purposes of R&D, showing compliance with regulations, crew training, or market survey without coordination.

**d. Certain Former-Military Aircraft.** You are encouraged to coordinate with AIR-113 operating limitations for former-military aircraft that weigh more than 9,000 pounds maximum takeoff weight, with turbine power greater than 3,000 pounds of total engine thrust of all engines or 1,000 shaft horsepower of one engine or if it was originally equipped with an ejection seat system.

**e. Coordination Mailbox.** You may [email](#) requests for coordination or questions about operating limitations to the responsible offices of table D-1 of this appendix. Include a copy of the application and, if applicable, the program letter. If an applicant is requesting you change or omit a limitation, include their rationale for doing so and their proposal for providing an equivalent level of safety.

**D-6. Review with Applicant.** When issuing a certificate, review the operating limitations with the applicant to ensure a clear understanding of the limitations. Remind the applicant they must comply with the applicable regulations, emphasizing § 91.9 and the following:

- a. Restricted.** Refer to §§ 21.181, 45.23, 91.203, and 91.313.
- b. Special LSA.** Refer to §§ 21.181, 43.11, 45.23, 91.203, and 91.327.
- c. Experimental.** Refer to §§ 21.181, 45.23, 91.119, 91.180, 91.203, 91.305, 91.319, and 91.817.
- d. Limited.** Refer to §§ 21.181, 45.23, 91.203, and 91.315.
- e. Primary.** Refer to §§ 21.181, 91.203, and 91.325.
- f. Provisional.**
  - (1) Class I. Refer to §§ 21.81(e) and 91.317.
  - (2) Class II. Refer to §§ 21.83(h), 91.317, and 121.207.
  - (3) Provisional Amendments to a TC. Refer to §§ 21.85(g), 91.317, and 121.207.
- g. Operations Over a Foreign Country.** Advise the applicant that it may not operate its aircraft over any foreign country without the special permission of that country. The applicable authority of that country may prescribe any operating limitation it deems appropriate, including any limitation concerning geographic areas for flight operations.

<b>Table D-1. Operating Limitations</b>			
<b>No.</b>	<b>Certification Basis (14CFR part 21) / Responsible Office</b>	<b>Notes/ Applicability</b>	<b>Operating Limitation</b>
<b>All Operations</b>			
1	184, 185, 189, 190, 191 AIR-113		This aircraft does not meet the airworthiness standards of Annex 8 to the Convention on International Civil Aviation. Operations in airspace outside of the United States will require the permission of the applicable foreign authority. That permission must be carried aboard the aircraft together with this U.S. airworthiness certificate and, upon request, be made available to an FAA inspector or the applicable foreign authority in the country of operation. Operations may be further restricted by the applicable foreign authority. This may include not allowing use of an airport, requiring specific routing, and restricting flight over specific areas. The operator must comply with any additional limitation prescribed by the applicable foreign authority when operating in its airspace. (1)
2	184, 185, 189, 190, 191 AIR-113		These operating limitations do not provide any relief from any applicable law or regulation. This aircraft must be operated per applicable regulations and the additional limitations prescribed herein. Note that a clearance from air traffic control (ATC) is not authorization for a pilot to deviate from any rule, regulation, operating limitation, or minimum altitude, or to conduct unsafe operation of the aircraft. If ATC issues a clearance that would cause a pilot to deviate from a rule, regulation, or operating limitation, or in the pilot's opinion, would place the aircraft in jeopardy, it is the pilot's responsibility to request an amended clearance. These operating limitations are a part of FAA Form 8130-7 and are to be carried in the aircraft at all times and to be available to the pilot in command of the aircraft. (2)
3	191 AFS-800		This special airworthiness certificate is not in effect during public aircraft operations (PAO). Concurrent public/civil operations are not permitted; the aircraft cannot be operated as a civil aircraft and as a public aircraft at the same time. No weapons or special military mission systems may be added to the aircraft. This airworthiness certificate is not in effect during flights related to providing military services (that is, air combat maneuvering, air-to-air gunnery, target towing, electronic countermeasures simulation, cruise missile simulation, and air refueling). These activities are inherently military, not civil activities. The FAA makes the distinction between the authorized flights for experimental purposes, and PAO. Before operating this aircraft under this special airworthiness certificate following a PAO, the aircraft must be returned to the condition and configuration at the time of inspection for the issuance of this airworthiness certificate. The operator must have written procedures for returning the aircraft to the civil configuration. This action must be documented in the maintenance records. The maintenance records and entries must clearly differentiate between a civil experimental flight per this certificate and any other flights. (3)
4	184, 185, 189, 190, 191 AFS-300		Application to amend this certificate must be made to the local Flight Standards District Office (FSDO) or Manufacturing Inspection District Office (MIDO). (4)



Table D-1. Operating Limitations			
No.	Certification Basis (14CFR part 21) / Responsible Office	Notes/ Applicability	Operating Limitation
5	191(g) AFS-800		No person may operate this aircraft for other than recreation and education. (5)
6	190 AFS-800		This aircraft may only be operated per the manufacturer's aircraft operating instructions (AOI), including any requirement for necessary operating equipment specified in the aircraft's equipment list. Night flight and instrument flight rules (IFR) operations are authorized if allowed by the AOI and if the instruments specified in § 91.205 are installed, operational, and maintained per the applicable requirements of part 91. (6)
7	190 & 191 AFS-800	All single seat, hot-air airships such as the Thunder & Colt AS-56	The PIC must hold a pilot certificate with a lighter-than-air category rating and an airborne heater privilege. The PIC must hold all required ratings or authorization and endorsements required by 14 CFR part 61. (7)
		For atypical aircraft, coordinate with AFS-800.	The pilot in command must hold _____ category and _____ class certificate or privilege. The pilot in command must hold all required ratings or authorizations and endorsements required by part 61. (7)
8	191(a), (b), (c), (d), (e), & (f) AFS-800	Large aircraft. Turbojet aircraft. Airplanes with 800 or greater total horsepower and V <sub>NE</sub> greater than 250 knots.	The pilot in command must hold— (a) An appropriate type rating (if one has been established); or (b) An experimental aircraft authorization, by make and model, on their pilot certificate; or (c) A temporary letter of authorization (LOA) issued by an FAA Flight Standards Operations Inspector. (8)
9	191(a), (b), (c), (d), (e), & (f) AFS-800	Single seat or single control aircraft subject to limitation 8	A qualified instructor after providing ground and flight training may make an endorsement, to allow the airman to be pilot in command for completing a practical test for the issuance of an experimental aircraft authorization. Refer to <a href="#">Order 8900.1, volume 5, chapter 9, section 2</a> . The endorsement may allow solo operation of the aircraft. The endorsement may be valid for a period up to 30 days. The endorsement must specify the flight conditions authorized (for example, day, night, IMC) and flying area. The flying area may not exceed 3/8 of the fuel range of the aircraft. (9)
10	191 AFS-800	Issue for aircraft that require a copilot and/or flight engineer and AH-64.	Additional required flightcrew members must hold the appropriate airman certificate, that is, pilot or flight engineer. Pilots must hold _____ category and _____ class certificate. (10)
11	191 AFS-800		When filing a flight plan, the experimental nature of this aircraft must be listed in the remarks section. (11)

Table D-1. Operating Limitations			
No.	Certification Basis (14CFR part 21) / Responsible Office	Notes/ Applicability	Operating Limitation
12	191(i) AFS-800		This aircraft must not be used for banner towing operations or intentional parachute jumping. (12)
13	191(a), (b), (c), (d), (e), (f), (g), & (h) AFS-800		This aircraft must not be used for towing, including, but not limited to glider towing, banner towing, target towing, or towing electronic receivers or emitters. This aircraft must not be used for intentional parachute jumping. (13)
14	191 AFS-300		If aircraft, engine, or propeller operating limitations are exceeded outside of planned test conditions, an appropriate entry will be made in the maintenance records. (14)
15	191 AFS-300	All large airplanes, turbine engine airplanes, and turbine rotorcraft.	<p>No person may operate this aircraft unless it is maintained per an inspection program meeting the scope and content described in § 91.409(f). The operator must select and identify in the aircraft maintenance records one of the following programs for the inspection of the aircraft:</p> <ul style="list-style-type: none"> <li>(a) For type-certificated aircraft, a current inspection program recommended by the manufacturer; or</li> <li>(b) For former-military aircraft, an inspection program recommended by the manufacturer or North Atlantic Treaty Organization (NATO) military service; or</li> <li>(c) An FAA-approved inspection program.</li> </ul> <p>Note: To extend an inspection interval, the owner/operator must submit a request for that extension with supporting documentation and data to the local FSDO and obtain concurrence from that FSDO.</p> <p>Inspections must be recorded in the aircraft maintenance records showing the following, or a similarly worded, statement: "I certify that this aircraft has been inspected on [insert date] per [identify applicable inspection program] and found to be in a condition for safe operation." (15)</p>
		All other aircraft not described above.	<p>No person may operate this aircraft unless within the preceding 12 calendar months it has had a condition inspection performed per the scope and detail of part 43, appendix D, manufacturer or other FAA-approved programs, and was found to be in a condition for safe operation. The inspections must be recorded in the aircraft maintenance records showing the following, or a similarly worded, statement: "I certify that this aircraft has been inspected on [insert date] per the [insert either: scope and detail of part 43, appendix D; or manufacturer's inspection procedures] and was found to be in a condition for safe operation." The entry will include the aircraft's total time-in-service (cycles if appropriate), and the name, signature, certificate number, and type of certificate held by the person performing the inspection. (15)</p>

