CHANGE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

ORDER
8130.2G
CHG 1

7/02/2012

National Policy

SUBJ: Airworthiness Certification of Aircraft and Related Products

1. Purpose. This change contains guidance related to the certification process for light-sport aircraft (LSA).

2. Who This Change Affects. This change affects all Washington headquarters branch levels of the Aircraft Certification Service, Flight Standards Service, and the Regulatory Support Division; the Aviation System Standards office; the branch level in the Aircraft Certification Service directorates and regional Flight Standards Service divisions; all aircraft certification offices; all manufacturing inspection district offices and manufacturing inspection satellite offices; all flight standards district offices; the Aircraft Certification Branch and Flight Standards Branch at the Federal Aviation Administration (FAA) Academy; all applicable representatives of the FAA; and all international field offices.

3. Explanation of Changes. This change—

a. Incorporates numerous changes to the certification processes for light-sport aircraft originating from input through the directive feedback system, field requested process clarifications, the light-sport manufacturers' assessment report recommendations, and industry and public comments. The changes are effected throughout chapter 4, section 6, Light-Sport Aircraft Category Aircraft Airworthiness Certifications, and section 8, Experimental LSA Airworthiness Certifications.

b. Clarifies policy and details procedures to verify accuracy and completeness of airworthiness certification files, including who may apply for a certificate, procedures to review and complete FAA Form 8130-6, and local verification of completeness and accuracy of airworthiness files before submission to the Flight Standards Service, Aircraft Registration Branch.

c. Incorporates various editorial changes based on input through the directive feedback system.

> **Note**: The use of the word "should" throughout this order refers to a recommended practice. The associated activity is not a requirement; therefore, a record of completion is not required.

4. Disposition of Transmittal Paragraph. Retain this transmittal sheet until the directive is cancelled by a new directive.

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U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

ORDER 8130.2G

8/31/2010

National Policy

SUBJ: Airworthiness Certification of Aircraft and Related Products

This order establishes procedures for accomplishing original and recurrent airworthiness certification of aircraft and related products and articles. The procedures contained in this order apply to Federal Aviation Administration (FAA) manufacturing aviation safety inspectors (ASI), to FAA airworthiness ASIs, and to private persons or organizations delegated authority to issue airworthiness certificates and related approvals.

Suggestions for improvement of this order may be submitted using FAA Form 1320-19, Directive Feedback Information, found in appendix G of this order.

/s/
Frank P. Paskiewicz
Manager
Production and Airworthiness Division, AIR-200

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c. It also is important for the operator to know the current status of the aircraft relative to applicable requirements; for example, (1) weight and balance data, (2) flight manual appropriate to the operation, and (3) compliance with airworthiness directives (AD). Some carriers have exemptions or adjusted AD compliance times.

210. Operation of Civil Aircraft with a Door Open or Removed for Parachuting, Skydiving, or Other Special Operations.

a. AC 105-2, Sport Parachute Jumping, appendix 2, identifies aircraft that the FAA has determined can safely be flown with one door open or removed if operated in accordance with specified operating limitations.

b. Owners or operators using aircraft listed in AC 105-2, appendix 2, and who are interested
* in obtaining authorization with operating limitations for operation of an 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 registration number of the aircraft;

(3) Location where aircraft normally is based; and

(4) Reason for the aircraft to be operated with a door removed.

* **c.** Aircraft may be approved to operate with a door open or removed by type certificate, amended type certificate, supplemental type certificate, authorization in the aircraft's flight manual, or field approval.

(1) Aircraft approved by type certificate, amended type certificate, supplemental type certificate, or approved flight manual authorization do not require any additional limitations.

(2) Aircraft approved to operate by issuance of FAA Form 337, Major Repair & Alteration, must have operating limitations issued. Sample operating limitations are outlined in figure 2-3 of this order. Field approval guidance is in FAA Order 8900.1, Flight Standards Information Management System (FSIMS). *

d. Sample operating limitations are outlined in figure 2-3 of this order and must be issued by ASIs for any aircraft without a TC or STC. The ASI must note on the operating limitations the aircraft make, model, registration and serial number, type of operation authorized, date of issuance, ASI's name, and district office number. On an aircraft that requires removal or opening of a particular door, the ASI must specify in the limitations which door may be removed or opened.

Note: A copy of the limitations must be forwarded to AFS-750.

e. Removal or installation of a cabin door for the specified aircraft is considered maintenance and as such must be accomplished by persons authorized under 14 CFR § 43.3.

f. If operations of rotorcraft with the doors opened or removed obstructs the nationality and registration 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 nationality and registration marks on an authorized surface required by 14 CFR § 45.27(a). The size of the marks must comply with 14 CFR § 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 14 CFR § 45.29(f). Any remnants of the permanent nationality and registration marks must be obliterated so as not to confuse identification of the rotorcraft with temporary markings. The temporary markings 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 that the temporary markings comply with 14 CFR part 45 and that the rotorcraft is returned to its permanent marking scheme.

g. Under appendix A to 14 CFR part 43, paragraph (c)(15), a pilot may be authorized to remove or reinstall passenger seats if the pilot is specifically listed by name in the operating limitations for the aircraft. The issuing ASI may require the pilot to demonstrate his or her ability in this preventive maintenance function.

h. Removal or installation of control sticks and wheels must be performed in accordance with the applicable sections of 14 CFR part 43.

211. Banner Towing. An aircraft that is in full compliance with its type design and has an FAA-approved banner tow installation may be operated under a standard airworthiness certificate for banner towing purposes. An aircraft that has a standard airworthiness certificate and is modified for a special purpose operation must be operated under a multiple airworthiness certificate (standard/restricted) when the following conditions occur:

a. The special purpose modification does not meet the type design.

b. The special purpose modification is not approved for standard category use.

c. The aircraft will be operated outside the normal category operating limitations.

212. Reserved.

Section 2. Airworthiness Certificates

213. General. FAA Form 8100-2 and FAA Form 8130-7 will be referred to as being either a standard or a special classification within this order.

214. Classification and Category of Airworthiness Certificates.

a. Standard Classification. FAA Form 8100-2 may be issued for an aircraft that fully complies with all of the requirements for a standard airworthiness certificate in the category of normal, utility, acrobatic, commuter, or transport category, manned free balloons, or any other special classes of aircraft designated by the FAA.

b. Special Classification. FAA Form 8130-7 may be issued for an aircraft that does not meet the requirements for a standard airworthiness certificate. The certificate may be issued for an aircraft that meets the following:

(1) Primary. Aircraft that satisfies the requirements of 14 CFR § 21.184.

(2) Restricted. Aircraft that satisfies the requirements of 14 CFR § 21.185.

(3) Limited. Aircraft that satisfies the requirements of 14 CFR § 21.189.

(4) Provisional. Aircraft that satisfies the applicable requirements of 14 CFR part 21, subpart C, Provisional Type Certificates, and 14 CFR part 21, subpart I, Provisional Airworthiness Certificates.

(5) Light-Sport. Aircraft that meets the requirements of 14 CFR § 21.190.

(6) Experimental. For any category of aircraft, including amateur-built (14 CFR §§ 21.191, 21.193, and 21.195).

(7) Special Flight Permits. FAA Form 8130-7 may be issued for an aircraft that does not currently meet applicable airworthiness requirements, but is capable of safe flight, and meets the requirements of 14 CFR §§ 21.197 and 21.199.

215. Replacement, Exchange, or Amendment of Airworthiness Certificates.

a. Replacement.

(1) 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. The replacement airworthiness certificate must carry the original issue date of the certificate being replaced, preceded by a capital "R" in the Date block of the certificate. Replacement certificates also will be issued when the aircraft registration number has been
* changed, and the ASI must forward a copy of the replacement certificate and a copy of the Aeronautical Center Form 8050-64 to AFS-750. In these cases, a new application for airworthiness certification is not required. *

*

(2) Request for a replacement certificate will be made to the local FAA office or, for air carriers, to the applicable certification office. The registered owner or certificate operator will certify this by submitting a signed statement containing the registration number (N-Number), serial number, make, and model of the aircraft, and a reason the replacement certificate is needed. Replacement of airworthiness certificates must not be accomplished by *

verbal agreement with the assigned ASIs or through procedures contained in air carriers' manuals that allow the continued operation of an aircraft without an airworthiness certificate. Such actions are contrary to 14 CFR §§ 91.203(b) and 121.153(a)(1), and 14 CFR part 135, Operating Requirements: Commuter and On-Demand Operations and Rules Governing Persons on Board Such Aircraft, 14 CFR § 135.25(a).

(3) A replacement airworthiness certificate may be issued without supporting documentation from AFS-750 if the date of issuance and the airworthiness classification and/or category of the lost or mutilated certificate can be positively established from the aircraft records, or from the remains of the certificate. If there is insufficient data on which to base issuance of the replacement certificate, the FAA ASI will obtain the required data electronically, by telephone, or by mail (such as the application form or previously issued airworthiness certificate) from AFS-750.

(4) Before issuing a replacement certificate, the FAA must review the aircraft records and, if necessary, inspect the aircraft to ensure that the applicant's request is justified and the aircraft is eligible for the airworthiness certificate requested.

* (5) Both a copy of the replacement certificate and a copy of the registered owner's or certificate operator's request for a replacement certificate (see paragraph 215a(2) of this order) or an Aeronautical Center Form 8050-64 (see paragraph 215a(1)) must be forwarded to AFS-750. *

b. Amendment.

(1) A standard or special airworthiness certificate may be amended when there is—

(a) A modification to the aircraft, such as one that has been approved by an STC or amended TC, that changes the category of the aircraft specified in block No. 4 of the standard airworthiness certificate.

(b) A change to the exceptions specified in block No. 5 of the standard airworthiness certificate.

(c) A change in the aircraft model specified in block No. 2 of the standard airworthiness certificate.

(d) A change in the operating limitations for an aircraft with a special airworthiness certificate.

(e) A change in the aircraft model specified in block "D" of the special airworthiness certificate for those aircraft that have been issued a TC (for example, restricted, primary, limited).

(2) An ODA may amend a standard airworthiness certificate, if authorized to perform the function in accordance with 14 CFR §183.49.

(3) When a certificate is amended, the issuance date will be the current date. Also, the capital letter "A" will be typed in front of the date.

(4) Any amendment of an airworthiness certificate will require submission of FAA Form 8130-6. See paragraph 801 of this order for instructions on completing this form.

(5) Paragraph 217 of this order details further information on aircraft model changes.

(6) Operating limitations that were issued based on a previous edition of this order may be updated to include limitations contained in the current edition. The FAA does not require a new aircraft certification inspection for this type of administrative paperwork amendment (except as provided in paragraph 4107 of this order).

c. Exchange. It is highly desirable that all aircraft currently certificated in the standard category carry FAA Form 8100-2 to be consistent with the regulations. Owners and operators of general aviation and air carrier aircraft that still have FAA Form 1362A, Certificate of Airworthiness, should be encouraged to exchange such forms for the standard airworthiness certificate, FAA Form 8100-2. In exchanging these certificates, the operating certificate number will NOT be entered on the revised form. FAA Form 1362A will be attached to and forwarded with a copy of the revised certificate to AFS-750 to establish an official record of the exchange action. The foregoing exchange procedure also applies to FAA Form 8130-7, in lieu of FAA Form 1362B, Certificate of Airworthiness. The new airworthiness certificate will reflect the date as indicated on FAA Forms 1362A or 1362B, preceded by a capital "E" in the Date block of the certificate. The procedure to exchange a C of A (ACA-1362 (12-50)) does not apply to an expired C of A issued before July 17, 1956. Block 4 of FAA Form 1362 indicates the date of expiration. See the procedures in chapter 3 of this order for a standard airworthiness certificate.

216. Surrendered Airworthiness Certificate.

a. Airworthiness certificates voluntarily surrendered by written authorization from an aircraft owner or authorized representative must state why the certificate is being surrendered. The authorization and certificate must be forwarded to AFS-750 for retention in the permanent airworthiness files for that aircraft.

b. The airworthiness certificate must be surrendered to the FAA by the aircraft owner or operator as specified in 14 CFR § 21.335(e) when:

(1) The title of a U.S.-owned aircraft passes or has passed to a purchaser in another country, or

(2) The aircraft is leased for operations, registered in another country, and is removed from the U.S. registry.

> **Note:** The exporting FAA representative will confirm deregistration and surrendered airworthiness certificate by reviewing the aircraft status on the FAA website. The FAA representative will make copies of these documents from the FAA website to complete their file.

217. Aircraft Model Change.

a. When an aircraft has been modified to conform to another model of the same make, the aircraft registration, airworthiness certificate, and aircraft ID plate must reflect the new model designation.

* **b.** In addition to the existing ID plate, a new fireproof ID plate as specified in 14 CFR § 45.13 to include the new model designation must be attached as close as physically possible to the original ID plate without obscuring it. *

c. To maintain an accurate and continuous operating history for the aircraft, the original ID plate must not be altered in any manner.

d. The normal procedures, including any applicable inspections, apply when processing FAA Form 8130-6. The amended airworthiness certificate will be identified with a capital "A" preceding the current date of the certificate being issued. 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 issue an amended registration certificate.

218. Safeguarding FAA Airworthiness Certificates. Airworthiness certificates are official forms and must be safeguarded by those FAA representatives who are charged with the responsibility for their issuance. Airworthiness certificates may not be produced in a computerized electronic format. Every measure must be taken to ensure these certificates are not obtained by unauthorized persons. At no time may a blank certificate be given to any unauthorized individual. Airworthiness certificates must be secured in a locked container when left unattended.

219. Recording of Conformity Inspections. FAA Form 8100-1, Conformity Inspection Record, must be used to document conformity inspections during type, production, and airworthiness certification programs (see figure 2-4 of this order).

a. Preparation. FAA Form 8100-1 must be prepared in accordance with the instructions shown on the back of the form.

b. Retention. FAA Form 8100-1, original or copy, should be retained by the managing office until it has been determined that it would serve no useful purpose.

220. Airworthiness Certification of Manned Free Balloons. Manned free balloons are type-certificated as complete aircraft consisting of three major articles: the envelope, the burner and fuel system, and the basket. The burner and fuel system and basket also are known as the "bottom-end" articles. Airworthiness certificates will not be issued for any individual article. The following are situations that may be encountered in certificating balloons in the standard category:

a. An applicant for a standard airworthiness certificate must present a complete system (three major components) for the purpose of making a determination of airworthiness.

b. Many balloon TCDS require each individual balloon envelope to be assigned an individual aircraft serial number, aircraft data plate, and aircraft registration number. As such, the balloon manufacturer obtains a registration number from the FAA Aircraft Registry, assigns the N-Number to the aircraft, and reports the aircraft model and serial number to the FAA Aircraft Registry. When an eligible envelope is mated with the necessary articles to make a complete aircraft as described in the applicable TCDS, it is eligible for a standard airworthiness certificate.

c. 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 in accordance with the TC. A person may accomplish the interchange of the burner and basket as a preventive maintenance task as described below.

d. 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 14 CFR 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. The due date of the next required inspection is determined based on the time the articles are due for inspection.

e. If an envelope is provided only as a replacement article without obtaining a new aircraft serial number, registration number, or ID data plate, the installation of the replacement envelope is a maintenance item under 14 CFR 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 data plate, serial number, and registration number are carried over from the previous aircraft envelope.

f. For model changes, see paragraph 217 of this order.

221. Reserved.

Section 3. Initial or Subsequent Issuance of Airworthiness Certificates (Original/Recurrent) or Related Approvals

222. General. This section clarifies the terms "original" and "recurrent" as related to the issuance of airworthiness certificates or approvals. Also identified in this section are the FAA offices responsible for performing such functions, including, as appropriate, the cross-utilization of FAA inspection personnel.

a. A variety of airworthiness functions are performed by the FAA. Many of these functions must be accomplished by or coordinated with FAA manufacturing or airworthiness ASIs who have expertise in the particular specialty. These ASIs may include the principal ASI for a major aircraft manufacturer, or the principal maintenance or avionics ASI for an air carrier with aircraft

of the same type and complexity as the one for which certification is requested. A number of airworthiness functions can be accomplished by cross-utilization of the FAA. Cross-utilization by the FAA must be employed whenever possible in accordance with the guidance contained in this section.

b. The terms “original” and “recurrent” distinguish between those functions for which FAA manufacturing ASIs have primary responsibility and those for which FAA airworthiness ASIs have primary responsibility.

c. The FAA manufacturing ASI has primary responsibility for the issuance of original airworthiness certificates and approvals. The FAA airworthiness ASI has primary responsibility for the issuance of recurrent airworthiness certificates and approvals.

223. Airworthiness Certification.

a. Original Certification. The term “original certification” applies to the issuance of standard or special airworthiness certificates and approvals, including FAA Form 8130-4, Export Certificate of Airworthiness, for aircraft holding a U.S. type design for the following:

(1) Aircraft or related products or articles that have not left, and are under the control of, the original product manufacturer’s quality system.

(2) Aircraft or related products and articles for which an FAA airworthiness certificate or approval has never been issued. Examples include—

(a) Surplus military aircraft,

(b) Aircraft built from spare and/or surplus articles,

(c) U.S.-manufactured aircraft returning from another country without having been issued a U.S. airworthiness certificate or U.S. export airworthiness approval,

(d) Provisional airworthiness certificates and amendments thereto,

(e) Limited airworthiness certificates,

(f) Experimental airworthiness certificates, and

(g) Aircraft manufactured to other than U.S. requirements imported to the United States.

(3) Aircraft that previously have been issued an airworthiness certificate and presented for certification in another category or classification, for example; aircraft converted from standard to restricted for the first time or from a special airworthiness certificate to standard for the first time.

(4) Aircraft that have undergone changes to the type design and require flight testing, for example, under an experimental certificate for the purpose of showing compliance with regulations including, as applicable, the issuance or reissuance of a standard airworthiness certificate.

(5) Prototype or test articles to be used for design evaluation for TC or STC purposes. This includes articles or installation approvals.

(6) Aircraft with an FAA-approved type design that have undergone a model change, as listed on the airworthiness certificate, and require a conformity inspection before issuance of an amended airworthiness certificate.

(7) Issuance of special flight permits for aircraft that previously have not been issued an airworthiness certificate.

b. Recurrent Certification. The term "recurrent certification" applies to the issuance of standard or special airworthiness certificates or approvals for the following:

(1) Aircraft that previously have been issued an airworthiness certificate except those listed in paragraphs 223a(3) through (5) of this order.

(2) Issuance of special flight permits for aircraft that previously have been issued an airworthiness certificate.

(3) Export certification or approval of aeronautical products or articles that previously have been issued an airworthiness certificate or approval.

(4) Issuance of airworthiness certificates for aircraft with certificates that have expired, been surrendered, or been revoked.

(5) Changes to operating limitations.

(6) Issuance of experimental certificates for aircraft with expired experimental certificates issued for research and development (R&D) or exhibition.

(7) U.S.-manufactured aircraft returning to the United States that previously were issued an airworthiness certificate or an Export C of A in the United States.

(8) Aircraft manufactured to a U.S. TC and exported from a country with which the United States has a bilateral agreement, when accompanied by an Export C of A from a bilateral civil aviation authority (CAA). The CAA's Export C of A must contain a statement from that CAA stating that the aircraft conforms to its U.S. type design and is in a condition for safe operation.

224. Exceptions.

a. Any requests, original or recurrent, for a special airworthiness certificate for LSA, amateur-built, exhibition, market survey, crew training, or air racing aircraft may be handled by FAA manufacturing ASIs, FAA airworthiness ASIs, or their authorized designees. If the responsible office cannot support the certification request, an appropriate delegation should be coordinated with the alternate office.

b. Any requests, original or recurrent, for an experimental certificate showing compliance with the regulations is the primary responsibility of the FAA manufacturing ASI or authorized designee. In remote areas or under special circumstances, an FAA airworthiness ASI may be delegated the authority by the Aircraft Certification Service if it is established that the person has had experience in type certification programs of a type and complexity comparable to the certificate requested.

225. Recording of Conformity Inspections. All inspections conducted by an ASI or designee to determine conformity to an approved type design before an airworthiness certificate is issued
* must be recorded on FAA Form 8100-1 (see paragraph 219 of this order). *

226. Eligibility and Evaluation of U.S. Military Surplus Flight Safety-Critical Aircraft Parts (Articles) (FSCAP), Engines, and Propellers.

a. General.

(1) This paragraph provides guidance for use in evaluating and determining the eligibility of U.S. military surplus FSCAPs, 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.

(2) Military engines, propellers, and articles are categorized as new or used and fall into one of the following categories:

(a) Dual-use FSCAPs;

(b) Military-unique FSCAPs;

(c) Dual-use military surplus engines, propellers, and articles; and

(d) Military-unique surplus engines, propellers, and articles.

(3) Before these military engines, propellers, and articles are installed on type-certificated products, the installer must determine that they are:

(a) Eligible for installation, and

(b) Airworthy.

(4) 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 226d of this order.

Note: For eligibility and evaluation of non-flight safety-critical articles, safety-critical aircraft articles, engines/propellers, and their articles, use AC 20-62, Eligibility, Quality, and Identification of Aeronautical Replacement Parts.

b. Dual-Use FSCAP (New or Used).

(1) 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:

(a) FSCAP identification: part number, DOD National Stock Number, and serial number.

(b) Manufacturer, DOD Commercial and Government Entity (CAGE) code, and date of manufacture.

(c) Total time-in-service.

(d) Current status of life-limited FSCAPs.

(e) Time since the last overhaul of each FSCAP that is required to be overhauled on a specified time basis.

(f) Identification of current inspection status, including time since last required inspection or maintenance performed.

(g) 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.

(h) A list of current major alterations, repairs, or modifications for each FSCAP.

(i) Date any work was accomplished.

(j) Work authentication.

(2) 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.

(a) New Dual-Use FSCAP.

1 For an FSCAP to be installed on products with standard airworthiness certificates, the FSCAP must conform to its FAA-approved type design and must be in a condition for safe operation.

2 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.

(b) Used Dual-Use FSCAP.

1 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 in accordance with 14 CFR § 43.13.

2 The FSCAP also must be evaluated by persons authorized under 14 CFR § 43.7(a), (c), (d), or (e) by using the following applicable methods, means, or data sources:

(aa) Differences between military and civil version (for example, possible DOD modifications, alterations, or repairs performed);

(bb) Current manufacturer or DOD technical data and procedures to perform tests and inspections, including current life-limited articles list;

(cc) 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?");

(dd) Nondestructive tests, as required;

(ee) Bench test or functional test, as required;

(ff) Results of tests and inspections recorded;

(gg) Complete historical and modification, alteration, or repair records;

(hh) Manufacturer's ID plate;

(ii) Flight, maintenance, and/or structural manual(s), and IPC; and

(jj) Instructions for Continued Airworthiness (ICAW).

(3) Approval for Installation. Persons authorized under 14 CFR § 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 in accordance with 14 CFR § 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.

c. Military-Unique FSCAP.

(1) Eligibility Screening. New or used military-unique FSCAPs may be eligible for installation on civil aircraft with special airworthiness certificates under 14 CFR § 21.305(c) in conjunction with type certification procedures for a product or in accordance with 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:

(a) FSCAP identification: part number, DOD National Stock Number, and serial number.

(b) Manufacturer, DOD CAGE code, and date of manufacture.

(c) Total time-in-service.

(d) Current status of life-limited FSCAPs.

(e) Time since the last overhaul of each FSCAP that is required to be overhauled on a specified time basis.

(f) Identification of current inspection status, including time since last required inspection or maintenance performed.

(g) 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.

(h) A list of current major alterations, repairs, or modifications for each FSCAP.

(i) Date any work was accomplished.

(j) Work authentication.

(2) 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.

(a) 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.

(b) Used Military-Unique FSCAP.