<b>Table D-1. Operating Limitations</b>			
<b>No.</b>	<b>Certification Basis (14CFR part 21) / Responsible Office</b>	<b>Notes/ Applicability</b>	<b>Operating Limitation</b>
16	191 AFS-300	Former military.	This aircraft must not be operated unless it is operated, inspected, and maintained per appropriate military technical publications and/or manufacturer's recommendations. (16)
17	191(i) AFS-300		An ELSA owner/operator certificated as a repairman for this aircraft under § 65.107, an appropriately rated FAA-certificated mechanic, or an appropriately rated FAA repair station may perform the condition inspection required by these operating limitations. (17)
18	191(g) AFS-300		An experimental aircraft builder certificated as a repairman for this aircraft under § 65.104, or an appropriately rated FAA-certificated mechanic, may perform the condition inspection required by these operating limitations. (18)
19	191(a), (b), (c), (d), (e), (f), & (h) AFS-300		Only FAA-certificated repair stations, FAA-certificated mechanics with appropriate ratings, or a manufacturer as authorized by § 43.3 may perform inspections required by these operating limitations. (19)
20	191 AFS-300		The aircraft may not be operated unless the replacement for life-limited articles specified in the applicable technical publications pertaining to the aircraft and its articles are complied with in one of the following manners: (a) Type-Certificated Products: Replacement of life-limited parts required by § 91.409(e) applies to experimental aircraft when the required replacement times are specified in the U.S. aircraft specifications or type certificate data sheets. (b) Non-Type-Certificated Products: All articles installed in non-type-certificated products operated under an airworthiness certificate issued for an experimental purpose, in which the manufacturer has specified limits, must include in their program an equivalent level of safety for those articles. These limits must be evaluated for their current operating environment and addressed in the approved inspection program. All articles installed in non-type-certificated products in which the manufacturer has specified limits, must include in their program an equivalent level of safety for those articles. The article must be inspected to ensure the equivalent level of safety still renders the product in a serviceable condition for safe operation. (20)
21	191 AFS-300		For aircraft originally incorporating fatigue life recording systems, the owner/operator must maintain and use the system as prescribed by the aircraft manufacturer and comply with the manufacturer's fatigue life limits. (21)
22	191(c), (d), (e), (f), (h), & (i) AFS-300		The geographically responsible FSDO where the aircraft is based must be notified, and its response received in writing, before flying this aircraft after incorporation of a major change as defined by § 21.93. The FSDO may require demonstrated compliance with § 91.319(b). (22)

Table D-1. Operating Limitations

No.	Certification Basis (14CFR part 21) / Responsible Office	Notes/ Applicability	Operating Limitation
23	191(g) AFS-300		<p>After incorporating a major change as described in § 21.93, the aircraft owner is required to reestablish compliance with § 91.319(b) and notify the geographically responsible FSDO of the location of the proposed test area. The aircraft owner must obtain concurrence from the FSDO as to the suitability of the proposed test area. If the major change includes installing a different type of engine (reciprocating to turbine) or a change of a fixed-pitch from or to a controllable propeller, the aircraft owner must fill out a revised FAA Form 8130-6 to update the aircraft's file in the FAA Aircraft Registration Branch, AFS-750. All operations must be conducted under day visual flight rules (VFR) conditions over a sparsely populated area in compliance with § 91.305. The aircraft must remain in flight test for a minimum of 5 hours. The FSDO may require additional time (more than 5 hours) depending on the extent of the modification. Persons nonessential to the flight must not be carried. The aircraft owner must make an aircraft maintenance record entry describing the change before the test flight. Following satisfactory completion of the required number of flight hours in the flight test area, the pilot must certify in the records that the aircraft has been shown to comply with § 91.319(b). Compliance with § 91.319(b) must be recorded in the maintenance records with the following, or a similarly worded, statement: "I certify that the prescribed flight test hours have been completed and the aircraft is controllable throughout its normal range of speeds and throughout all maneuvers to be executed, has no hazardous characteristics or design features, and is safe for operation. (23)</p>
24	187 AFS-300		<p>Conversion from one category certificate to the other must be accomplished per [<i>Reference the applicable instructions (date)</i>].</p> <p>Each conversion from one category certificate to another must be documented via a maintenance record entry. (24)</p>
25	187 AFS-300	If an inspection per § 21.187(b) is required	The operator of this aircraft must have the aircraft inspected by the FAA, or by a certificated mechanic with an appropriate airframe rating, to determine airworthiness each time the aircraft is converted from the restricted category to another category for the carriage of passengers for compensation or hire. (25)
26	191 AFS-300	Multipurpose PC/modifier procedure per paragraph 4-9 of this order.	Changing between experimental operating purposes must be accomplished per [ <i>Reference the approved PC/modifier procedure, for example, ABC Aircraft Co. Experimental Operating Procedure No. 12 (dated)</i> ]. (26)
			When changing between experimental operating purposes, the operator must determine that the aircraft is in a condition for safe operation and appropriate for the purpose intended. A record entry will be made by an appropriately rated person to document that finding in the maintenance records. (26)

Table D-1. Operating Limitations			
No.	Certification Basis (14CFR part 21) / Responsible Office	Notes/ Applicability	Operating Limitation
27	190 & 191(i) AFS-800		The pilot may only conduct the flight maneuvers authorized in the AOI. (27)
28	191 AFS-800	Former military turbine airplanes.	<p>Preflight planning runway length requirements: Takeoff is prohibited unless takeoff planning determines it is possible to stop the airplane safely on the runway, as shown by the accelerate-stop distance data. For aircraft without accelerate-stop distance data, the airplane must be able to safely stop within the effective length of the runway, from any point during the takeoff, before reaching 105 percent of <math>V_{MCA}</math> or 115 percent of the power-off stalling speed in the takeoff configuration, whichever is greater. In addition, the aircraft must be able to clear all obstacles by at least 50 feet vertically.</p> <p>Landing will not be attempted unless landing planning determines that a full stop landing can be made within 60 percent of the effective length of the runway from a point 50 feet above the runway. When calculating takeoff or landing performance, corrections must be made for any runway gradient. Performance data based on still air may be corrected by taking into account not more than 50 percent of any reported headwind component and not less than 150 percent of any reported tailwind component. Calculations may not include the use of reverse thrust or drag chute. (28)</p>
29	191(d) & (e) AFS-300		<p>The owner/operator must submit an annual program letter to the geographically responsible FSDO where the aircraft is based. A copy of the current program letter and any amendments must be carried on board the aircraft any time that the aircraft is being operated.</p> <p>The program letter must include the following information:</p> <ul style="list-style-type: none"> <li>(a) The aircraft's home base,</li> <li>(b) The name of the person responsible for the operation and maintenance of the aircraft,</li> <li>(c) A list of events at which the aircraft will be [exhibited/raced] (the list may be amended as necessary),</li> <li>(d) The estimated time or number of flights, and</li> <li>(e) The areas over which the aircraft will be flown. (29)</li> </ul>

Table D-1. Operating Limitations

No.	Certification Basis (14CFR part 21) / Responsible Office	Notes/ Applicability	Operating Limitation
30	191 AFS-300, except AFS-800 for pilot/ passenger training program.	Ejection seat installed or aircraft originally had an ejection seat.	<p>Aircraft equipped with operational ejection seats must have external markings that ensure emergency personnel are aware of the hazard presented by the system.</p> <p>Operational ejection seat systems must be maintained and inspected per the manufacturer's procedures or U.S./NATO applicable orders. The manufacturer or military service must approve any modification to the seat or parts substitution. The manufacturer or military service must have approved the ejection seat system, as configured, for installation in the aircraft.</p> <p>Operational ejection seat systems must be secured per the manufacturer's procedures or U.S./NATO technical orders to prevent inadvertent operation of the system when the aircraft is parked or out of service.</p> <p>Person(s) acting as pilot-in-command and flightcrew members operating aircraft equipped with operational ejection seat(s), whether armed or not armed, must have successfully completed an ejection seat training program within the previous 24 calendar months prior to operations for this make and model of aircraft per AC 91-87.</p> <p>Passengers must have a safety brief prior to flight per AC 91-87. (30)</p>
31	191(d) & (e) AFS-300		<p>When an aircraft's home base is changed or there is a transfer of ownership, the owner/operator will, within 30 days:</p> <p>(a) Submit a new program letter to the geographically responsible FSDO.</p> <p>(b) If an accepted or approved inspection program is specified in these operating limitations, submit a copy to the geographically responsible FSDO. (31)</p>
32	185, 187 AFS-800	Aircraft that may be equipped with operational, jettisonable stores.	When equipped with operational jettisonable stores, flight operations are restricted to areas that meet § 91.305 and flight over densely populated areas is prohibited at all times. (32)
33	191(a) AFS-800	Aircraft that may be equipped with operational, jettisonable stores.	<p>When equipped with operational jettisonable stores, flight operations are restricted to areas that meet § 91.305.</p> <p>Flight over densely populated or congested areas is prohibited at all times.</p> <p>Operations are limited to testing the aircraft for use with the jettisonable stores.</p> <p>When not testing the jettisonable stores, each store must be removed or secured so it cannot be jettisoned. (33)</p>

Table D-1. Operating Limitations

No.	Certification Basis (14CFR part 21) / Responsible Office	Notes/ Applicability	Operating Limitation
34	191(c), (d), & (e) AFS-300	All Aero Vodochody L-29 & L-39 series airplanes.	<p>Installation of explosive pylon charges (ejectors) is prohibited.</p> <p>If installed, any Emergency Stores Release Handle (ESRH) or Master Armament Safety Switch (MASS) must be disabled. Both must be disabled and disconnected from all systems. Weapon related buttons and switches must also be disabled and disconnected from all systems.</p> <p>Selection of all simulated failure modes from the rear cockpit (instructor position) must be disabled. (34)</p>
	191(c), (d), & (e) AFS-800	All BAE Hawk series airplanes.	<p>If installed, all four jettison switches must be disabled and disconnected from all systems.</p> <p>Installation of explosive pylon charges (ejectors) is prohibited.</p> <p>Flight with asymmetric wing mounted equipment is prohibited. (34)</p>
	191(a), (c), (d), & (e) AFS-300	Boeing AH-64, all series helicopters.	<p>Flights with munitions loaded are prohibited.</p> <p>All weapons systems will be disabled by:</p> <p>(a) Appropriate circuit breakers shall be pulled and secured to ensure the circuits are not inadvertently closed.</p> <p>(b) Electrical umbilical providing electrical signal to weapons shall be disconnected, and capped and stowed as appropriate.</p> <p>External stores and systems must be secured to prevent inadvertent operation of the systems whenever the aircraft is operated or parked. (34)</p>
	191(c), (d), & (e) AFS-800	All Douglas A-4 series airplanes.	<p>Installation of explosive pylon charges (ejectors) is prohibited.</p> <p>Any passenger must receive, before flight, adequate training concerning (1) any rear-seat responsibilities per the applicable flight manual, (2) "off-limits" equipment and switches in the rear-seat, and (3) any other safety-related task not covered under the ejection seat training program.</p> <p>The maximum authorized speed for aircraft operations is 10 percent below the published Mmo. In addition, any additional speed limitation imposed by any equipment must be followed; such as in cases involving avionics limitations or external equipment. (34)</p>
	191(c), (d), & (e) AFS-300	All F-5 series airplanes	<p>The emergency jettison battery must be removed or disconnected. The "jettison control" and "emergency all jettison" circuit breakers must be disconnected or secured open. The armament circuit breakers on the pedestal and other circuit breaker panels must be disconnected or secured open.</p> <p>Installation of explosive pylon charges (ejectors) is prohibited. (34)</p>