1 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 The FSCAP also must be evaluated to determine airworthiness in accordance with 14 CFR § 43.13, by using the following applicable methods, means, or data sources:

(aa) Special equipment or test apparatus, as required;

(bb) Current manufacturer or DOD technical data and procedures to perform tests and inspections;

(cc) 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?");

(dd) Nondestructive tests, as required;

(ee) Bench test or functional test, as required;

(ff) Results of tests and inspections recorded;

(gg) Complete historical and modification, alteration, or repair records;

(hh) Manufacturer's ID plate;

(ii) Flight, maintenance, and/or structural manual(s), and IPC; and

(jj) ICAW.

(3) Approval for Installation. Persons authorized under 14 CFR § 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 in accordance with

14 CFR § 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.

d. Dual-Use and Unique Military Surplus Engines, Propellers, and Their Articles.

(1) 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.

(2) The pertinent accompanying historical records documentation is essential for:

(a) The Defense Reutilization and Marketing Office's (DRMO) public sale of engines, propellers, and articles;

(b) Categorizing the engines, propellers, and articles as dual-use or military-unique; and

(c) Establishing the eligibility and airworthiness of the engine, propeller, and articles.

(3) Military surplus engines and propellers may be type certificated under 14 CFR § 21.17, which requires issuance of a new TC and compliance with the applicable requirements, such as 14 CFR part 33, Airworthiness Standards: Aircraft Engines, for engines and 14 CFR part 35, Airworthiness Standards: Propellers, for propellers. For a military aircraft issued a TC under 14 CFR § 21.25 or § 21.27, the applicable engine or propeller is not required to be issued a separate TC. However, it should be noted 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.

(4) 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 un-commanded 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.

(5) 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 in accordance with 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).

(a) 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 14 CFR § 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 14 CFR § 21.27 or § 21.25. The eligibility determination is made based on a review of the following pertinent historical records:

1 Engine, propeller, and article ID (article part number and serial number and manufacturer).

2 Contract or purchase order number under which the engine, propeller, or article was manufactured.

3 Evidence of engine, propeller, and article status, for example; serviceable or unserviceable, in accordance with DOD Form (DD Form) 1574-1 or Department of the Army (DA) Form 2410.

4 Complete historical records maintained by the military, the manufacturer, and any other prior owner(s), pertaining to inspection, modification, 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 should also include the date on which the work was accomplished and work authentication.

5 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.

(b) 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.

1 New Dual-Use Engines, Propellers, and Articles.

(aa) 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.

(bb) 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.

2 Used Dual-Use Engines, Propellers, and Articles.

(aa) 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 designated engineering representative (DER). When a DER is used, the DER's recommendations or decisions must be substantiated in writing using FAA Form 8100-9,

Statement of Compliance With Airworthiness Standards, and include supporting documents. Each engine, propeller, and article must conform to the approved TC, must have been manufactured under an FAA-approved production system, and be in a condition for safe operation. In addition, the following should be evaluated:

(1) Operational differences between military and civil versions (for example, possible DOD modification, 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).

(2) Complete historical operational records. This includes extreme operational conditions such as accidents, fires, or exceeding engine operating limits.

(3) Complete historical maintenance records; for example, modifications, 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.

(4) ICAW.

(5) Emission requirements as stated in the TCDS (engine only).

(6) 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?").

(7) Current manufacturer's technical data to perform tests or inspections.

(8) Written results of inspections performed (for example, maintenance record entry, FAA Form 8130-3, Authorized Release Certificate, or FAA Form 337, Major Repair and Alteration, for approval for return to service) and a completed FAA Form 8130-9, Statement of Conformity.

(9) The application of the identifying marking requirements in accordance with 14 CFR §§ 45.11 and 45.13, as applicable.

(10) Engine, propeller, or article overhaul records, including overhaul in accordance with civil engine/propeller manuals.

(11) Verification that the engine, propeller, or article was produced by an FAA PAH.

(bb) 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, 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:

(1) Complete historical operational records. This includes extreme operational conditions such as accidents, fires, or engine exceeding operating limits.

(2) Complete historical maintenance records; for example, modifications, alterations, and repairs, and complete documentation of the work performed.

(3) ICAW.

(4) Emission requirements as stated in the TCDS (engine only).

(5) 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?").

(6) Current manufacturer's technical data to perform tests or inspections.

(7) 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.

(8) The application of the identifying marking requirements in accordance with 14 CFR §§ 45.11 and 45.13, as applicable.

(9) Engine, propeller, or article overhaul records, including overhaul in accordance with civil engine/propeller manuals.

(10) Verification that the engine, propeller, or article was produced by an FAA PAH.

(c) Approval for Installation. Persons authorized under 14 CFR § 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 in accordance with 14 CFR § 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.

(6) 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.

(a) 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 14 CFR §§ 21.25(a) and 21.8 with special airworthiness certificates. The eligibility determination is made based on a review of the following pertinent DOD historical records:

1 Engine, propeller, article ID (article part number and serial number and manufacturer).

2 Contract or purchase order number under which the engine, propeller, or article was manufactured.

3 Evidence of engine, propeller, and article status; for example, serviceable or unserviceable, per DD Form 1574-1 or DA Form 2410.

4 Complete historical records maintained by the military, the manufacturer, and any other prior owner(s), pertaining to inspection, modification, 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.

5 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.

(b) 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.

1 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.

2 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.

(c) Approval for Installation. Persons authorized under 14 CFR § 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 in accordance with 14 CFR § 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.

(5) Large airplanes, turbojet, or turbopropeller multi-engine airplanes comply with the inspection program requirements of 14 CFR part 91, subpart E, Maintenance, Preventive Maintenance, and Alterations, or other CFR referenced therein. A supplemental structural inspection program also is required for certain large transport category airplanes. See AC 91-56, Continuing Structural Integrity Program for Airplanes.

(6) The TC holder or STC holder has furnished one set of FAA-accepted ICAW or one complete set of FAA-accepted maintenance manuals to the owner of the aircraft when the first standard airworthiness certificate is issued, or has procedures in place to ensure that FAA-accepted ICAW or maintenance manuals are provided upon delivery of the aircraft, as required by 14 CFR §§ 21.17(a) and (b), 21.31, and 21.50. The ICAW or maintenance manuals also are required for all products with a TC or STC. If no FAA-accepted ICAW or maintenance manuals are available, the ASI having certificate management responsibility over the manufacturer will contact the ACO and Aircraft Evaluation Group (AEG) to determine the status of the ICAW or maintenance manuals. The ASI is responsible for ensuring that the manufacturer and company designees are made aware of the status of the ICAW or maintenance manuals. No deliveries will be allowed before the ICAW or maintenance manuals are approved.

> **Note:** For additional information relative to imported products, see AC 21-23, Airworthiness Certification of Civil Aircraft, Engines, Propellers, and Related Products Imported to the United States.

g. Inspect the aircraft for the following:

(1) The nationality and registration marks and ID plate are displayed and marked in accordance with 14 CFR part 45. The information therein agrees with the application for airworthiness certification.

(2) All equipment, both required and optional, is properly installed and listed in the aircraft equipment list.

(3) Instruments and placards are correctly located, installed, and properly marked in the English language.

(4) All applicable ADs have been accomplished and appropriately recorded.

(5) The aircraft conforms to its approved U.S. TC and is in a condition for safe operation.

(6) All aircraft systems have been satisfactorily checked for proper operation.

(7) Operation of the engine(s) and propeller(s) has been checked in accordance with the aircraft manufacturer’s instructions.

h. If it is determined that the aircraft meets the requirements for the certification requested, the ASI or authorized designee should—

* (1) Make an aircraft logbook entry in accordance with paragraph 801b(8)(d) of this order. *

(2) Issue FAA Form 8100-2 in accordance with paragraph 802 of this order.

(3) Complete sections V and VIII of FAA Form 8130-6, as appropriate, in accordance
* with the instructions contained in paragraph 801b(5) and 801b(8) of this order. *

(4) Examine, review, and route the certification file in accordance with paragraph 807 of this order.

i. If the aircraft does not meet the requirements for the certification requested and the airworthiness certificate is denied, the ASI must write to the applicant stating the reason(s) for denying the certificate. The ASI also will attach a copy of the denial letter to the application and forward the application to AFS-750 to be made a part of the aircraft record.

307.-308. Reserved.

Section 2. New Aircraft

309. General. In addition to the instructions contained in section 1 of this chapter, this section provides further guidance material associated with the airworthiness certification of new aircraft being produced under a TC, a PC, an ODA, or a bilateral agreement.

310. Use of Designees. With the exception of paragraph 314 of this order, designees authorized under 14 CFR § 183.33 may perform the necessary inspections leading to the issuance of airworthiness certificates for completed products and articles thereof. A designee authorized under 14 CFR §§ 183.31 and 183.33 may be appointed to inspect and issue airworthiness certificates for aircraft manufactured under a PC, including articles thereof. The designees are under the direct supervision of the MIDO having certificate management responsibility over the manufacturer.

311. Certification Procedures. The ASI or authorized designee should follow the appropriate procedures in section 1 of this chapter in conjunction with any applicable steps listed in this order.

312. Aircraft Manufactured Under a TC (Without an FAA Production Approval).

a. The FAA has full responsibility for ensuring that each aircraft for which an airworthiness certificate is issued conforms to the type design and is in a condition for safe operation. Sufficient inspections of each aircraft must be conducted by ASIs or authorized designees.

b. Under the provisions of 14 CFR §§ 21.183(b) and 21.123, FAA Form 8100-2 may be issued for aircraft produced by a manufacturer who does not have an FAA production approval.

(11) The ASI will review the FAA Form 8130-9, certifying the completed aircraft conforms to the applicable FAA-approved data for this project. Any major deviations to the TC must be described on the statement of conformity and approved by FAA engineering. When submitting FAA Form 8130-9 for an aircraft built from spare and/or surplus parts, cross out the phrase in section IV, item B, "produced under type certificate" (see figure 3-6 of this order) and enter below that item the TC, specification, or listing numbers as applicable.

(12) A new ID plate will be reviewed by the FAA before installation on the aircraft to verify it meets the requirements of 14 CFR §§ 45.11 and 45.13. The builder's name would be that of the person who assembled the aircraft and not the name of the TC owner/manufacturer who builds the same model of aircraft (see figure 3-2 of this order). The model designation is that of the aircraft type design to which conformity is determined. The serial number selected by the builder should be clearly distinguishable from the TC holder's serial numbers; for example, the serial number could be the builder's name or initials together with a number.

(13) The FAA should list supporting documents such as manufacturer invoices, supplier affidavits, packing lists, parts lists, material certification sheets, and other acceptable records submitted by the applicant on FAA Form 8100-1, which becomes part of the checklist and inspection record. The basis for determining conformity with the FAA-approved data for this project will be established and become a matter of record for future reference.

(14) The MIDO/MISO/CMO/CMU or FSDO issuing the standard airworthiness certificate will ensure a copy of FAA Forms 8100-2 and 8130-6 are forwarded to the CMACO.

318. Reserved.

Section 3. Used Aircraft and Surplus Aircraft of the U.S. Armed Forces

319. General.

a. 14 CFR § 21.183(d) is applicable to used aircraft. Its provisions are applied to airworthiness certification of used aircraft (aircraft with time in service for other than production flight testing), including aircraft type certificated under 14 CFR § 21.29 but not eligible for certification under 14 CFR § 21.183(c), U.S.-manufactured civil aircraft that were exported and later returned to the United States for FAA certification, and surplus military aircraft. In addition to the provisions contained in section 1 of this chapter, this section provides further guidance material and procedures associated with airworthiness certification of these aircraft.

b. Obtaining an airworthiness certificate may not, by itself, be sufficient to meet all of the regulatory requirements for operating an aircraft in the United States. Operations under 14 CFR part 121 or part 135 may require additional inspections, tests, or the installation of additional instruments and/or equipment before operation.

320. Certification Procedures.

a. General. The FAA must follow the appropriate procedures listed in paragraph 306 of this order, along with the guidance and procedures in paragraphs 322 through 330 of this order when examining a used aircraft.

b. Repair data approved by another CAA. Increasingly the FAA is negotiating bilateral agreements that provide greater recognition to data approved by other CAAs for repairs to a used aircraft or its articles. Always consult the current version of a respective bilateral agreement to determine the acceptance of foreign repair data. If you have questions regarding the applicable provisions of any of these bilateral agreements, contact the Aircraft Certification Service, International Policy Office (AIR-40).

321. Conformity Determination.

a. Under 14 CFR § 21.183(d), an applicant is entitled to a standard airworthiness certificate for used aircraft (aircraft with time in service for other than production flight testing) (to include 14 CFR § 21.29 aircraft), or surplus military aircraft. The applicant must present acceptable evidence to substantiate conformance to the FAA-approved type design, including any
* modifications, for example, an STC or FAA field approval documented on Form 337, and that *
the aircraft has been inspected in accordance with the performance rules for 100-hour inspections as set forth in 14 CFR § 43.15 and found to be airworthy by one of the following persons:

(1) The manufacturer;

(2) The holder of an appropriately rated repair station certificate issued under 14 CFR part 145, Repair Stations;

(3) The holder of a mechanic certificate issued under 14 CFR part 65, Certification: Airmen Other than Crewmembers; or

(4) The holder of a certificate issued under 14 CFR part 121 and having a maintenance and inspection organization appropriately rated for the type of aircraft involved.

b. Under the provisions of 14 CFR § 21.183(d), it is the applicant's responsibility to present, with the application, evidence that substantiates conformity with the FAA-approved type design. The applicant must provide any inspection and maintenance records, service history, and any other records substantiating eligibility of the articles being used. The FAA is required to make a "finding of conformity" in accordance with 14 CFR § 21.183(d)(3), which consists of a review of the applicant's evidence showing how conformity was determined. Sufficient conformity inspections must be conducted on the aircraft and the applicant's evidence for the ASI to find the aircraft to be in conformity. If conformity cannot be determined, the inspection should be stopped until such time as the applicant presents new evidence showing such determination has been made.

c. Compliance with the inspection requirement can be demonstrated by one of the following methods:

(1) The applicant may have the aircraft inspected in accordance with the performance rules for 100-hour inspections set forth in 14 CFR § 43.15(c)(1).

(2) The FAA may accept a recent 100-hour inspection, whether performed in the United States or in any other country where the aircraft previously was located while the aircraft was on the U.S. registry:

(a) When the inspection was performed within 30 days before the date of application for a standard airworthiness certificate.

(b) When the inspection was accomplished by an approved maintenance organization appropriately certificated by the CAA of a country with which the United States has a bilateral maintenance agreement and that meets the requirements as defined in 14 CFR § 21.183(d)(2). See AC 21-23, appendix 4.

> **Note:** 14 CFR § 21.183(d)(2) exempts experimentally certificated aircraft that previously had been issued a different airworthiness certificate under 14 CFR § 21.183 from the 100-hour inspection set forth in 14 CFR § 43.15.

(3) The FAA may accept a previously performed inspection in lieu of a 100-hour inspection
* that meets the requirements set forth in appendix B to this order. In this circumstance, the *
applicant shall list the country, foreign repair station name, and number (if applicable) in section IV, block 6 of FAA Form 8130-6. Using permanent blue or black ink, the applicant shall strike/draw a line through the title of Section IV, Block 5 of FAA Form 8130-6, initial the line-through, and provide a statement that an equivalent inspection was performed that meets the requirements of appendix B to this order.

d. The process by which an applicant can meet these requirements depends on the aircraft involved and its history. This order is intended to address the most common situations encountered in certificating aircraft under 14 CFR § 21.183(d). Unique situations should be discussed in advance with the Aircraft Certification Service, Production and Airworthiness Division (AIR-200).

e. If the application is for an original airworthiness certificate, the maintenance rules of 14 CFR part 43 are not applicable. An example of this situation is when a new aircraft is delivered without an Export C of A and later returns to the United States for certification.
* Approval of major and minor changes to type design comes under the applicable provisions of *
14 CFR §§ 21.95 and 21.97. All changes in type design and their approval must be appropriately documented and made part of the original airworthiness certification file. This approval must be documented in an attachment to FAA Form 8130-6.

322. Flight Testing. The FAA may require flight tests to determine that the aircraft is in a condition for safe operation. The applicant must consult with the FAA to establish a flight test procedure and flight checkoff form. The FAA must confirm that the aircraft has been flight tested by the applicant's pilot in accordance with that procedure. Flight tests may not be conducted by the FAA until an entry has been placed in the aircraft records to show that these tests have been satisfactorily completed by the applicant. The appropriate airworthiness certificate for this purpose is a special airworthiness certificate, for showing compliance with 14 CFR.

323. Issuance of Standard Airworthiness Certificates Under 14 CFR § 21.183(d)—Used Aircraft and Surplus Aircraft of the U.S. Armed Forces. Before a standard airworthiness certificate is issued, the applicant must show that the aircraft meets the FAA-approved type design for that aircraft. This includes aircraft type certificated under 14 CFR § 21.29.

a. Upon initial contact by persons desiring a standard airworthiness certificate for a U.S. type-certificated aircraft located in a country other than the United States the FAA must:

(1) Determine whether the certification program can be accomplished in the desired location without placing an undue burden on FAA resources. If the determination results in a finding that the desired location places an undue burden on FAA resources and certification cannot be performed by an ASI, then advise the applicant that the use of an appropriate FAA designee is permissible; or

(2) Advise the applicant that a special flight permit for U.S.-registered aircraft (14 CFR § 21.197) or special flight authorization (SFA) for non-U.S.-registered aircraft may be issued under 14 CFR § 91.715 if it is necessary to relocate the aircraft for the airworthiness inspection. To ferry an aircraft to a location near the office or a mutually acceptable location, see chapter 7 of this order.

Note: Special flight permits and SFAs are not recognized by the ICAO.

(3) Discuss with the applicant any anticipated issues, the applicable certification procedures in section 1 of this chapter, the specific requirements listed herein, and any proposed certification time schedules.

b. Bilateral Agreements: Bilateral Airworthiness Agreement (BAA), Bilateral Aviation Safety Agreement (BASA) or Other International Agreements for Airworthiness.

(1) A bilateral agreement provides for close cooperation between the FAA and another CAA in the resolution of safety issues that might arise from in-service operation of any product exported or imported and approved or accepted under the terms of the agreement. When a safety concern arises, the FAA will work with and through the CAA of the other country to the maximum extent practicable, for example, through the exchange of information and technical opinions, to determine the appropriate corrective action required of operators or owners of affected U.S.-registered aircraft. The CAA is expected to keep the FAA informed of corrective actions that the CAA believes are required for safety on U.S.-registered aircraft.

Chapter 4. Special Airworthiness Certification

Section 1. General Information

4000. General. The procedures in this chapter provide guidance material associated with airworthiness certification and the issuance of FAA Form 8130-7. 14 CFR part 21, subpart H, Airworthiness Certificates, and subpart I, Provisional Airworthiness Certificates, prescribe the procedural requirements for airworthiness certification for restricted, multiple, limited, primary
* category aircraft (PCA), light-sport, experimental purposes, and provisional. Procedures also are *
provided for issuance of special flight permits.

4001. Application for Airworthiness Certificate. FAA Form 8130-6 is required whenever an airworthiness certificate is issued or amended. This includes changes to operating limitations
* that may have been prescribed. The application for a U.S. airworthiness certificate must be made by the registered owner or an authorized agent who has a notarized letter of authorization from the registered owner. The applicant or authorized agent must complete the appropriate sections *
and sign the application. A program letter also must be submitted to the FAA with any other document(s) required for the requested certification. The program letter must be reviewed to ensure all of the requirements of 14 CFR § 21.193(d) have been met.

4002. Certification Procedures. The following procedures are common for issuance of FAA Form 8130-7, consistent with any other specific procedures that may be prescribed in other paragraphs dealing with individual airworthiness categories. In no case may any aircraft be operated unless there is an appropriate and valid airworthiness certificate issued for that aircraft. The FAA must conduct any inspections necessary to verify the certification procedures listed below, including any other inspections found appropriate for that certification. For amateur-built aircraft, see paragraph 4096 of this order; for LSA, see paragraphs 4038 and 4081 of this order.

a. Record Inspection. The FAA representative must do the following:

(1) Obtain from the applicant a properly executed FAA Form 8130-6 and any other documents required for the certification.

(2) For experimental certification, obtain from the applicant a program letter that identifies the aircraft, the purpose of the certificate, the area over which the operations are to be conducted, and the duration of the program.

(3) Review the documentation provided by the applicant to determine that the registration requirements of 14 CFR part 47 have been met, and ensure that the aircraft is marked in accordance with 14 CFR part 45.

(4) Check with AFS-750 to determine if a denial letter exists for the particular aircraft. This may assist the ASI in determining aircraft eligibility.

(5) Review the aircraft records to determine that any required maintenance and inspections have been accomplished. Records should be complete and reflect no unapproved design changes.

(6) Arrange to review any inspection or technical data needed to establish conformity to type design.

(7) Review the applicant's weight and balance data for accuracy and currency for the aircraft submitted.

(8) Determine that the aircraft has been flight tested, if required. If it has not been flight tested, issue an appropriate FAA Form 8130-7, for showing compliance with the airworthiness regulations (14 CFR §§ 21.189(a)(2), 21.185(d) and 91.319(b)). The flight test must be recorded in the aircraft records and certify that the requirements of 14 CFR § 91.319(b) have been met. Flight test time is included as "time-in-service," as defined by 14 CFR part 1.

(9) Determine the aircraft complies with all applicable ADs.

Note: Each AD contains an applicability statement specifying the product to which it applies. ADs, unless specifically limited, apply to the make and model set forth in the applicability statement regardless of category. The TC and airworthiness certification categories are used to identify the product affected. For further guidance see AC 39-7, Airworthiness Directives.

(10) Establish that all required documentation and records have been provided for the aircraft, that is, an up-to-date approved flight manual, equipment list, and maintenance records and manuals as required by certain airworthiness parts of the CFR.

b. Aircraft Inspection. The FAA must arrange with the applicant to make the aircraft available for inspection to determine the following:

(1) The aircraft is eligible by make and model using the TCDS, aircraft specification, or aircraft listing, as applicable.

(2) The ID plate meets the requirements of 14 CFR § 45.11, as applicable.

(3) The information on the ID plate is correct, matches the information on FAA Form 8130-6, and is in accordance with 14 CFR § 45.13, as applicable.

(4) The aircraft nationality and registration marks are in accordance with part 45.

Note: 14 CFR § 21.182 (a) and (b)(2) (amateur-built or primary kit-built only and LSA) requires each aircraft to be identified as described in 14 CFR § 45.11. In addition, if the aircraft previously was registered in the United States, it is acceptable to continue use of the duplicate pink copy of Aeronautical Center Form 8050-1, Aircraft Registration Application, as temporary authority to operate. However, it first must be verified that AFS-750 has received the Aircraft Registration Application as a temporary authority to operate.

(5) The flight control system operates properly.

4035. Certification Procedures. The FAA must follow the steps in paragraph 4002 of this order, and consider the following:

a. The duration of certificates is unlimited as long as the requirements of 14 CFR § 21.181(a)(1) are met.

b. 14 CFR § 91.325 identifies the operating limitations unique to PCA.

c. Figures 4-3 through 4-5 of this order provide samples of FAA Form 8130-7 applicable to PCA.

4036.-4037 Reserved.

Section 6. Light-Sport Aircraft Category Airworthiness Certifications

4038. General. A special airworthiness certificate in the light-sport category is issued to an aircraft that meets the definition of LSA, is manufactured to the applicable consensus standards, and is one of the following five classes of the LSA category: airplanes, gliders, powered parachutes, weight-shift-control aircraft (commonly called trikes), and lighter-than-air aircraft (balloons and airships). When the aircraft meets all the eligibility requirements of 14 CFR §§ 1.1 and 21.190, it may be issued an airworthiness certificate in the LSA category. Excluded from obtaining a special airworthiness certificate in the LSA category are gyroplane aircraft and light-sport kit aircraft, which may receive an experimental purpose for operating LSA as addressed in chapter 4, section 8 of this order.

a. Definition. As defined in 14 CFR § 1.1, an LSA is an aircraft other than a helicopter or powered-lift that since its original certification has continued to meet the following:

(1) A maximum takeoff weight of not more than 1,320 pounds (600 kilograms) for aircraft not intended for operation on water; or 1,430 pounds (650 kilograms) for aircraft intended for operation on water.