Table D-1. Operating Limitations			
No.	Certification Basis (14CFR part 21) / Responsible Office	Notes/ Applicability	Operating Limitation
35	191 AFS-800	All aircraft equipped or originally equipped with drag chute, such as MiG-21, MiG-23, F-104, and F-4.	The drag chute must be maintained and packed by trained personnel. (35)
36	191 AFS-800	All aircraft equipped or originally equipped for in-flight refueling, such as KC-10, MiG-21, MiG-23, F-104, and F-4.	Fueling or defueling the aircraft with the engine operating is prohibited. (36)
37	191(d) & (e) AFS-800		Operation is restricted to airports that are within airspace classes C, D, E, or G, except in the case of a declared emergency or authorized operations under an airshow waiver. (37)
38	191 AFS-800	All aircraft using hydrazine fuel, such as F-16.	Airport operations are prohibited for aircraft equipped with a hydrazine-based emergency power unit (EPU), unless the following are met: (a) Trained ground support personnel available (that is, secure EPU before shutdown). (b) A trained emergency hydrazine response team (using the same training and guidance used by the U.S. Air Force) that is capable of responding as specified in § 139.319(h). (c) Permission from the airport manager. (38)
39	189 & 191(c), (d), (e), (g), (h), & (i) AFS-300		This aircraft is prohibited from flight with any externally mounted equipment unless the equipment is mounted in a manner that will prevent in-flight jettison. The aircraft must be configured as documented in the aircraft's flight test records or as allowed in the original manufacturer's, or military operator's aircraft limitations. If relying on the manufacturer's or military data, the aircraft must conform to the manufacturer's design and be maintained to manufacturer's or military instructions. No change in external loading for the aircraft (for example, a change in a pylon, rack, or external store) from configurations approved by the manufacturer or military operator is allowed, except to prevent jettison. Compliance with all manufacturer or original military operator limitations when any external stores or fuel tanks are installed is required. (39)



<b>Table D-1. Operating Limitations</b>			
<b>No.</b>	<b>Certification Basis (14CFR part 21) / Responsible Office</b>	<b>Notes/ Applicability</b>	<b>Operating Limitation</b>
40	191(a) & (b) AFS-400		Enhanced Flight Vision System (EFVS) operations for the purpose of research and development and/or showing compliance with regulations are not authorized if any component associated with the instrument approach procedure being flown, or any component of the approach lighting system associated with the instrument approach, is inoperative. (40)
41	191(g) AIR-113		Except for single-place aircraft, the following placard must be displayed in the aircraft in full view of all occupants: "PASSENGER WARNING—THIS AIRCRAFT DOES NOT COMPLY WITH FEDERAL SAFETY REGULATIONS FOR STANDARD AIRCRAFT." (41)
<b>The following limitations only apply during phase I.</b>			
42	191(d), (e), (g), (h), & (i) AFS-800		No person may operate this aircraft for other than the purpose of meeting the requirements of § 91.319(b). The pilot in command must comply with § 91.305 at all times. This aircraft is to be operated under VMC, day only. This aircraft must be operated for at least _____ hours with at least _____ takeoffs and landings in this geographical area: [ The area must be described by radius, coordinates, navigational aids, and/or landmarks. The size of the area and airports must be that required to safely conduct the anticipated maneuvers and tests.] This aircraft may only operate from [identify name of airport(s)]. (42)
43	191(d), (e), & (h) AFS-800		No person may be carried in this aircraft during flight unless that person is a required flightcrew member. (43)
44	191(g) & (i) AFS-800		Unless operating per FAA AC 90-116, <i>Additional Pilot Program for Phase I Flight Test</i> , only the minimum crew necessary to fly the aircraft during normal operations may be on board. (44)

Table D-1. Operating Limitations

No.	Certification Basis (14CFR part 21) / Responsible Office	Notes/ Applicability	Operating Limitation
45	191(d), (e), (g), (h), & (i) AFS-800		<p>Upon completion of phase I flight testing, compliance with § 91.319(b) must be recorded in the maintenance records. The following or similar statement must be recorded in the maintenance records:</p> <p>"I certify that the prescribed flight test has been completed and the aircraft is controllable throughout its normal range of speeds and throughout all maneuvers to be executed, has no hazardous operating characteristics or design features, and is safe for operation.</p> <p>If aerobatic maneuvers are intended to be performed during phase II, those maneuvers must be satisfactorily accomplished and recorded in the maintenance records. Aerobatic flight testing is not complete until sufficient flight experience has been gained to establish that the aircraft is satisfactorily controllable during the aerobatic maneuver tested.</p> <p>Upon completion of flight testing, the owner/operator must make the following or similar entry in the maintenance records:</p> <p>"I certify that the following aerobatic maneuvers have been test flown, and that the aircraft is controllable throughout the maneuvers' normal range of speeds. The flight-tested aerobatic maneuvers and speeds are _____ at _____, _____ at _____, _____ at _____, and _____ at _____."</p> <p>During phase II operations, aerobatic maneuvers that were not documented per this limitation may not be performed. The owner may place the aircraft back into phase I for the sole purpose of adding additional aerobatic maneuvers to the aircraft authorized maneuvers.(45)</p>
46	191(d), (e), (g), (h), & (i) AFS-800		<p>If the aircraft will have removable externally mounted equipment, it must be test flown in all configurations. An entry must be made in the maintenance records indicating the configurations flight tested, unless the original manufacturer's flight test data for that equipment is included in the aircraft limitations. If relying on the manufacturer's data, the aircraft and load must conform to the manufacturer's design and be maintained to manufacturer's instructions. Otherwise, the aircraft owner/operator must conduct test flights in all configurations and make an entry in the maintenance records indicating the configurations flight tested. (46)</p>
<b>The following limitations only apply during phase II.</b>			
47	191 AFS-800		<p>Kinds of operations authorized: Day VFR flight operations are authorized. (47)</p>
48	191 AFS-800	For limitations 48-50, refer to paragraphs D-4.f of this appendix.	<p>Night flight operations are authorized if the instruments specified in § 91.205(c) are installed, operational, and maintained per the applicable requirements of part 91. (48)</p>
49	191(b), (f), (g), (h), & (i) AFS-800		<p>Instrument flight operations are authorized if the instruments specified in § 91.205(d) are installed, operational, compliant with the performance requirements of, and maintained per the applicable regulations. All maintenance or inspection of this equipment must be recorded in the aircraft maintenance records and include the following items: date, work performed, and name and certificate number of person returning aircraft to service. (49)</p>

Table D-1. Operating Limitations

No.	Certification Basis (14CFR part 21) / Responsible Office	Notes/ Applicability	Operating Limitation
50	191 (a), (c), (d), & (e) AFS-800	Aircraft described in paragraph D-4.f	IFR flight operations limited to VMC are authorized if the instruments specified in § 91.205(d) are installed, operational, compliant with the performance requirements of, and maintained per the applicable regulations. The pilot in command must have a method to comply with the § 91.319(c) prohibition from operating over densely populated areas or in congested airways. All maintenance or inspection of this equipment must be recorded in the aircraft maintenance records and include the following items: date, work performed, and name and certificate number of person returning aircraft to service. (50)
		Aircraft not described in paragraph D-4.f	Instrument flight operations are authorized if the instruments specified in § 91.205(d) are installed, operational, compliant with the performance requirements of, and maintained per the applicable regulations. The pilot in command must have a method to comply with the § 91.319(c) prohibition from operating over densely populated areas or in congested airways. All maintenance or inspection of this equipment must be recorded in the aircraft maintenance records and include the following items: date, work performed, and name and certificate number of person returning aircraft to service. (50)
51	191(c), (d), (e), (f), (g), (h), & (i) AFS-800		The pilot in command must not perform any maneuvers that have not been flight tested or operate the aircraft outside the weight, airspeeds, and center of gravity limits tested. (51)
52	191(d), (e), (g), (h) & (i) AFS-800	Aircraft described in paragraph D-4f. AFS-800	The carriage of passengers is prohibited. (52)
53	191(a), (b) & (c) AFS-800	PC/modifier procedure per paragraph 4-9 of this order.	All flights must be conducted within the geographical area described in [describe the PC/modifier approved operating procedure, for example, ABC Aircraft Co. Experimental Operating Procedure No. 12 (dated)]. (53)
			All flights must be conducted within the geographical area described as follows (note that there may be areas within the geographical area that are not suitable for operation) The area must be described by radius, coordinates, navigational aids, and/or landmarks. The size of the area must not be more than one-half the range of the aircraft from the aircraft's home base airport.  Flights for maintenance, as defined in § 1.1, of the aircraft are permitted outside the defined area. (53)

Table D-1. Operating Limitations			
No.	Certification Basis (14CFR part 21) / Responsible Office	Notes/ Applicability	Operating Limitation
54	191(d), (e), (f), (g), (h), & (i) AFS-800	Aircraft described in paragraph D-4.f.	<p>All proficiency/practice flights must be conducted within the geographical area described as follows: _____, but that area will not be more than one-half the range of the aircraft from the aircraft's home base airport.</p> <p>Exceptions:</p> <ol style="list-style-type: none"> <li>1. Proficiency flying outside of the area stated above for organized formation flying, training, or pilot checkout in conjunction with a specific event.</li> <li>2. Flights for maintenance of the aircraft are permitted outside the defined proficiency area. (Maintenance, as defined in § 1.1, is the reference for the purpose of these flights.) The maintenance performed in connection with the flight must be recorded in the maintenance records and include the following items: date, work performed, and name and certificate number of person returning aircraft to service. (54)</li> </ol>
55	191 AFS-800	AH-64, all series	The pilot in command must comply with 14 CFR 91.305 at all times. (55)
		Refer to paragraph D-4.f of this appendix.	Flight over a densely populated area or in a congested airway is prohibited. (55)
		All lighter-than-air. All gliders. Amateur-built. Primary kit-built. ELSA.	Flight over a densely populated area or in a congested airway is authorized for the purpose of takeoff or landing; or unless sufficient altitude is maintained to make a safe emergency landing in the event of a power unit failure, without hazard to persons or property on the ground. (55)
		All others	<p>Flight over a densely populated area or in a congested airway is authorized per § 91.319(c) only for the purpose of takeoff and landing.</p> <p>The area on the surface described by the term "only for the purpose of takeoff and landing" is the traffic pattern.</p> <p>For the purpose of this limitation, the term "only for the purpose of takeoff and landing" does not allow multiple traffic patterns for operations such as training or maintenance checks. This <i>does not</i> restrict a go-around/rejected landing for safety reasons.</p> <p>When avoiding populated areas, aircraft speed and weight must be considered. The information in FAA Order 8900.1, <i>Flight Standards Information Management System (FSIMS)</i>, regarding set-back distances from spectator areas for aviation events such as air shows or air races may assist in determining a suitable space to fly the aircraft. (55)</p>
56	191(a) & (b) issue limitation 56, 57, or 58 AFS-800	Only for RVSM certification purposes.	Operations in Reduced Vertical Separation Minimum (RVSM)-designated airspace may be allowed under § 91.180(b) for aircraft certification and development purposes. Refer to part 91 and the Aeronautical Information Manual. (56)