(2) A maximum airspeed in level flight with maximum continuous power (V_H) of not more than 120 knots calibrated airspeed under standard atmospheric conditions at sea level.

(3) A maximum never-exceed speed (V_{NE}) of not more than 120 knots calibrated airspeed for a glider.

(4) A maximum stalling speed or minimum steady flight speed without the use of lift-enhancing devices (V_{S1}) of not more than 45 knots calibrated airspeed at the aircraft's maximum certificated takeoff weight and most critical CG.

(5) A maximum seating capacity of no more than two persons, including the pilot.

(6) A single, reciprocating engine, if powered.

(7) A fixed or ground-adjustable propeller, if a powered aircraft other than a powered glider.

* (8) A fixed or feathering propeller system, if a powered glider. *

(9) A fixed-pitch, semi-rigid, teetering, two-blade rotor system, if a gyroplane.

(10) A nonpressurized cabin, if equipped with a cabin.

(11) Fixed landing gear, except for an aircraft intended for operation on water or a glider.

(12) Fixed or retractable landing gear, or a hull, for an aircraft intended for operation on water.

(13) Fixed or retractable landing gear for a glider.

Note: Although gyroplane aircraft (commonly known as gyrocopters) are identified in the LSA definition of 14 CFR § 1.1, gyroplane aircraft, even when
* meeting the LSA definition, may only be issued an experimental certificate for the purpose of R&D, in accordance with 14 CFR § 21.191(a). Gyroplanes may be eligible in other categories and for purposes other than LSA. *

b. Eligibility. LSA are eligible for a special airworthiness certificate in the LSA category in accordance with 14 CFR § 21.190 when the aircraft has not been previously issued a standard, primary, restricted, limited, or provisional airworthiness certificate, or an equivalent airworthiness certificate issued by a CAA outside the United States, and the applicant provides a copy of the aircraft manufacturer's—

* (1) Written operating instructions for the aircraft in the English language. *

(2) Written maintenance and inspection procedures for the entire aircraft in the English language.

(3) Flight training supplement in the English language.

* (4) Statement of Compliance (SOC) as described in 14 CFR § 21.190(c). Samples of FAA Form 8130-15, LSA Statement of Compliance, are located in chapter 4, figures 4-19 and 4-20 of this order. A blank copy of FAA Form 8130-15 may be obtained from the FAA * forms database at www.faa.gov/forms. FAA Form 8130-15 must contain:

(a) The identity of the aircraft by make (the manufacturer's name) and model, serial number, class, date of manufacture, and consensus standard used;

(b) A statement that the aircraft meets the provisions of the identified FAA-accepted consensus standard;

(c) A statement that the aircraft conforms to the manufacturer's design data, using the manufacturer's quality assurance system that meets the identified FAA-accepted consensus standard;

(d) A statement that the manufacturer will make available to any interested person the following documents that meet the identified FAA-accepted consensus standard:

* *1* The aircraft operating instructions (AOI), commonly known as the pilot's operating handbook (POH); *

2 The aircraft's maintenance and inspection procedures for the entire aircraft; and

3 The aircraft's flight training supplement.

(e) A statement that the manufacturer will monitor and correct safety-of-flight issues through the issuance of safety directives and a continued airworthiness system that meets the identified FAA-accepted consensus standard;

(f) A statement that at the request of the FAA, the manufacturer will provide unrestricted access to its facilities; and

* (g) A statement that the manufacturer, in accordance with a production acceptance test procedure that meets the applicable FAA-accepted consensus standards, has— *

1 Ground and flight-tested the aircraft;

2 Found the aircraft performance acceptable; and

3 Determined the aircraft is in a condition for safe operation.

c. Eligible Light-Sport Aircraft Manufactured Outside the United States. For an aircraft that has been manufactured outside the United States to be eligible for a special airworthiness certificate in the LSA category, an applicant must provide evidence to the FAA that the aircraft meets the definition of LSA according to 14 CFR § 1.1 and the requirements of 14 CFR § 21.190(b). In addition, in accordance with 14 CFR § 21.190(d), an applicant must provide proof of the following:

(1) The aircraft was manufactured in a country with which the United States has a
* bilateral agreement concerning airplanes. To verify bilateral agreements, see the AIR-40 listing of current bilateral agreements located on the FAA website. *

(2) The aircraft manufactured outside the United States is eligible for an airworthiness certificate, flight authorization, or other similar certification in its State of Manufacture. Verification of this eligibility is through a statement from the manufacturer in the aircraft documentation that had the aircraft remained in the country of export, the aircraft would have been eligible for an airworthiness certificate, flight authorization, or other similar certification.

(3) When an aircraft manufactured outside the United States meets the definition of LSA in accordance with 14 CFR § 1.1 and is not eligible per 14 CFR § 21.190(b), the aircraft may be eligible for an experimental LSA certificate in accordance with 14 CFR §§ 21.191(i) and 21.193(e)(6). Guidance on experimental LSA certification is given in chapter 4, section 8 of this order.

* **d. Light-Sport Aircraft Construction and Manufacturer Requirements.** The manufacturer of an aircraft for airworthiness certification in the light-sport category must manufacture the aircraft to the design requirements and quality system of the applicable FAA-accepted consensus standards. The acceptance of consensus standards will be published through a notice of availability (NOA) in the Federal Register. To meet the intent of 14 CFR § 21.190 and to be eligible for an airworthiness certificate in the special LSA category, the applicant must present satisfactory evidence that the aircraft was manufactured and found acceptable to the provisions of the applicable consensus standard. Evidence of acceptability is provided by the LSA manufacturer's Statement of Compliance, FAA Form 8130-15, attesting to compliance with the requirements of 14 CFR § 21.190. A list of accepted consensus standards can be found on the FAA website (reference paragraphs 4039 and 4082 of this order). When an inspection of either the documentation or aircraft demonstrates that the statement of compliance is incorrect, the aircraft is ineligible for certification. The following are clarifications of FAA-accepted consensus standards and requirements for construction of LSA as it relates to certification in this category:

* (1) The manufacturer of LSA must use those articles, components, and equipment that are in accordance with the applicable FAA-accepted consensus standard design requirements. The use of used, overhauled, or reconditioned articles and assemblies will be provided for in the LSA manufacturer's maintenance and inspection procedures in accordance with the FAA-accepted consensus standards.

(2) The manufacturer is not required to be a PAH for LSA, and LSA do not receive a TC. For an aircraft to be eligible within the light-sport category, the aircraft manufactured cannot be type certificated, but may have type-certificated components, equipment, and products incorporated in the LSA. Light-sport category aircraft are constructed to regulatory requirements and applicable FAA-accepted consensus standards. Aircraft that are constructed in whole or of component parts that do not meet and/or are not within the FAA-accepted consensus standards are not eligible for certification in special light-sport category.

(3) In accordance with 14 CFR § 21.190(b) and (c), the manufacturer must provide the aircraft's maintenance and inspection procedures that meet the applicable FAA-accepted consensus standards for LSA to be eligible for certification.

(4) In accordance with 14 CFR § 21.190(c), the manufacturer must perform an acceptance test of the aircraft with the requirements necessary to prove the aircraft's reliability and functionality. The manufacturer verifies the aircraft's proper function on the ground and in flight according to the applicable FAA-accepted consensus standard. The manufacturer must document the acceptance test results in accordance with their quality system and determine whether the aircraft is in a condition for safe operation. All production aircraft must obtain a special flight permit in accordance with 14 CFR § 21.197 to accomplish flight test requirements.

(5) A manufacturer that issues the SOC is responsible for the quality of the LSA end product. The manufacturer's quality assurance responsibility includes material supplied and
* assembly work performed by other persons, including dealers, and distributors when acting on behalf of a manufacturer. Parties who perform pre-certification work must be authorized by the manufacturer and addressed in the manufacturer's quality system text denoting specifics of name(s) and title(s) who are authorized to perform, and identifying the specific conditions and process controls. A precertification LSA for which the manufacturer has not maintained oversight through to issuance of the special LSA category airworthiness certificate is not eligible for special light-sport category certification. However, the aircraft may be eligible for an * experimental light-sport certificate in accordance with 14 CFR §§ 21.191(i) and 21.193(e). Guidance on experimental LSA certification is given in paragraph 4082 of this order.

* (6) Before any flight testing in the United States, the aircraft must be registered in * accordance with 14 CFR part 47 and be issued an appropriate flight permit.

* (7) An LSA manufactured in a country outside the United States must be from a country with which the United States has a bilateral agreement allowing airplanes, and must have been eligible for an airworthiness certification or similar flight authorization had it remained in that country. *

e. Advising Applicants.

(1) FAA inspection of an aircraft will be limited to a general airworthiness inspection when the aircraft is submitted for airworthiness certification. The FAA ASI or DAR will not perform any of the fabrication, construction, assembly, testing, manufacturer's quality inspections, and closing work on or to the aircraft.

(2) When the prospective applicant contacts the appropriate FAA office to inquire about the certification process for a LSA category, the FAA should provide the applicant with the applicable forms and any guidance necessary to ensure a thorough understanding of applicable regulations.

Note: When applicable, advise the applicant of the ability to use the FAA website to obtain requested forms and information.

(3) The applicant, when applying for an airworthiness certificate, should be advised on how and where to submit the appropriate application(s) and documentation to the FAA. The FAA office, when requested, should furnish the following forms:

(a) Aeronautical Center Form 8050-1, Aircraft Registration Application;

* (b) FAA Form 8130-6, Application for U.S. Airworthiness Certificate; and *

(c) Aeronautical Center Form 8050-88A, Affidavit of Ownership for Experimental or Special Light-Sport Aircraft.

(4) At the time of airworthiness certification—

(a) The aircraft must be complete in every respect, and

* (b) The applicant must submit all required documentation (see paragraph 4039) and correct any deficient items noted during inspection. If the applicant cannot or will not provide the necessary documentation and cannot or will not have corrected noted deficiencies, the applicant should be advised that the aircraft cannot be certificated as an LSA until satisfactory evidence is provided to substantiate that the aircraft complies with 14 CFR §§ 21.190, and all applicable regulatory requirements. *

(5) Advise the applicant to provide the LSA manufacturer's documented accurate weight of the aircraft in accordance with established weight and balance or weight and loading procedures to determine the aircraft's empty, gross, and most forward and aft CG location, including the weight and balance or weight and loading calculations from the initial flight. The completed weight and balance report, including load limits for flight personnel, oil, fuel, and any cargo-carrying capabilities, must be available in the aircraft, along with the other applicable placards, listings, and markings required by 14 CFR § 91.9.

* (6) Advise the applicant that although this LSA is designed and constructed to FAA-accepted consensus standards, it also must be certificated and operated to the regulations contained in Title 14, Code of Federal Regulations and applicable FAA policies.

(7) Advise the applicant that if the manufacturer's continued airworthiness operations/continued airworthiness system is not maintained or no longer exists, this causes a condition of special LSA category certification ineligibility and a reduction in continued operational safety that may cause this special airworthiness certificate to no longer be in effect. This aircraft may be eligible in another category or purpose and conditions of operation.

(8) Advise the applicant that should a special airworthiness certificate in special light-sport category 14 CFR § 21.190 be granted for this aircraft and the applicant later elects to obtain an experimental certificate under 14 CFR § 21.191(i)(3), the LSA may not be eligible for return to special light-sport category certification.

(9) Advise the applicant that if the LSA is manufactured in a country outside the United States it must be from a country with which the United States has a bilateral agreement allowing airplanes, and must have been eligible for an airworthiness certification or similar flight authorization had it remained in that country.