Table D-1. Operating Limitations			
No.	Certification Basis (14CFR part 21) / Responsible Office	Notes/ Applicability	Operating Limitation
57	191(a), (b), (c), (d), (e), (f), & (g) AFS-800	Only for aircraft capable of non-stop climb to FL430 and not RVSM compliant.	Operations in RVSM-designated airspace may be allowed under § 91.180(b) for climbing/descending through RVSM flight levels without intermediate level-off to or from flight levels above RVSM airspace. Refer to part 91 and the Aeronautical Information Manual. (57)
58	191(a), (b), (c), (d), (e), (f), & (g) AFS-800	Aircraft capable of flight above FL280 and not capable of nonstop climb to FL430 and not RVSM compliant.	Flight in RVSM-designated airspace is prohibited. (58)
59	191(d) AFS-800	Aircraft not described in paragraph D-4.f.	No person may be carried in this aircraft during the exhibition of the aircraft's flight capabilities, performance, or unusual characteristics at air shows, or for motion picture, television, or similar productions, unless essential for the purpose of the flight. (Refer to FAA Order 8900.1.) Persons may be carried during flights to and from any event or during proficiency/currency flying, limited to the design seating capacity of the aircraft and subject to the regulatory prohibition on compensation. (59)
60	191 AFS-800	Glider.	The following placard must be displayed in the cockpit, in full view of the pilot: "Note: No person may exceed the designer's or builder's recommended limitations as follows: maximum gross weight _____; CG limits _____; airplane tow speed _____; maximum airspeed in smooth air _____; and maximum airspeed in rough air _____." (60)
61	191(a), (b) & (c) AFS-800	PC/modifier procedure per paragraph 4-9 of this order	Persons may be carried per [describe the production certificate holder's approved operating procedure, for example, ABC Aircraft Co. Experimental Operating Procedure No. 12 (dated)]. (61)
		All others	No person may be carried in this aircraft during flight unless that person is essential to the purpose of the flight. (61)

## **Appendix E. CAA Assistance with U.S. Airworthiness Certificates for New Aircraft Manufactured Outside the United States.**

E-1. **Introduction.** The FAA may obtain assistance from a CAA of the SOM in the final processing, dating, and delivery of a U.S. airworthiness certificate for newly manufactured, type-certificated aircraft destined for export to the United States. The FAA issues the form and the CAA provides assistance with specific process steps. The use of this procedure is only allowed if no conflict exists with the applicable bilateral agreement. A manufacturing office may apply the procedures in this appendix only when approved by AIR-100. Upon request from the U.S. aircraft owner or the CAA of the SOM, the FAA may, at its discretion, authorize the CAA to act on its behalf.

E-2. **Applicability.** The provisions of this appendix apply only to an aircraft that—

- a. Is newly manufactured in a country/jurisdiction that has a bilateral agreement concerning airworthiness with the United States,
- b. Has been exported via an export C of A from the exporting CAA,
- c. Is registered in the United States,
- d. Conforms to its FAA TC, and
- e. Is in a condition for safe operation.

E-3. **Procedure.**

a. The aircraft manufacturer notifies the CAA of the SOM that an aircraft has been sold to a U.S. owner and is to be placed on the U.S. registry. As a result, the U.S. aircraft owner will be requesting issuance of a U.S. airworthiness certificate at the point of manufacture.

b. The U.S. owner submits a request to reserve a U.S. registration number [hereafter, N-number] for the particular aircraft and, upon receipt, provides it to the aircraft manufacturer for permanent marking of the aircraft. The U.S. owner also provides this information to the CAA.

c. At least 20 days before the expected delivery date of the aircraft, the U.S. owner provides FAA Form 8130-6 to the FAA office that issues airworthiness certificates for import aircraft, including its request that the airworthiness certificate be issued at the point of manufacture. Sections I, II, and III are to be completed, as applicable; however, the following items in section III are to be left blank because the information for these items is unknown until final delivery/export of the aircraft:

- (1) The status of compliance to the current versions of applicable ADs as indicated in the airworthiness directives block of subsection B, Aircraft Certification Basis.
- (2) Total airframe hours (including production flight test time) in the applicable block of subsection C, Total Airframe Hours.
- (3) The date of the application as indicated in subsection D, Certification.

d. The CAA notifies the manager of the certificate-issuing, FAA office of its desire to act on behalf of the FAA in the delivery of an airworthiness certificate for the particular aircraft. The following information will be provided by the CAA:

- (1) N-number, make, model, and S/N of the aircraft.
- (2) Name of the U.S. aircraft owner.
- (3) Scheduled aircraft delivery date.

e. The FAA certificate-issuing office prepares the airworthiness certificate, including two copies.

(1) For a standard airworthiness certificate, list exceptions in block 5 for each failure to meet a standard of Annex 8 to the ICAO Convention. This includes any exemption that does not meet Annex 8. This also includes any standard in the certification basis that does not meet Annex 8. If no exceptions, enter "None."

- (2) Leave the Date of Issuance block blank.
- (3) Sign the original and two copies.

(4) Forward the certificates to the CAA. Do not deliver the airworthiness certificate more than 45 days before the expected aircraft delivery date, unless specific circumstances warrant an earlier delivery. Any costs of overnight courier services for the delivery of forms needing expedited delivery to the CAA will be paid for by the applicant or the manufacturer. The following sentence must be included in the transmittal letter: "Do not deliver this airworthiness certificate, issued for the subject aircraft above, until this office notifies you that the aircraft has been properly registered."

f. Data Plate Preparation and Installation. Upon completion of manufacture and required inspections and tests, including production flight tests, the aircraft manufacturer installs an ID plate on the aircraft that meets the requirements of § 45.11. The aircraft manufacturer also applies the N-number to the aircraft per § 45.21.

g. The CAA issues an export C of A for the aircraft after completing all tasks and inspections necessary to determine that the aircraft conforms to the FAA-approved type design and is in a condition for safe operation. This certificate must contain the certification statement prescribed in the applicable FAA TCDS under the Import Requirements heading.

**Note:** If any nonconformities, deviations, or exceptions exist, the CAA must obtain written acceptance of these conditions from the certificate-issuing, FAA office before issuing the export C of A. Such conditions may disqualify the aircraft from receiving the intended airworthiness certificate due to its inability to fully meet the requirements of the U.S. TC.

h. Additional Work Performed After Issuance of the CAA's Export C of A.

(1) If any additional work (for example, alterations or repairs) is performed on the aircraft by the manufacturer after issuance of the export C of A, and before delivery of the U.S. airworthiness certificate, the following is required:

(a) The work must be controlled, documented, and completed by the manufacturer under its CAA-approved production quality system and associated procedures.

(b) The exporting CAA will review the manufacturer's additional completed work to ensure the aircraft remains in compliance with its FAA-approved type design and is in a

condition for safe operation. If the CAA is satisfied that these requirements are met, the U.S. airworthiness certificate may be released to the registered owner/operator per this appendix.

(2) If any additional work (for example, alterations or repairs) is performed on the aircraft by someone other than the manufacturer (which also may include any other persons or organizations under the direct control of the manufacturer) after issuance of the export C of A, the aircraft may be disqualified from receipt of the U.S. airworthiness certificate issued under this special procedure.

**Note:** The CAA is not responsible for the review and acceptance of any additional work performed outside of its direct control and oversight. This includes any additional work performed on the aircraft directly by the new U.S. owner before receiving the U.S. airworthiness certificate. The certificate-issuing, FAA office could not, therefore, be assured of the continued validity of the export C of A upon which this special procedure and the issuance of the U.S. airworthiness certificate are based.

(3) The new U.S. owner/operator (or their authorized agent) may at times perform the various functions and activities which may be necessary to prepare the newly acquired aircraft for their departure flight from the manufacturer and placement into operation.

(a) These functions and activities (for example, preoperational servicing/maintenance, pre-flight inspections, aircraft systems functional checks, navigation/communication equipment, and operational software installation) must be properly documented and may be undertaken after issuance of the export C of A and before receipt of the U.S. airworthiness certificate.

(b) After the completion of these tasks, the new U.S. owner/operator must ensure the aircraft remains in conformity to the FAA-approved type design and in a condition for safe operation. The CAA may, at its discretion, monitor these functions and activities in advance of the release of the U.S. airworthiness certificate.

(4) The CAA should contact the FAA certificate-issuing office when any problems arise pertaining to these requirements which would preclude the release and delivery of the U.S. airworthiness certificate to the new U.S. owner/operator.

**i.** The aircraft manufacturer or the U.S. owner must ask the CAA in the SOM to confirm to the FAA Aircraft Registration Branch (AFS-750) that they have not issued registration for the aircraft or that registration in that country has ended, is canceled, or is invalid. Refer to part 47, Aircraft Registration, §§ 47.15(a)(1) and 47.37(b).

**j.** The U.S. owner submits to AFS-750 all information required to register the aircraft. Permanent registration will be received via Aeronautical Center Form 8050-3, *Certificate of Aircraft Registration*. If the U.S. aircraft owner desires to receive a temporary registration before receiving the permanent one, it should request Form AFS-750-FAX-4, *Temporary Certificate of Registration*, from AFS-750.

**k.** The U.S. owner provides the CAA with a complete FAA Form 8130-6 after receipt of the registration. Sections IV and V, and the entire reverse side of FAA Form 8130-6 are to be left blank. However, the items left blank from the initial form, and one additional item, should now be completed with the following:



(1) The status of compliance up to the most current and applicable ADs as indicated in the Airworthiness Directives block of subsection B.

(2) The total airframe hours (including production flight test time) in the applicable block of subsection C.

(3) The final date entered by the applicant must be the same as or later than the date of the export C of A issued by the exporting CAA.

(a) The date cannot be later than the date entered on the airworthiness certificate for the aircraft.

(b) The signature of the person in subsection D must be the registered owner's (or an authorized employee of the corporation or company signified as the registered owner) identified under subsection A of section III. If the signature is other than one of these persons, the application must be accompanied with a notarized letter or current power of attorney delegating the authority to act as an agent on the owner's behalf to apply for the airworthiness certificate. A true copy of the notarized letter or power of attorney is acceptable.

(4) The specific 14 CFR reference listed in section III, subsection C, should be crossed out and changed from § 91.173 to § 91.417.

**l.** The CAA verifies the following before delivery of the airworthiness certificate:

(1) The registered owner identified on the application for the airworthiness certificate is the same person, company, or corporation shown on Aeronautical Center Form 8050-3 or Form AFS-750-FAX-4.

(2) The aircraft N-number on the registration, application, airworthiness certificate, and aircraft match. In addition, the N-number marks on the aircraft must meet the requirements of 14 CFR part 45.

(3) The aircraft's ID plate has all of the required data and proper information, and is mounted in the proper location on the aircraft.

(4) The CAA has issued the export C of A.

**m.** The CAA finalizes the airworthiness certificate as follows. The date on which the certificate was issued is entered in the Date of Issuance block on the original and on the two copies. Dates on certificates should be in DD MMM YYYY or DD Mmm YYYY format; for example, "25 DEC 2016" or "25 Dec 2016." Date of issuance entries must be typewritten or made with another appropriate instrument, for example, a mechanical date stamping device for the date entry. Handwritten entries are not permitted.

**n.** The CAA provides (electronic transmission is acceptable) the documents listed below to the FAA certificate-issuing office before the first flight of the aircraft under the U.S. airworthiness certificate. This action is necessary because the FAA certificate-issuing office must be in possession of legal documentation in the form of on-hand file records of proper airworthiness certification before the aircraft is operated.

(1) A copy of the export C of A.

(2) A copy of the registration.

(3) A copy of the completed and dated airworthiness certificate.

**o.** The CAA places the airworthiness certificate in the aircraft for display at the cabin or cockpit entrance in such a way that the certificate is legible to passengers or crew per § 91.203(b). The following statement is entered into the aircraft maintenance record: “U.S. [*Standard or Special*] Airworthiness Certificate, issued [*date*], has been placed in the aircraft on behalf of [*FAA certificate-issuing office*] on [*date*].” The person from the CAA who issued and placed the airworthiness certificate in the aircraft must sign the aircraft maintenance record and include a functional title or other evidence of authorization to act on behalf of the CAA.

**p.** The CAA retains one copy of the airworthiness certificate and forwards the following documents to the manager of the FAA certificate-issuing office:

- (1) The remaining copy of the dated airworthiness certificate.
- (2) The original and one copy of the completed application.
- (3) The original and one copy of the export C of A issued by the CAA of the SOM.
- (4) A copy of the registration.

**q.** The FAA certificate-issuing office endorses the application by entering a statement on the form in a location that can be easily read. At a minimum, this statement must:

- (1) Indicate that the airworthiness certificate was issued on the basis of the export C of A for Export No. [*insert number where applicable*], and
- (2) Include the issuing CAA’s name and the date of issuance of the export C of A.

**r.** The FAA certificate-issuing office then forwards the application, the copy of the airworthiness certificate, and the original export C of A to AFS-750 for permanent filing. A copy of the registration is only forwarded if it is part of documentation of a falsified registration being provided to the CAA.

**s.** The U.S. owner takes delivery of the aircraft and installs the U.S. registration in the aircraft.

**Appendix F. Sample Special Flight Authorizations.****Figure F-1. Sample SFA for the Flight of an Aircraft to a Place Where Repairs or Alterations Are To Be Made**

U.S. Department  
of Transportation

**Federal Aviation  
Administration****FOREIGN CIVIL AIRCRAFT SPECIAL FLIGHT AUTHORIZATION (SFA)**

Authorization No.: NE-03-09  
Aircraft Make: Cessna  
Aircraft Model: 180H  
Serial No.: 18051515  
Nationality and Registration Marks: CF-ABC  
Name and address of Registered Owner: Mr. Richard A. Roe  
777 Quebec Street  
Smithton, Ontario, Canada

Pursuant to Title 14 of the Code of Federal Regulations (14 CFR) 91.715, Mr. Richard A. Roe is hereby authorized to operate the aircraft identified above for the purpose of flying it from Hartford, Connecticut, to Ontario, Canada, for permanent repair of damage incurred during a landing accident at Hartford. A representative of Transport Canada Civil Aviation has inspected the aircraft and found it safe for the intended flight provided that the airspeed does not exceed 130 knots and no passengers are carried aboard the aircraft. All operations must be per the following restrictions and limitations.

1. A copy of this authorization must be available to the pilot in command when operating under the terms of this SFA.
2. You must comply with all limitations imposed by the State of Registry and this authorization.
3. Persons or property must not be carried for compensation or hire.
4. This authorization is valid in the United States only.
5. Upon request, this authorization must be made available to an FAA inspector.
6. All flights must be conducted under visual flight rules, day only.

**Figure F-1. Sample SFA for the Flight of an Aircraft to a Place Where Repairs or Alterations Are To Be Made (Continued)**

7. All flights must be conducted at airspeeds not to exceed 130 knots.
8. This SFA is valid until July 31, 2017, unless superseded or rescinded.

J. A. Smith, Manager  
Flight Standards District Office

Issued in Windsor Locks, Connecticut, July 21, 2017.

**Figure F-2. Sample SFA for the Flight of an Aircraft to a New SOR  
(This Format Is Generally Applicable to a Single Aircraft Authorization for Ferry Flights)**



U.S. Department  
of Transportation

**Federal Aviation  
Administration**

**CIVIL AIRCRAFT SPECIAL FLIGHT AUTHORIZATION (SFA)**

Authorization No.: SO-11-01  
Aircraft Make: Beech  
Aircraft Model: D185  
Serial No.: A-23456  
Nationality and Registration Marks: HK-ABC  
Name and address of Registered Owner: Mr. Hernando Restrepo  
22 Calle de Presidente  
Fusagasuga, Colombia

Pursuant to Title 14 of the Code of Federal Regulations (14 CFR) 91.715, Mr. Hernando Restrepo is hereby authorized to operate the aircraft identified above for the purpose of flying from Quebec, QC, Canada, to Fusagasuga, Colombia. The aircraft identified above was under Canadian registry and held a current and valid Canadian airworthiness certificate before its sale to Mr. Restrepo. A current and valid Colombian airworthiness certificate will not be issued until after its entry into Colombia. All operations of the aircraft must be per the following restrictions and limitations.

1. A copy of this authorization must be available to the pilot in command when operating under the terms of this SFA.
2. You must comply with all limitations imposed by the State of Registry and this authorization.
3. Persons or property must not be carried for compensation or hire.
4. This authorization is valid in the United States only.
5. Upon request, this authorization must be made available to an FAA inspector.
6. The identification marks assigned to the aircraft by the State of Columbia must be displayed on the aircraft according to that country's applicable requirements.

**Figure F-2. Sample SFA for the Flight of an Aircraft to a New SOR  
(This Format Is Generally Applicable to a Single Aircraft Authorization for Ferry Flights)  
(Continued)**

7. This SFA is valid until August 11, 2017, or unless superseded or rescinded.

J. A. Smith, Manager  
Portland Flight Standards District Office  
Southern Region

Issued in Portland, Maine, on July 21, 2017.

**Figure F-3. Sample SFA for the Purpose of Flight Testing**

U.S. Department  
of Transportation

**Federal Aviation  
Administration**

**FOREIGN CIVIL AIRCRAFT SPECIAL FLIGHT AUTHORIZATION (SFA)**

Authorization No.: ASW-1  
Aircraft Make: McDonnell Douglas  
Aircraft Model: DC-9-11  
Serial No.: 12345  
Nationality and Registration Marks: CF-POH  
Name and address of Registered Owner: Canada Air, Montreal, Canada  
Name and Address of Agent: John Doe Company,  
21 Blackfoot Drive  
San Antonio, Texas 78216

Pursuant to Title 14 of the Code of Federal Regulations (14 CFR) 91.715, the John Doe Company is hereby authorized to operate the aircraft identified above for the purpose of conducting flight test(s) required to obtain a supplemental type certificate (STC) covering the installation in the aircraft of General Electric CGY2 turbofan engines. All operations of the aircraft must be per the following restrictions and limitations.

1. A copy of this authorization must be available to the pilot in command when operating under the terms of this SFA.
2. You must comply with all limitations imposed by the State of Registry and this authorization.
3. Persons or property must not be carried for compensation or hire.
4. This authorization is valid in the United States only.
5. Upon request, this authorization must be made available to an FAA inspector.
6. No person may be carried in the aircraft during flight unless that person is essential to the purpose of the flight and has been advised of the contents of this SFA and of the airworthiness status of the aircraft.

**Figure F-3. Sample SFA for the Purpose of Flight Testing (Continued)**

7. All flight tests must be conducted in compliance with § 91.305.
8. All flights must be conducted under visual flight rules, day only.
9. All maintenance and inspection of the aircraft must be conducted under the direct supervision of qualified personnel holding appropriate licenses issued or rendered valid by the Canadian Department of Transportation and according to Canadian aircraft maintenance requirements.
10. This SFA is valid until July 27, 2017, or unless superseded or rescinded.

J. A. Smith, Manager  
Manufacturing Inspection Office  
Rotorcraft Directorate

Issued in Fort Worth, Texas, on July 21, 2017.



**Figure F-4. Sample Blanket SFA for Customer Crew Training**

U.S. Department  
of Transportation

**Federal Aviation  
Administration**

### CIVIL AIRCRAFT SPECIAL FLIGHT AUTHORIZATION (SFA)

Authorization No.: NE-02-43

Pursuant to Title 14 of the Code of Federal Regulations (14 CFR) 91.715 to the Yankee Airplane Company, John Hancock Airport, Boston, Massachusetts 02111, this constitutes authority instead of an airworthiness certificate. For the purpose of giving customer crew training to the buyer, its employees, or designees in any aircraft manufactured by the Yankee Airplane Company when the aircraft has been placed under foreign registry, each aircraft operated under this SFA must be operated according to the following restrictions and limitations.