(10) Advise the applicant that before issuing the first LSA category airworthiness certificate to any new manufacturer's LSA or to a new LSA model from existing manufacturers, AIR-200 must be contacted. DARs cannot issue the first LSA category airworthiness certificate for any new manufacturer's LSA or to a new LSA model from existing manufacturers. Only an assigned ASI can perform the first issuance. *

4039. Certification Procedures. The procedures in this section provide guidance material associated with airworthiness certification and the issuance of FAA Form 8130-7 for the light-sport category.

* **Note:** All DARs must meet the requirements specified in FAA Order 8100.8, Designee Management Handbook, having no conflict of interest when performing LSA airworthiness certification(s).

a. General. The FAA airworthiness certification process consists of a general airworthiness inspection to determine the aircraft is in a condition of safe operation, in accordance with 14 CFR § 21.190(b)(3), and a verification that the applicant's documentation supplied with the aircraft agrees with the identification, description, and applicable regulations. The inspection is accomplished only after the aircraft is completed and before the issuance of the airworthiness certificate. The FAA ASI or DAR will not perform any of the fabrication, construction, assembly, testing, manufacturer's quality inspections, or closing work on or to the aircraft.

(1) During the airworthiness inspection process, omissions, errors and other discrepancies may be found. It is the responsibility of the ASI or DAR to inform the applicant of those discrepant items. When the applicant is not the LSA manufacturer, the corrections of discrepancies to the aircraft and the aircraft's documentation must be authorized by the manufacturer. See paragraph 4038d(5) of this section. Only when the required corrections have been made can an airworthiness certificate be issued. When any of the regulatory requirements for an LSA cannot be substantiated by an applicant, then the LSA is not eligible for U.S. certification in light-sport.

(2) Should the ASI or DAR become aware that the manufacturer is or is about to discontinue business, change ownership or manufacturer's name, or move location, the ASI or DAR through their managing office must seek further direction from the Production and Airworthiness Division, AIR-200, prior to issuing any LSA certificate.

(3) AIR-200 must be contacted prior to issuing the first airworthiness certificate to any new manufacturer's LSA or to a new LSA model from existing manufacturers. Check for certification and safety information on the FAA Make Model Directory for special LSA, located on the FAA website under Aircraft, General Aviation & Recreational Aircraft, LSA, sub-category standards. DARs must not issue the first special LSA category airworthiness certificate for any new manufacturer's LSA or to a new LSA model from existing manufacturers. Only an assigned ASI can perform the first issuance.

b. Inspection and Document Review. The FAA must—

(1) Obtain from the applicant a properly executed FAA Form 8130-6 and any other documents required for the certification. A sample of the Airworthiness Application for Special Light-Sport Category airworthiness certificate under § 21.190 is located in AC 21-12.

Note: Light-sport category aircraft manufactured outside the United States (14 CFR § 21.190(d)) are not considered imported. Therefore, no check is used in box 11 and the origin of the aircraft is not annotated in the block. *

* (2) Obtain for inspection the AOI/POH, maintenance and inspection procedures, and flight training supplement, and the LSA manufacturer's SOC, FAA Form 8130-15 (14 CFR § 21.190(b)). Also, obtain for inspection supporting documentation; the production ground and flight test report acceptance record, the final inspection acceptance record(s), aircraft registration information, and aircraft logbook(s).

Note: The aircraft documentation will be used in conjunction with the performance of the physical examination of the aircraft. Return the documentation to the applicant upon completion of inspection or certificate issuance.

(a) Inspect the AOI/POH, and the flight training supplement contents that may be incorporated into the AOI, ensuring these are physically present with and for each aircraft. These are regulatory required items for certification eligibility (§ 21.190(b)(1)).

1 Check that the AOI/POH and flight training supplement are for the aircraft being inspected. Verify the information contained in these documents is the corresponding and appropriate information for that aircraft as identified by the registration information and inspection of the aircraft.

2 Verify that the aircraft's installed equipment is in accordance with the AOI. Verify that the flight test report reflects the testing of the AOI-installed equipment. Verify that the aircraft configuration matches the flight test report. Inspection of flight test records is located in subparagraph (d) below.

3 When inspecting an airplane, check that the AOI/POH data matches the regulatory requirements of § 1.1 Light-sport aircraft (2), (3), and (4). Ensure that the airspeed indicator markings match the requirements of the AOI/POH-calculated limitations.

4 Check for inclusion of weight and balance or weight and loading data for this aircraft as equipped. This is part of the (as designed and manufactured) permanent record for the aircraft, and is a basis for the associated operating and performance data located in this documentation.

5 Verify that there is a reporting system for maintenance, service, and safety documented in the AOI, the maintenance and inspection procedures (manual), or both in accordance with § 21.190(c)(5). The report may be in hard copy form, electronic media, or both. In either form of media, there must be instructions on how to provide the report to the manufacturer and retain a copy of the report in the aircraft records. If the only means given is to use electronic media, the ASI or DAR will verify the electronic media and instructions are operational.

(b) Ensure each aircraft has its appropriate maintenance and inspection procedures in accordance with § 21.190(b)(1). The following procedures may be in the form of a manual(s).

1 Verify the aircraft has the correct model maintenance manual. *

*

2 Verify the engine/powerplant maintenance and (optional) overhaul text is included in the maintenance manual. If the engine/powerplant maintenance and (optional) overhaul text is deferred to another manual (such as the engine original equipment manufacturer's manual, for example, ROTAX), then within the light-sport manufacturer's aircraft maintenance manual the text must identify to the reader that specific manual's identification with revision and date. Ensure all manuals and procedures are marked with the specific aircraft's unique serial number. It is the same for all other parts, articles, or appliances, type-certificated equipment or not, when the manufacturer's maintenance and inspection procedures (manual's) information is deferred to an external manual or procedure. The external manuals or procedures must be physically present with and for each aircraft.

3 Verify the maintenance and inspection procedures identify critical components that require a replacement time, inspection interval, or related procedure. Those critical components identified in the maintenance and inspection procedures will be used to verify these components are permanently and legibly marked with a serial number (or equivalent) unique to that part (14 CFR § 45.15(c)) when inspecting the aircraft.

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

5 When the maintenance and inspection procedures are used for pre-certification tasks, verify that the person performing those tasks is authorized to do so. The authorization must be in writing by the manufacturer and included in the quality assurance manual. When the maintenance and inspection procedures defer to an external manual or procedure, the person must be authorized to perform those tasks as stated above.

6 Verify the data contained in the documentation (such as the maintenance manuals, AOI, placards, and other manuals incorporated by reference) is consistent. An example of consistency is the AOI, maintenance manual, and the aircraft's fuel tank placard all identify the same fuel requirements (with conversion noted).

7 Verify all applicable manufacturer's safety directives are entered into the aircraft's records. Verify the person making the entry into the logbook has the appropriate level of authorization to perform the task in accordance with the safety directive.

8 Check the aircraft's records for compliance to all applicable ADs. This requirement applies to LSA with type-certificated products or equipment incorporated into the design and/or as equipped. If an AD is issued against a type-certificated product installed in a light-sport category aircraft, the manufacturer of the aircraft is required in accordance with the FAA-accepted consensus standard to issue a safety directive providing instructions on how to address the safety of flight issue on the specific aircraft. Compliance also applies to LSA make- and model-specific ADs.

(c) Review the aircraft manufacturer's Light-Sport Aircraft Statement of Compliance, FAA Form 8130-15 (affidavit), for accuracy and completeness in accordance with § 21.190(b)(1)). Use this guidance and the information in paragraph 804 of this order to check *

* the Form 8130-15. A sample Form 8130-15 is provided in section 13, figure 4-19 of this order. Place a photocopy of the completed and inspected Form 8130-15 in the certification package for FAA records retention (AFS-750). Return the original to the applicant for retention in the aircraft's records. Any changes or additions to the information on the Form 8130-15 must be made by the person authorized by the manufacturer in their quality assurance system.

1 Examine the contents of the Form 8130-15 contained in section I, Aircraft Identification. Verify that the information is correct and appropriate for the aircraft identified by the registration information, the required documentation, and the physical inspection of the aircraft and the aircraft's data plate.

2 Verify the applicant is using the correct form. Check the lower left-hand corner of Form 8130-15 for the correct number and revision.

3 If the manufacturer's address is outside the United States (block 2) as identified in § 21.190(d), verify the aircraft was manufactured in a country with which the United States has a bilateral agreement concerning airplanes. To check for bilateral agreements, see the AIR-40 listing of current bilateral agreements located on the FAA website. If there are questions regarding country of manufacture, contact AFS-750 with reference to AC Form 8050-88A, Affidavit of Ownership for Experimental or Special Light-Sport Aircraft. The country of manufacture and data must match Form 8050-88A and Form 8130-15. If the country of manufacture does not match or does not have a bilateral agreement, then the aircraft cannot be certificated in LSA.

4 Examine the contents of the Form 8130-15 contained in section II, Applicable Users Manuals, and section III, Manufacturer's Process Documents. Verify the consensus standards and user manual information (standard number, revision number, and title) is correct and for the proper aircraft.

5 Manufacturers must use the current consensus standard. However, manufacturers may use the previously accepted consensus standard until the NOA "may not be used" date. Compare the date of manufacture located in section I, block 4, of Form 8130-15 with the consensus standards listed in sections II and III. A matrix of FAA-accepted consensus standards and the NOA information are located on the FAA website under Aircraft, General Aviation & Recreational Aircraft, LSA, sub-category standards. Further information on the FAA-accepted consensus standards may be obtained by querying "NOA" on the FAA website.

6 Examine the contents of the Form 8130-15 contained in section IV, Manufacturer's Certification. 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 serial number entered in block 3 and in the certification statement are the same and the serial number of the aircraft's data plate and the aircraft's registration match. Check to ensure at a minimum, that the certification statements are worded correctly and fully contained in this portion of the Form 8130-15. *

* *7* Examine the contents of the Form 8130-15 section IV. Verify the name, signature, title, and date areas are filled in (minimum of one name is required). The person signing the form must be designated in the manufacturer's quality assurance system. Verify the authorization process documentation in the manufacturer's quality assurance system is to the same revision level as noted in section III. If this process documentation does not specifically identify the person authorized to sign the Form 8130-15, the form cannot be accepted for certification. The Form 8130-15 cannot be accepted if it is signed by a person not authorized in the manufacturer's quality assurance system.

> **Note:** The following information is reference material only, provided for the ASI. Electronic copies of the consensus standards may be viewed through the FSIMS website. To navigate to the ASTM consensus standards, go to the Related Info drop-down menu, other sites, sub-category Advisory Publications, ASTM, ASTM Custom Portal, search by consensus standard number, open the appropriate standard.

(d) Review the aircraft records to determine whether the required production flight test(s) and inspections have been accomplished in accordance with the eligibility requirements of § 21.190(c)(7). Photocopy(s) of the completed flight test acceptance records and aircraft configuration will be placed in the certification package for FAA records retention, and the original is retained by the applicant.

1 Check the manufacturer's flight testing acceptance record documentation. Verify that the record and data are in the English language and use standard accepted aeronautical abbreviations. Verify that the report indicates flight 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 that the data contents of the as-tested acceptance record are within the requirements of the AOI operating limitation ranges and parameters.

2 When LSA manufacturers delegate flight testing, check for the written authorization. Check 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 section III of the Form 8130-15 matches the manufacturer's quality assurance system revision level. When this documentation cannot be shown or is not in compliance to the authorized processes, the production flight test acceptance report cannot be accepted to validate the Form 8130-15 for certification of the LSA.

> **Note:** All special LSA pre-certification flight operations within the United States will be conducted with the appropriate special flight permit and appropriate operating limitations. Any and all testing, inspections, or qualifications affecting the eligibility and determination of the airworthiness of the aircraft must be accomplished prior to issuing the special light-sport category airworthiness certificate.

*

* (e) Review final inspection/acceptance record(s). All production ground- and flight-tested aircraft that have subsequent work performed (such as installations, assembly, or reassembly operations) must have a final inspection record showing acceptance.

1 Check the final inspection and acceptance record for the person's name(s), signature, and title. When applicable, check the certificate number and type of certificate held by the person performing the work and inspections.