1. Each aircraft operated for customer crew training flights must carry this SFA attached with a statement including the name and address of the aircraft owner, the aircraft's assigned nationality and registration marks, and the dates on which the customer crew training flights are scheduled to begin and end.
2. All customer crew training and aircraft maintenance must be conducted under the direct supervision of qualified Yankee Airplane Company personnel.
3. Customer crew training flights on any one aircraft must be conducted during an interval not to exceed 30 days.
4. Before beginning customer crew training flights with any one aircraft, the Yankee Airplane Company must submit to the local FAA Manufacturing Inspector the information specified in paragraph 1 of this authorization pertaining to that aircraft.
5. The identification marks assigned to the aircraft by the State of Registry must be displayed on the aircraft according to that country's applicable requirements.
6. Persons or property must not be carried for compensation or hire.
7. No person may be carried in the aircraft during flight unless that person is essential to the purpose of the flight and has been advised of the contents of this SFA and of the airworthiness status of the aircraft.


**Figure F-4. Sample Blanket SFA for Customer Crew Training (Continued)**

8. This authorization is valid in the United States only.
9. This SFA is valid until superseded or rescinded.

J. A. Smith, Manager  
Flight Standards Division  
New England Region

Issued in Burlington, Massachusetts, on July 21, 2017.

**Figure F-5. Sample SFA for Export Delivery**

 U.S. Department of Transportation  <b>Federal Aviation Administration</b>	<p style="text-align: center;"><b>CIVIL AIRCRAFT SPECIAL FLIGHT AUTHORIZATION (SFA)</b></p> <p>Authorization No.: <u>NE-03-59</u> Aircraft Make: <u>Piper</u> Model: <u>PA 84</u> Serial No.: <u>1334</u> Nationality and Registration Marks: <u>I-JAB</u> Registered Owner: <u>Joseph A. Banco, Via Banco, Rome, Italy</u></p> <p>Pursuant to Title 14 of the Code of Federal Regulations (14 CFR) 91.715, Mr. Joseph A. Banco is hereby authorized to operate the aircraft identified above for the purpose of export and delivery from Westfield, Massachusetts, to Rome, Italy. This aircraft is on Italian registry and an airworthiness certificate has not yet been issued.</p> <ol style="list-style-type: none"><li>1. A copy of this authorization must be available to the pilot in command when operating under the terms of this SFA.</li><li>2. You must comply with all limitations imposed by the State of Registry and this authorization.</li><li>3. Persons or property must not be carried for compensation or hire.</li><li>4. This authorization is valid in the United States only.</li><li>5. Upon request, this authorization must be made available to an FAA inspector.</li><li>6. No person may be carried in this aircraft during flight unless that person is essential to the purpose of the flight and has been advised of the content of this SFA and of the airworthiness status of the aircraft.</li><li>7. The aircraft must not be operated with temporary fuel system(s) or temporary navigation equipment installed or at a weight in excess of its maximum certificated takeoff weight, unless approved, by the civil aviation authority (CAA) State of Registry in writing.</li></ol>
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**Figure F-5. Sample SFA for Export Delivery (Continued)**

8. The kinds of operations authorized are visual flight rules, instrument flight rules, day, and night.
9. This SFA is valid until August 18, 2017, unless superseded or rescinded.

J. A. Smith, Manager  
Flight Standards Division  
New England Region

Issued in Burlington, Massachusetts, on July 21, 2017.

**Figure F-6. Sample Blanket SFA for Delivering Aircraft  
for the Purpose of Export Delivery**

U.S. Department  
of Transportation

**Federal Aviation  
Administration**

## FOREIGN CIVIL AIRCRAFT SPECIAL FLIGHT AUTHORIZATION (SFA)

Authorization No.: WP-26-22

This SFA is issued to the John Smith Airplane Company, 711 Water Boulevard, San Diego, California 82101, pursuant to Title 14 of the Code of Federal Regulations (14 CFR) 91.715. A copy of this SFA furnished by the above constitutes authority instead of an airworthiness certificate for the purpose of export delivery of aircraft manufactured by that Company. This SFA is applicable to aircraft that are on a foreign registry and have no airworthiness certificate.

1. A copy of this authorization must be available to the pilot in command when operating under the terms of this SFA.
2. No person may be carried in this aircraft during flight unless that person is essential to the purpose of the flight and has been advised of the content of this SFA and of the airworthiness status of the aircraft.
3. The aircraft must not be operated with temporary fuel system(s) or temporary equipment installed, or at a weight in excess of its maximum certificated takeoff weight, unless approved by the civil aviation authority (CAA) of the State of Registry in writing.
4. Persons or property may not be carried in the aircraft for compensation or hire.
5. This authorization is valid in the United States only.
6. The kinds of operations authorized are visual flight rules, instrument flight rules, day, and night.

**Figure F-6. Sample Blanket SFA for Delivering Aircraft  
for the Purpose of Export Delivery (Continued)**

7. This SFA is valid until December 31, 2017.

Monico Ramirez  
Aviation Safety Inspector  
Los Angeles International Field Office

Issued in Los Angeles, California, on July 21, 2017.

**Figure F-7. Sample SFA for the Purpose of Demonstration**

U.S. Department  
of Transportation

**Federal Aviation  
Administration**

CIVIL AIRCRAFT SPECIAL FLIGHT AUTHORIZATION (SFA)

Authorization No.: NE-01-31  
Aircraft Make: Hansa  
Model: HFB-320  
Serial No.: 1024  
Nationality and Registration Marks: D-CARO  
Name and Address of Registered Owner: Hamburger Flugzeugbau G.M.B.H.  
2103 Hamburg  
Finkenwerder Postfact 109, Germany

Pursuant to Title 14 of the Code of Federal Regulations (14 CFR) 91.715, Hamburger Flugzeugbau G.M.B.H. is hereby authorized to operate the aircraft identified above for the purpose of conducting demonstration flights in the United States. The aircraft has been issued a provisional certificate of airworthiness by the Luftfahrt-Bundesamt and has been shown to meet standards equivalent to those required for provisional certification of a U.S.-registered civil aircraft. All operations of the aircraft must be per the following restrictions and limitations.

1. A copy of this authorization must be available to the pilot in command when operating under the terms of this SFA.
2. You must comply with all limitations imposed by the State of Registry and this authorization.
3. Persons or property must not be carried for compensation or hire.
4. This authorization is valid in the United States only.
5. Upon request, this authorization must be made available to an FAA inspector.
6. The identification marks assigned to the aircraft by the State of Registry must be displayed on the aircraft according to that country's applicable requirements.

**Figure F-7. Sample SFA for the Purpose of Demonstration (Continued)**

7. No person may be carried in this aircraft during flight unless that person is essential to the purpose of the flight and has been advised of the content of this SFA and of the airworthiness status of the aircraft.
8. All flights must be conducted under visual flight rules, day only.
9. This SFA is valid until September 19, 2017, unless superseded or rescinded.

J. A. Smith, Manager  
Flight Standards Division  
New England Region

Issued in Burlington, Massachusetts, on July 21, 2017.



**Figure F-8. Sample SFA for Participating in Aviation Events**

U.S. Department  
of Transportation

**Federal Aviation  
Administration**

**FOREIGN CIVIL AIRCRAFT SPECIAL FLIGHT AUTHORIZATION (SFA)**

Authorization No.: NE-01-31  
 Aircraft Make: Aero Vodochody  
 Model: L-39C  
 Serial No.: 1024  
 Nationality and Registration Marks: ES-XXX  
 Name and Address of Registered Owner: Hamburger Flugzeugbau G.M.B.H.  
2103 Hamburg  
Finkenwerder Postfact 109, Germany

Pursuant to Title 14 of the Code of Federal Regulations (14 CFR) 91.715, Hamburger Flugzeugbau G.M.B.H. is hereby authorized to operate the aircraft identified above for the purpose of participating in aviation events. The aircraft does not meet the airworthiness requirements specified in Annex 8 to the Convention on International Civil Aviation and has been issued an Estonian permit to fly. The aircraft will enter the United States on or about August 1, 2017, from Canada and will exit to Mexico approximately December 1, 2017. The intended aviation events include—

Rhode Island National Guard Open House & Air Show, North Kingstown, RI  
 Bethpage Air Show at Jones Beach, Wantagh, NY  
 Virginia Beach Patriotic Festival, Virginia Beach, VA  
 Westmoreland County Air Show, Latrobe, PA  
 Denton Air Show, Denton, TX  
 Spectacle Aerien International Bagotville, Bagotville, QC, Canada  
 Battle Creek Field of Flight Air Show & Balloon Festival, Battle Creek, MI  
 EAA AirVenture, Oshkosh, WI  
 National Championship Air Races, Reno, NV

All operations of the aircraft must be per the following restrictions and limitations.

1. A copy of this authorization must be available to the pilot in command when operating under the terms of this SFA.
2. You must comply with all limitations imposed by the State of Registry and this authorization.
3. Persons or property must not be carried for compensation or hire.

**Figure F-8. Sample SFA for Participating in Aviation Events (Continued)**

4. This authorization is valid in the United States only.
5. Upon request, this authorization must be made available to an FAA inspector.
6. Operation is restricted to airports that are within airspace class C, D, E, or G, except in the case of a declared emergency or authorized operations under an airshow waiver.
7. Kinds of operations authorized by the State of Registry are authorized, with the following restriction. If instrument flight operations are authorized, the pilot in command must have a method to avoid operating over densely populated areas or in congested airways.
8. Flight over densely populated areas is authorized only for the purpose of takeoff or landing.
9. Flight in Reduced Vertical Separation Minimum (RVSM) designated airspace is prohibited.
10. Flight with any externally mounted equipment is prohibited.
11. Preflight planning runway length requirements:
  - a. Takeoff is prohibited unless takeoff planning determines that it is possible to stop the airplane safely on the runway, as shown by the accelerate-stop distance data. In addition, the aircraft must be able to clear all obstacles by at least 50 feet vertically.
  - b. Landing will not be attempted unless landing planning determines that a full stop landing can be made within 60 percent of the effective length of the runway from a point 50 feet above the runway.
  - c. When calculating takeoff or landing performance, corrections must be made for any runway gradient. Performance data based on still air may be corrected by taking into account not more than 50 percent of any reported headwind component and not less than 150 percent of any reported tailwind component. Calculations may not include the use of reverse thrust or drag chute.
12. This authorization is valid until October 31, 2017, unless superseded or rescinded, or the Estonian permit to fly becomes invalid.