2 Check 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, then 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 logbook for entries.

3 If any work has been done after flight test, the weight and balance or load and balance data sheet must be recalculated/completed.

(3) Review the documentation provided by the applicant to determine that the registration requirements of 14 CFR part 47 have been met, and ensure the aircraft registration marks match the registration documentation.

(4) Check with AFS-750 to determine if a denial letter exists for the particular aircraft. This may assist in determining aircraft eligibility.

(5) 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 reweighed. 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 will not be certificated.

c. General Aircraft Inspection. The FAA must arrange with the applicant to make the aircraft available for inspection to—

(1) Verify the ID plate meets the requirements of 14 CFR § 45.11, as applicable.

(2) Verify the information on the ID plate is correct, matches the information on FAA Form 8130-6, and is in accordance with 14 CFR § 45.13, as applicable. Identification data required by § 45.13(a)(1), (2), and (3) are mandatory. Sections 45.13(a)(4) and (5) cannot be assigned to LSA, and are therefore not applicable. If there are spaces provided with headings for (4) and (5), those spaces will be marked with "NONE." When only spaces are provided for (4) and/or (5), no marking is required (see paragraph 4038d(2)). Identification data (6) is optional for the manufacturer/builder. Any other optional data that the manufacturer/builder includes on the data plate must be in such a manner as not to confuse the mandatory data contents.

(3) Verify the aircraft nationality and registration marks are in accordance with 14 CFR part 45 and, as applicable, with 14 CFR §§ 45.21, 45.23, 45.27, and 45.29. *

* (a) Check both exterior sides of the aircraft to ensure that the nationality registration marking is the same on both sides and matches that of the registration documentation, and that both nationality registration numbers are displayed at a 12-inch minimum for airplanes and a 3-inch minimum for powered parachute, weight-shift-control, and gliders, in accordance with 14 CFR § 45.29.

(b) Check both exterior sides of the aircraft to ensure that marking is the same on both sides when marked for multiple entry points, and that the aircraft has the word "LIGHT-SPORT" (hyphen optional) displayed in 2-inch minimum and 6-inch maximum letters, in accordance with 14 CFR § 45.23.

(c) Inspect the aircraft to identify critical components for which a replacement time, inspection interval, or related procedure is specified in the maintenance and inspection procedures. Verify the aircraft's parts, articles, and components are permanently and legibly marked with the identified part numbers (or equivalent) and serial numbers (or equivalent) for compliance with § 45.15.

(4) Verify the flight control systems and associated instruments operate properly.

(5) Verify the instruments are appropriately marked and required placards are installed with placement for easy reference. When checking airplanes give particular attention to the airspeed indicator. Verify that the AOI/POH data matches the regulatory requirements of § 1.1 Light-sport aircraft (2), (3) and (4), and that the markings 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).

(6) Verify the system controls when equipped (for example, fuel selector(s) and electrical switches/breakers) are appropriately placed, clearly marked, provide easy access and operation, and function in accordance with the manufacturer's specifications and applicable consensus standard.

(7) Verify an ELT is installed on airplanes, in accordance with 14 CFR § 91.207, before issuance of special LSA airworthiness certification.

(8) Verify airframe emergency parachutes that are ballistic, assisted, or deployable are properly marked, identified, and within their service dates. The aircraft must have provisions that provide for clear marking and identification of all explosive devices used in conjunction with ballistic parachutes. Markings 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 in light-sport category will not be issued before meeting this requirement. *

d. Certificate Issuance. Upon satisfactory completion of the records inspection, document review, and aircraft inspection, the FAA will issue the special airworthiness certificate and the operating limitations for that aircraft. The operating limitations will be attached to FAA Form 8130-7. The FAA must review the operating limitations with the applicant to ensure a clear understanding of the limitations. Operating limitations under 14 CFR § 21.190 may be prescribed as follows:

(1) The manufacturer of the LSA is required to certify within the SOC that the aircraft was ground and flight tested successfully, and is in condition for safe operation. The manufacturer must endorse the aircraft logbook with a statement certifying the applicable flight testing has been completed, therefore, the FAA will not issue operating limitations to further demonstrate flight testing.

(2) The FAA will prescribe operating limitations for the operation of an LSA for an unlimited duration, as appropriate.

(3) The FAA may prescribe any additional limitations deemed necessary in the interest of safety.

(4) If the aircraft meets the requirements for the requested certification, the FAA must—

(a) Make an aircraft logbook entry.

* (b) Issue FAA Form 8130-7, with appropriate operating limitations. See paragraph 4043 of this order. *

(c) Complete sections V and VIII of FAA Form 8130-6, in accordance with the
* instructions contained in paragraph 801 of this order. *

(d) Examine, review, and route the certification file in accordance with the instructions contained in chapter 8 of this order.

* (e) A photocopy of the completed and inspected Form 8130-15 and the production flight test acceptance records will be placed in the certification package for FAA records retention. *

(5) If the aircraft does not meet the requirements for the certification requested and the airworthiness certificate is denied, the FAA ASI or DAR must—

(a) Write a letter to the applicant stating the reason(s) for denying the airworthiness certificate.

* (b) Attach a copy of the denial letter and when applicable, copies of the substantiating documentation to the Form 8130-6 and forward it to AFS-750 to be made part of the aircraft record. *

e. Change of Special Airworthiness Certificates from an Experimental Category to
* **Special LSA Category.** 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 an experimental R&D certificate (see paragraph 4081g of this order, Prototype Aircraft Produced by a Light-Sport Kit Manufacturer) to ensure there are no adverse flight characteristics in

accordance with 14 CFR § 91.319(b), and the manufacturer provides the necessary documentation (14 CFR § 21.190) with the appropriate FAA forms and applications. There is an FAA aircraft inspection required and new operating limitations are issued for this aircraft, certificate, and category.

(2) If the LSA was converted from a special light-sport category airworthiness
* certificate to an experimental LSA certificate (14 CFR § 21.191(i)(3)), the applicant seeking to *
return to the light-sport category must provide the following:

(a) All original documentation required in accordance with 14 CFR § 21.190.

* (b) The manufacturer's SOC for the aircraft that was used for the original issuance *
of the light-sport category airworthiness certificate.

(c) Proof of compliance with applicable safety directives, repairs, and safety modifications published by the manufacturer and documented in the aircraft's records in accordance with 14 CFR part 43.

(d) A finding and 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 serial number(s)-specific. 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 and/or modification. All manufacturer's alteration and/or modification approvals will be made a part of the aircraft's permanent record and documented in the aircraft's records in accordance with 14 CFR 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 modifications, additions, or changes, approved by the manufacturer or not, that conflict with the definition of an LSA in § 1.1, the eligibility requirements of 14 CFR part 21, or the operating requirements of 14 CFR part 91. See § 21.181(a)(3). If the aircraft is found ineligible, issue a denial letter and send a copy to the geographic FSDO.

(e) Evidence that the required maintenance and inspections were accomplished and *
documented in the aircraft's records in accordance with 14 CFR part 43, and, if not accomplished and documented, then the aircraft is not eligible for return to the special light-sport category configuration.

(f) Proof the aircraft was inspected and is in a condition for safe operation.

f. Transfer of Light-Sport Category Airworthiness Certificates. An airworthiness certificate is transferred with the aircraft (per 14 CFR § 21.179); for example, if there is a change of ownership or transfer of registration. There is no FAA inspection required after transfer of an aircraft with its airworthiness certificate unless it is determined that revised operating limitations are necessary. In this case, a new FAA Form 8130-7 must be issued to reflect the new date of the revised operating limitations. Therefore, the applicant must submit FAA Form 8130-6. Aircraft records also must be transferred with change of ownership (per 14 CFR § 91.419).

* **4040. Prototype and Production Flight Testing.** *

a. Flight Testing Purpose and Coordination. The manufacturer must ground and flight test the LSA for the purpose of finding the performance acceptable and determining that each aircraft is in a condition for safe operation in accordance with 14 CFR § 21.190(c).

(1) The manufacturer must notify the closest geographic MIDO of the intent to perform production flight testing on the LSA to the applicable consensus standard, and submit the proposed geographic flight testing locations to the same FAA MIDO a minimum of 30 days in advance of the initial proposed flight testing operations.

> **Note:** The LSA manufacturer's production flight test plan must be in accordance with the applicable consensus standard.

(2) The ASI (see paragraph 202d and the note after paragraph 202d of this order) will coordinate the production flight testing activities with the responsible geographic or assigned FSDO.

(3) A special flight permit may be issued for production flight testing to allow a manufacturer to meet the requirements of 14 CFR § 91.203 when operating new production
* aircraft for the purpose of flight testing, as provided in 14 CFR § 21.197(a)(3). This permit must be used in conjunction with a valid Aircraft Certificate of Registration. See FAA Order 8130.20, * Registration Requirements for the Airworthiness Certification of U.S. Civil Aircraft, for guidance on acceptable evidence of valid registration. The special flight permit is valid only for the purpose of production flight testing. The applicable operating limitations are printed in block B on the reverse side of FAA Form 8130-7 (figure 4-1 of this order).

> **Note:** Production flight test operating limitations baseline guidance for light-sport category aircraft are described in paragraph 4042 of this order.
> * Any other flight testing affecting the completion, eligibility, and * determination of the airworthiness of the aircraft must be accomplished before issuing the special light-sport category airworthiness certificate. The aircraft must be issued a special flight permit and limitations for the purpose of flight test only.

* **b. Eligibility for Production Flight Testing in the United States.** A manufacturer producing LSA under 14 CFR § 21.190 is eligible to obtain special flight permits for production flight testing provided the following conditions are met:

(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 and that production test pilots are fully familiar with the aircraft. The manufacturer must transition a prototype aircraft from experimental R&D to a special airworthiness certificate in the light-sport category to be considered an LSA manufacturer. The aircraft is then eligible for production flight testing. *

* (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) 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 entered into the aircraft's logbook. *

* (4) The aircraft is not flown by the manufacturer for purposes other than production flight tests. *

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

c. Application and Issue of Special Flight Permits for Production Flight Testing.

(1) A manufacturer producing LSA under 14 CFR § 21.190 is eligible to obtain special flight permits for production flight testing within the provisions established in this section. 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 special flight permit for production flight testing.

(2) Before issuing a special flight permit for production flight testing, each aircraft must be registered with a permanent registration number assigned. Evidence of aircraft registration may be shown by Aeronautical Center Form 8050-3; Aeronautical Center Form 8050-6, Dealer's Aircraft Registration Certificate; or other telegraphic/electronic confirmation which AFS-750 issues as a temporary registration. When the manufacturer/applicant for initial registration does not have a dealer's registration, the pink copy of the Aeronautical Center Form 8050-1 may not be used to comply with 14 CFR § 91.203(a)(2) for operation of the aircraft.

(3) An LSA manufacturer or its authorized agent must apply for a special flight permit for production flight testing using FAA Form 8130-6 for each aircraft needing a production flight test. Special flight permits are not transferable from one aircraft to another.

(4) When the applicant for a special flight permit is found in compliance with all requirements, the FAA should issue FAA Form 8130-7 with the operating limitations specified in paragraph 4042 of this order. The FAA may impose any additional limitations deemed necessary for safe operation. The operating limitations must be enumerated on a separate sheet, identified by the aircraft registration and serial numbers, dated, and signed. The applicant should be advised that FAA Form 8130-7 must be displayed in the aircraft in accordance with 14 CFR § 91.203(b).

* (5) A copy of all certification documents for issuance of a special flight permit for production flight testing will be retained in the files of the issuing ASI/designee, or as directed by the designee's managing office. Certification documents for issuance of special flight permits for production flight testing are not to be sent to FAA Registry, AFS-750. *

* **4041. Flight Test Areas.**

a. General. The assigned test area is prescribed in accordance with 14 CFR § 91.305, that is, no person may flight test an aircraft except over open water, or sparsely populated areas, having light air traffic. The FAA will, when requested, assist applicants in selecting areas that * comply with 14 CFR § 91.305. The FAA is required to evaluate each application to determine that the flight test area does not exceed that which is reasonably required to accomplish the program. Actions pertaining to flight test areas must be coordinated through the MIDO to the assigned FSDO and nearest office of the Air Traffic Service.

b. Assigned Flight Test Area. All flight-testing operations of LSA must be limited to the assigned flight test area until the aircraft is shown to be controllable throughout its normal range of speeds and all maneuvers to be executed, and has not displayed any hazardous operating characteristics or design features.