A.A. Smith, Manager  
New York International Field Unit

Issued in Jamaica, New York, on July 21, 2017.

**Appendix G. Limitations for Operation of an Aircraft With a Door Removed****Figure G-1. Sample Limitations for Operation of an Aircraft With a Door Removed**

U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

Make \_\_\_\_\_  
Model \_\_\_\_\_ Serial No. \_\_\_\_\_  
Registration No. \_\_\_\_\_

**AIRCRAFT OPERATING LIMITATIONS**

The aircraft described above may be flown with not more than one cabin door removed for the purpose of (see note below), provided the aircraft is operated per the applicable sections of Title 14 of the Code of Federal Regulations and the following limitations:

Note: Show specific operations; for example, intentional parachute jumping, skydiving, etc.

1. Maximum speed must not exceed any of the following:
  - The approved maneuvering speed.
  - 70 percent maximum level flight speed.
  - 70 percent maximum structural cruising speed.
2. Aerobatic maneuvers are not permitted.
3. Maximum yaw angle 10 degrees; maximum bank angle 15 degrees.
4. A Federal Aviation Administration (FAA)-approved safety belt must be provided and worn by each occupant during takeoff and landing and at all other times when required by the pilot-in-command.
5. All occupants must wear parachutes when intentional parachute jumping and skydiving operations are conducted.
6. Smoking is not permitted.
7. When operations other than intentional parachute jumping and skydiving are conducted, a suitable guardrail or equivalent safety device must be provided for the doorway.
8. All loose articles must be tied down or stowed.
9. No baggage may be carried.

**Figure G-1. Sample Limitations for Operation of an Aircraft  
With a Door Removed (Continued)**

10. Parachutists' static lines must be kept free of pilot's controls and control surfaces.
11. Operations are limited to visual flight rules conditions.
12. Cabin door hold-open clips installed on wing brace struts and/or under surface of wing must be removed before conducting intentional parachute jumping or skydiving operations.
13. When intentional parachute jumping, skydiving, or other specified operations are being conducted, the pilot at the controls must hold at least a private pilot certificate and appropriate rating.
14. This aircraft must not be operated in solo flight by the holder of a student pilot certificate.
15. Operation of this aircraft with a door removed for any purpose other than that for which it is certificated is prohibited.
16. The following placard must be placed on the instrument panel in full view of the pilot:  
"For flight with door removed, see aircraft operating limitations dated \_\_\_\_\_."
17. A copy of these limitations must be carried in the aircraft when flight operations are conducted with the door removed.
18. These operating limitations are a part of the airworthiness certificate.

FAA Inspector \_\_\_\_\_ Date \_\_\_\_\_  
Office No. \_\_\_\_\_

**Appendix H. Acronyms**

<b>14 CFR</b>	Title 14 of the Code of Federal Regulations
<b>49 USC</b>	Title 49 of the United States Code
<b>AC</b>	Advisory Circular or Aeronautical Center
<b>ACO</b>	Aircraft Certification Office
<b>AD</b>	Airworthiness Directive
<b>AEE</b>	Office of Environment and Energy
<b>AEG</b>	Aircraft Evaluation Group
<b>AFS</b>	Flight Standards Service
<b>AFS-300</b>	Aircraft Maintenance Division
<b>AFS-750</b>	Aircraft Registration Branch
<b>AFS-800</b>	General Aviation and Commercial Division
<b>AIR</b>	Aircraft Certification Service
<b>AIR-100</b>	Design, Manufacturing, and Airworthiness Division
<b>AIR-113</b>	Airworthiness Certification Section
<b>AIR-400</b>	International Division
<b>AOI</b>	Aircraft Operating Instructions
<b>ASI</b>	Aviation Safety Inspector
<b>ASTM</b>	ASTM, International (formerly American Society for Testing and Materials)
<b>ATC</b>	Air Traffic Control
<b>ATF</b>	Department of Justice, Bureau of Alcohol, Tobacco, Firearms, and Explosives
<b>AVS</b>	Associate Administrator for Aviation Safety
<b>BAA</b>	Bilateral Airworthiness Agreement
<b>BASA</b>	Bilateral Aviation Safety Agreement
<b>CAA</b>	Civil Aviation Authority
<b>CAGE</b>	Commercial and Government Entity
<b>CAM</b>	Civil Aeronautics Manual
<b>CAMP</b>	Continuous Airworthiness Maintenance Program
<b>CAR</b>	Civil Air Regulations
<b>CFR</b>	Code of Federal Regulations
<b>CG</b>	Center of Gravity
<b>CHDO</b>	Certificate Holding District Office
<b>CMO</b>	Certificate Management Office
<b>DAR</b>	Designated Airworthiness Representative
<b>DER</b>	Designated Engineering Representative
<b>DMIR</b>	Designated Manufacturing Inspection Representative
<b>DMO</b>	Directives Management Officer
<b>DOD</b>	Department of Defense
<b>DOT</b>	Department of Transportation
<b>EAA</b>	Experimental Aircraft Association
<b>EASA</b>	European Aviation Safety Agency
<b>E-Card</b>	Export Certificate Number Assignment Card
<b>E-Number</b>	Export Certificate Number Assignment Card (E-card) number
<b>EDRS</b>	Electronic Document Retrieval System
<b>EFVS</b>	Enhanced Flight Vision System

<b>ELSA</b>	Experimental Light-Sport Aircraft
<b>EPU</b>	Emergency Power Unit
<b>Export C of A</b>	Export Certificate of Airworthiness
<b>FAA</b>	Federal Aviation Administration
<b>FMRA 2012</b>	FAA Modernization and Reform Act of 2012
<b>FSIMS</b>	Flight Standards Information Management System
<b>FSCAP</b>	Flight Safety-Critical Aircraft Part
<b>FSDO</b>	Flight Standards District Office
<b>GPO</b>	Government Publishing Office
<b>ICA</b>	Instructions for Continued Airworthiness
<b>ICAO</b>	International Civil Aviation Organization
<b>ID</b>	Identification
<b>IFO</b>	International Field Office
<b>IFR</b>	Instrument Flight Rules
<b>IP</b>	Implementation Procedures
<b>IPA</b>	Implementation Procedures for Airworthiness
<b>IPC</b>	Illustrated Parts Catalog
<b>LOA</b>	Letter of Authorization
<b>LSA</b>	Light-Sport Aircraft
<b>MCAI</b>	Mandatory Continuing Airworthiness Information
<b>MIDO</b>	Manufacturing Inspection District Office
<b>MIO</b>	Manufacturing Inspection Office
<b>NATO</b>	North Atlantic Treaty Organization
<b>NATOPS</b>	Naval Air Training and Operating Procedures Standardization
<b>N/A</b>	Not applicable
<b>NOA</b>	Notice of Availability
<b>NTSB</b>	National Transportation Safety Board
<b>ODA</b>	Organization Designation Authorization
<b>PAH</b>	Production Approval Holder
<b>PAO</b>	Public Aircraft Operations
<b>PC</b>	Production Certificate
<b>PDF</b>	Portable Document Format
<b>PIC</b>	Pilot in Command
<b>PIV</b>	Personal Identification Verification
<b>PLR</b>	Production Limitation Record
<b>PMA</b>	Parts Manufacturer Approval
<b>POH</b>	Pilot's Operating Handbook
<b>PPC</b>	Powered Parachute
<b>R&amp;D</b>	Research and Development
<b>RGL</b>	Regulatory and Guidance Library
<b>RMO</b>	Records Management Officer
<b>RPM</b>	Revolutions Per Minute
<b>RVSM</b>	Reduced Vertical Separation Minimum
<b>SFA</b>	Special Flight Authorization
<b>SFP</b>	Special Flight Permit
<b>SIF</b>	Special Interest Flight

<b>SIP</b>	Schedule of Implementation Procedures
<b>SIR</b>	Special Import Requirements
<b>SLSA</b>	Special Light-Sport Aircraft
<b>S/N</b>	Serial Number
<b>SOC</b>	Statement of Compliance
<b>SOD</b>	State of Design
<b>SOM</b>	State of Manufacture
<b>SOR</b>	State of Registry
<b>STC</b>	Supplemental Type Certificate
<b>TC</b>	Type Certificate
<b>TCDS</b>	Type Certificate Data Sheet
<b>TIP</b>	Technical Implementation Procedures
<b>TSO</b>	Technical Standard Order
<b>UAS</b>	Unmanned Aircraft System
<b>VFR</b>	Visual Flight Rules
<b>VLA</b>	Very Light Aircraft
<b>WSC</b>	Weight-Shift Control

## Appendix I. Definitions

**Airworthy.** An aircraft with a type certificate (TC) is airworthy when it conforms to its U.S. TC and is in a condition for safe operation. For the purpose of this order, a non-type-certificated aircraft is airworthy when it is in a condition for safe operation.

**Airworthiness Certificate.** A standard airworthiness certificate, FAA Form 8100-2, and special airworthiness certificate, FAA Form 8130-7.

**Bilateral Agreement.** A document signed by the United States and a foreign jurisdiction that allows reciprocal acceptance of specified aeronautical products and of procedures for approving different types of aeronautical products. For the purposes of this order, [bilateral agreements](#) include Bilateral Aviation Safety Agreements (BASA), Bilateral Airworthiness Agreements (BAA), and the Aviation Safety Agreement with the European Union.

**Category.** Refer to § 1.1 for this definition.

**Commercial and Government Entity (CAGE) Code.** A U.S. Department of Defense code that identifies the manufacturer of a product or article produced under government contract.

**Classification.** Refers to the two types of airworthiness certificates, standard and special.

**Condition for Safe Operation.** Refers to the condition of the aircraft relative to wear and deterioration, for example, skin corrosion, window delamination/crazing, fluid leaks, and tire wear.

**Conformity to the TC.** Means the aircraft configuration and the engine, propeller, and articles installed are consistent with the drawings, specifications, and other data that are part of the TC. This includes any supplemental type certificate (STC), repairs, and alterations incorporated into the aircraft.

**Consensus Standard.** For the purpose of certificating light-sport aircraft (LSA), an industry-developed consensus standard that applies to aircraft design, production, and airworthiness. It includes, but is not limited to, standards for aircraft design and performance, required equipment, manufacturer quality assurance systems, production acceptance test procedures, operating instructions, maintenance and inspection procedures, identification and recording of major repairs and major alterations, and continued airworthiness instructions.

**Continued Airworthiness System.** For the purpose of eligibility in airworthiness certificating LSA, the manufacturer's closed-loop system consisting of controls, procedures, and requirements for monitoring and correcting safety-of-flight issues through the issuance of safety directives meeting the identified consensus standard.

**Critical Characteristic.** Any feature throughout the life cycle of a Flight-Safety Critical Aircraft Part (FSCAP) which, if nonconforming, missing, or degraded, could cause a catastrophic failure resulting in loss or serious damage to the aircraft or an uncommanded engine shutdown resulting in an unsafe condition. A characteristic can be critical in terms of: dimension, tolerance, finish, or material; an assembly, manufacturing, or inspection process; or an operation, field maintenance, or depot overhaul requirement. A manufacturing-critical characteristic is produced during the manufacturing process. An installation-critical characteristic, such as torque, is critical in terms of assembly or installation.



**Designee.** A person delegated to act as a representative of the Administrator under 14 CFR part 183.

**Dual-Use Product or Article.** Any product or article manufactured for civil application by a production approval holder (PAH) authorized by the Federal Aviation Administration (FAA) and produced under a U.S. military contract. The military product (or article thereof) has the same part number and configuration as its civil counterpart and is manufactured using the same FAA-approved design, materials, and manufacturing processes. This could also include any product or article originally produced for the military that currently holds a normal, utility, acrobatic, or transport TC issued under part 21.

**Exemption.** Relief from requirements of a current regulation for an individual or entity.

**Export.** Refers to the transfer of an aviation product or article from the regulatory jurisdiction of one CAA to another.

**Flight Safety-Critical Aircraft Part (FSCAP).** Any article containing a critical characteristic whose failure, malfunction, or absence could cause (1) a catastrophic failure resulting in loss or serious damage to the aircraft, or (2) an uncommanded engine shutdown resulting in an unsafe condition.

**Implementation Procedures (IP).** A document under a bilateral agreement that specifies detailed procedures on cooperation between the FAA and another CAA in the discipline of airworthiness. Depending on the particular agreement, this document may be called Implementation Procedures for Airworthiness (IPA), Technical Implementation Procedures (TIP), or Schedule of Implementation Procedures (SIP).

**Import.** Refers to the receipt of an aviation product or article from the regulatory jurisdiction of one CAA by another.

**Light-Sport Aircraft (LSA).** Refer to § 1.1 for this definition by weight, speed, and configuration. This category of aircraft includes five classes of aircraft: airplanes, gliders, powered parachutes, weight-shift control, and lighter-than-air aircraft.

**Light-Sport Aircraft Statement of Compliance (SOC).** A signed statement made by the aircraft manufacturer stating that the aircraft (specific by S/N) was designed, manufactured, and is supported with a monitoring and correction of safety-of-flight within a continued airworthiness system, per the appropriate consensus standards.

**Light-Sport Eligible Kit.** An eligible kit is one that is of the same make and model aircraft that has been issued a light-sport category airworthiness certificate by the FAA. The kit is manufactured by the same entity that built the aircraft, and that aircraft has been issued the LSA airworthiness certificate. Once built, the owner-assembled kit aircraft is eligible for the experimental operating LSA certificate.

**Make.** As used in this order concerning the make of a product, make means manufacturer.

**Maintenance Records.** The records of maintenance for an aircraft, aircraft engine, or propeller. Commonly referred to as a “logbook.”

**Military Surplus Product or Article.** A product or article that originally was released as surplus by the U.S. military, even if subsequently resold by a manufacturer, owner/operator, repair facility, or any other parts supplier.

**Military-Unique Flight Safety-Critical Aircraft Part (FSCAP).** Any FSCAP specifically and uniquely designed and manufactured for the U.S. military, for which there is no corresponding FAA-approved TC or PAH engine, propeller, or article produced for civilian application. Breakout products or articles produced specifically for military use by a manufacturer other than an FAA PAH using military-provided designs, drawings, and specifications also are considered military-unique.

**N-number.** The national and registration number for an aircraft registered in the United States.

**New Aircraft.** An aircraft may be considered new as long as ownership is retained by the manufacturer, distributor, dealer, or their trustee; if there is no intervening private owner, lease, or time sharing arrangements; and if the aircraft has not been used in any pilot school and/or air taxi operation. An aircraft is still considered new regardless of the operating time logged by the manufacturer, distributor, or dealer as long as the aircraft has been maintained per part 43, as applicable, and the aircraft has remained under the operational control of the manufacturer, distributor, or dealer.

**Original Certification.** This term applies to the issuance of standard or special airworthiness certificates and export certificates of airworthiness for:

- a. An aircraft that has never left the control of the production certificate (PC) or type certificate (TC) holder that manufactured it;
- b. An aircraft that has never held a U.S. or foreign export certificate of airworthiness (C of A), airworthiness certificate, or equivalent document except for an aircraft that has only held a special flight permit (SFP);
- c. An aircraft involved in a certification project such as developing a TC or STC, including issuing a standard airworthiness certificate after the certification project is completed; or
- d. The issuance of a provisional airworthiness certificate under § 21.225 for a provisional amendment to a TC.

**Production Approval Holder (PAH).** A holder of a PC, Parts Manufacturer Approval (PMA), or Technical Standard Order (TSO) authorization who controls the design and quality of a product or article thereof.

**Purpose.** The definition varies depending on use:

As used with respect to issuance of a special airworthiness certificate for an experimental purpose, the purpose refers to the various intended flight operations under § 21.191. Examples include research and development, showing compliance with regulations, crew training, exhibition, etc.

As used with respect to issuance of a special flight permit (SFP), the purpose refers to the various intended flight operations under § 21.197. Examples include flying an aircraft to a base where repairs are to be performed, delivering an aircraft, production flight testing new aircraft, etc.

As used with respect to restricted category aircraft, the purpose refers to the various special purpose operations eligible for receipt of a restricted category TC under § 21.25. Examples include: agricultural, aerial survey, patrol, etc.

**Recurrent Certification.** This term applies to the issuance of standard or special airworthiness certificates or export C of A that do not meet the definition of original certification. Recurrent certification verifies an aircraft has been properly maintained and altered while in service.

**Registration.** Means any of the following:

Aeronautical Center Form 8050-3, *Certificate of Aircraft Registration*.

Aeronautical Center Form 8050-6, *Dealer's Aircraft Registration Certificate*.

Form AFS-750-FAX-4, *Temporary Certificate of Registration*.

**State of Design (SOD).** Per § 21.1(b)(7), the country or jurisdiction having regulatory authority over the organization responsible for the design and continued airworthiness of a civil aeronautical product or article.

**State of Manufacture (SOM).** Per § 21.1(b)(8), the country or jurisdiction having regulatory authority over the organization responsible for the production and airworthiness of a civil aeronautical product or article.

**State of Registry (SOR).** The country or jurisdiction on whose register an aircraft is recorded.

**Third-Country Aircraft.** As used concerning exporting/importing an aircraft, an aircraft whose SOM is not the country of the exporting or importing CAA.

**True Copy.** A copy that includes a signed statement saying that the content of the copy has been compared with the content of the original and found to be the same.

**Type Certificate (TC).** A design approval issued by the FAA when the applicant demonstrates that a product complies with the applicable regulations. As defined by § 21.41, the TC includes the type design, the operating limitations, the TCDS, the applicable regulations of 14 CFR parts 21 through 49, and other conditions or limitations prescribed by the Administrator. The TC is the foundation for other FAA approvals, including production and airworthiness approvals.

**Type Design.** The engineering definition of a particular product. The type design consists of the following (see 14 CFR § 21.31):

Drawings and specifications.

Dimensions, materials, and processes.

Airworthiness limitations.

For primary category aircraft, if desired, a special inspection and preventive maintenance program designed to be accomplished by an appropriately rated and trained pilot-owner.

Other data to describe the product design, and to determine the airworthiness, noise characteristics, fuel venting, and exhaust emissions (where applicable).

## Appendix J. Administrative Information

**1. Distribution.** This order is distributed to the Washington Headquarters division and office levels of the Federal Aviation Administration (FAA) Aircraft Certification Service (AIR) and Flight Standards Service (AFS); to the branch levels of AIR; to the branch levels in the regional Flight Standards Divisions and Aircraft Certification Directorates; to all Flight Standards District Offices and International Field Offices; to all Aircraft Certification Offices; to all Certificate Management Offices and all Manufacturing Inspection District and Satellite Offices; and to the Aircraft Certification and Airworthiness Branches of the FAA Academy.

**2. Authority to Change This Order.** The issuance, revision, or cancellation of the material in this order is the responsibility of the AIR Design, Manufacturing, and Airworthiness Division (AIR-100).

**3. Deviations.** Adherence to the procedures in this order is necessary for uniform administration of this directive material. Any deviations from this guidance material must be approved by AIR-100. If a deviation is necessary, the requesting FAA employee should ensure the deviations are substantiated, documented, and concurred with by the appropriate, local supervisor. The deviation must be submitted to AIR-100 for review and approval. The limits of Federal protection for FAA employees are defined in Title 28 of the United States Code (28 USC) 2679.

**4. Suggestions for Improvements.** Please forward all comments on deficiencies, clarifications, or improvements regarding the contents of this order to:

- a. The AIR Directives Management Officer via [email](#), or
- b. The FAA [Directive Feedback System](https://ksn2.faa.gov/avs/dfs/Pages/Home.aspx) at <https://ksn2.faa.gov/avs/dfs/Pages/Home.aspx>

Your suggestions are welcome. FAA Form 1320-19, *Directive Feedback Information*, is located in appendix K to this order for your convenience. If you require an immediate interpretation, please contact AIR-100 at (202) 267-1575; however, you should also complete FAA Form 1320-19 as a follow-up to the conversation.

**5. Records Management.** Refer to FAA Order 0000.1, *FAA Standard Subject Classification System*; FAA Order 1350.14, *Records Management*; or your office Records Management Officer (RMO)/Directives Management Officer (DMO) for guidance regarding retention or disposition of records.

**Appendix K. FAA Form 1320-19, Directive Feedback Information**

**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: FAA Order 8130.2J

To: AIR Directives Management Officer via [email](mailto:9-AWA-AVS-AIR-DMO@faa.gov) at [9-AWA-AVS-AIR-DMO@faa.gov](mailto:9-AWA-AVS-AIR-DMO@faa.gov) or complete the online form at the FAA [Directive Feedback System](#)

*(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 (10-98)**