(1) In the case of flight testing an aircraft from an airport surrounded by a densely populated area, but with at least one acceptable approach/departure route of flight, the FAA must ensure that a route of flight is selected that subjects the fewest persons and least property to possible hazards. The description of the area selected by the applicant and agreed to by the FAA must be made a part of the operating limitations.

(2) In the case of an aircraft located at any airport surrounded by a densely populated area and lacking any acceptable approach/departure route of flight, the FAA must deny the airworthiness certificate (special flight permit issued for production flight testing) and write a letter to the applicant stating the reason(s) for denying the proposed flight test area. The applicant must be advised to relocate the aircraft to an airport suitable for flight testing.

> **Note:** An acceptable approach/departure route of flight may be considered to exist when the route of flight provides a reasonable opportunity to execute an off-airport emergency landing that will not jeopardize other persons or property.

c. Assignment to the Flight Test Area. 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 special flight permit for * flight testing of LSA, the FAA should assign additional periods of time to flight test areas only when it is deemed necessary in the interest of safety.

4042. Special Flight Permit for Flight Testing LSA Category Operating Limitations.

a. Operating limitations must be designed to fit the specific situation encountered. The FAA may impose any additional limitations deemed necessary in the interest of safety. The FAA must review each imposed operating limitation with the applicant to ensure the applicant understands the operating limitation.

b. The following operating limitations must be prescribed for flight testing LSA:

(1) No person may operate this aircraft for other than the purpose of meeting the requirements of 14 CFR § 21.190(c)(7) or § 21.197 during flight. In addition, this aircraft must be operated in accordance with applicable air traffic and general operating rules of 14 CFR part 91 and all additional limitations herein prescribed. These operating limitations are a part of a special flight permit and are to be carried in the aircraft at all times and be available to the pilot in command of the aircraft.

(2) All flights must be conducted within the geographical area described as follows. The area must be described 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.

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

(4) This aircraft is to be operated under VFR, day only.

(5) The test pilot in command of this aircraft must hold at least a private pilot certificate, have the appropriate category and class ratings to act as pilot in command, and have a minimum of 100 hours as pilot in command in that category and class.

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

4043. Issuance of LSA Category Aircraft Operating Limitations.

a. Operating limitations must be designed to fit the specific situation encountered. The FAA may impose any additional limitations deemed necessary in the interest of safety. The FAA must review each imposed operating limitation with the applicant to ensure the applicant understands the operating limitations.

b. The following operating limitations, as applicable, will be issued as shown below; any deviation must be coordinated in accordance with this order:

(1) No person may operate this aircraft for any other purpose than that for which the aircraft was certificated. This aircraft must be operated in accordance with applicable air traffic and general operating rules of 14 CFR part 91 and all additional limitations prescribed herein. 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) The pilot in command of this aircraft must advise the passenger of the special nature of this aircraft and that the aircraft does not meet the certification requirements of a standard certificated aircraft.

(3) This aircraft must display the word “LIGHT-SPORT” (hyphen optional) near the entrance to the cabin, cockpit, or pilot station in 2-inch minimum or a maximum of 6-inch block letters in accordance with 14 CFR § 45.23(b).

(4) This aircraft must contain the placards and markings as required by 14 CFR § 91.9. In addition, the placards and markings must be inspected for legibility and clarity, and the associated systems inspected for easy access and operation, to ensure they function in accordance with the manufacturer's specifications and the FAA-accepted consensus standards during each condition inspection.

(5) This aircraft is to be operated under VFR, day only, unless appropriately equipped for night and/or instrument flight in accordance with 14 CFR § 91.205, and when allowed by the manufacturer's operating instructions.

(6) Noncompliance with these operating limitations will render the airworthiness certificate invalid. Any change, alteration, or repair not in accordance with the manufacturer's
* written instructions and authorizations will render the airworthiness certificate invalid, and the *
owner of the aircraft must apply for a new airworthiness certificate under the provisions of 14 CFR § 21.191 with appropriate operating limitations before further flight.

(7) Application to amend these operating limitations must be made to the responsible geographic FSDO or MIDO.

(8) This aircraft does not meet the requirements of the applicable, comprehensive, and detailed airworthiness code as provided by Annex 8 to the Convention on International Civil Aviation. The owner/operator of this aircraft must obtain written permission from another CAA before operating this aircraft in or over that country. That written permission must be carried aboard the aircraft together with the U.S. airworthiness certificate and, upon request, be made available to an ASI or the CAA in the country of operation.

(9) The pilot in command of this aircraft must hold at least the appropriate category and class privileges, rating, or endorsements required by 14 CFR part 61.

(10) No person may operate this aircraft in the light-sport category for compensation or hire except to tow a light-sport glider or an unpowered ultralight vehicle in accordance with 14 CFR § 91.309 or to conduct flight training.

* (11) This aircraft may only be operated in accordance with the manufacturer's AOI, *
including any provisions for necessary operating equipment specified in the aircraft's equipment list.

(12) No person may operate this aircraft in the light-sport category for compensation or hire unless within the preceding 100 hours of time in service the aircraft has—

(a) Been inspected by a certificated repairman with an LSA maintenance rating, or an appropriately rated mechanic, or an appropriately rated repair station in accordance with inspection procedures developed by the aircraft manufacturer or a person acceptable to the FAA, and has been returned to service in accordance with the applicable provisions of 14 CFR part 43;

* (b) Received an annual condition inspection in accordance with number (14) of *
these operating limitations; or

(c) Received an inspection for the issuance of an airworthiness certificate in accordance with 14 CFR part 21.

(13) Aircraft instruments and equipment installed and used under 14 CFR § 91.205 must be inspected and maintained in accordance with the requirements of 14 CFR part 91. Any maintenance or inspection of this equipment must be recorded in the aircraft maintenance records.

(14) No person will operate this aircraft unless within the preceding 12 calendar months it has had a condition inspection performed in accordance with the manufacturer's maintenance and inspection procedures, and was found to be in a condition for safe operation. As part of the condition inspection, cockpit instruments must be appropriately marked and needed placards installed in accordance with 14 CFR § 91.9. This inspection will be recorded in the aircraft maintenance records.

(15) Condition 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] in accordance with the manufacturer's maintenance and inspection procedures, and was found to be in a condition for safe operation."** The entry will include the aircraft's total time-in-service, and the name, signature, certificate number, and type of certificate held by the person performing the inspection.

(16) No person may operate this aircraft in the light-sport category unless it is continuously maintained in compliance with 14 CFR § 91.327(b).

4044. LSA Statement of Compliance (SOC). This SOC is also referred to as the Manufacturer's SOC. It is required by 14 CFR §§ 21.190(b)(1)(iii) and 21.193(e)(4), and is described in 14 CFR § 21.190(c), which details the requirements of the manufacturer's SOC in
* FAA Form 8130-15. Samples of FAA Form 8130-15 are provided in figures 4-19 and 4-20 of * this order. For instructions on reviewing a completed FAA Form 8130-15, see paragraph 804 of this order. For verification of the FAA-accepted consensus standards, see the FAA-accepted standards matrix and NOA information on the FAA Airworthiness Certification website under
* Light-Sport Aircraft, standards. *

4045.-4070. Reserved.

Section 7. General Experimental Airworthiness Certifications

4071. General. Any U.S.-registered aircraft, other than public aircraft, that does not have a current standard airworthiness certificate (conforming to its TC) or special airworthiness certificate cannot legally be operated until it has been issued an experimental airworthiness certificate or special flight permit. Operations requiring the issuance of experimental certificates include those involving flight tests of certificated aircraft that have undergone design changes.

a. An experimental airworthiness certificate may be issued to an aircraft located in or outside of the United States that is intended for continual operation in another country when it meets the following requirements:

(1) The CAA of the country in which the aircraft is located or intended to fly has authorized operation of the aircraft.

(2) The Flight Standards Service will have appropriate oversight of the aircraft during the period of operation.

b. If an experimental airworthiness certificate is issued to an aircraft located in or outside of the United States for time-limited operations in another country, the experimental airworthiness certificate must be accompanied by appropriate operating limitations that have been coordinated with the responsible CAA before issuance.

c. Experimental Airworthiness Certificates, Multipurpose. An experimental airworthiness certificate may be issued for more than one of the purposes shown in chapter 4, sections 8 through 11 of this order. When more than one purpose is requested, the issuing FAA representative must ensure that adequately controlled conditions exist as specified in the operating limitations. When issuing an airworthiness certificate for the purposes of R&D, showing compliance with regulations, crew training, or market surveys, the certificate should be made effective for only the length of time reasonable to accomplish the applicant's program, and not to exceed 1 year. The issuance of multiple-purpose certificates for R&D and showing compliance should be limited to PC holders. This may be extended to modifiers only when adequately substantiated, for example, for complex programs. Applicants for a multiple-purpose certificate must justify the requested purposes to the satisfaction of the FAA. PC holders may submit a procedure that meets the requirements of paragraph 4127 of this order to their local management office for approval.

d. Listing of Manned Free Balloon or Glider on Special Airworthiness Certificates Issued for Experimental Purposes. An aircraft eligible for the issuance of an experimental airworthiness certificate under 14 CFR § 21.191 and which clearly has the predominant flight characteristics of either a manned free balloon or glider will be identified as follows: "MANNED FREE BALLOON" or "GLIDER" will be placed in parentheses following "experimental" in the Category/Designation block of FAA Form 8130-7. This procedure ensures the appropriate application of 14 CFR part 61, Certification: Pilots, Flight Instructors, and Ground Instructors, concerning the medical requirements for the operation of such aircraft. Further guidance can be found in AC 21.17-2, Type Certification - Fixed-Wing Gliders (Sail Planes) Including Powered Gliders.

e. The requirements for issuing experimental certificates are contained in 14 CFR §§ 21.191, 21.193, and 21.195.

f. For the purpose of this chapter, type certification programs include TC and STC, as well as amendments to either.

g. 14 CFR § 91.319 prescribes operating limitations that are applicable to all aircraft having experimental certificates. In addition, the FAA may prescribe other limitations as may be considered necessary under 14 CFR § 91.319(i).

> **Note:** Basic operating limitations for all experimental aircraft must be issued as prescribed in chapter 4, sections 8 through 11 of this order.

h. To operate under phase II operating limitations, the owner/operator must make a signed logbook entry attesting to meeting the requirements of 14 CFR § 91.319(b).

i. Experimental military aircraft built under a military contract and identified by military aircraft ID marks do not require registration or the issuance of experimental certificates for flight testing or demonstration prior to 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 experimental airworthiness certificate because such aircraft are considered civil aircraft.

j. The FAA must determine that the aircraft displays nationality and registration marks in accordance with 14 CFR § 45.21 and that the word "EXPERIMENTAL" is displayed in accordance with 14 CFR § 45.23.

4072. Eligibility.

a. For an aircraft to be eligible for an experimental certificate, the aircraft must be registered and the applicant must satisfy one or more of the purposes stated in 14 CFR § 21.191, as discussed in chapter 4, sections 8 through 11 of this order.

b. An aircraft that has a Dealer's Aircraft Registration Certificate may be issued an experimental airworthiness certificate so the manufacturer can perform required flight tests, as well as for purposes incidental to the sale of the aircraft. In the latter case, the FAA must ensure that the requirements of 14 CFR § 21.195 are met.

c. In ensuring compliance with 14 CFR § 21.193(d), the following must be described in the applicant's program letter:

(1) Purpose of Experiment, 14 CFR § 21.193(d)(1). An applicant must submit a program letter that describes the purpose of the experiment and the aircraft configuration, and outlines the program objectives. The letter must be detailed enough to permit the FAA to prescribe the conditions and limitations necessary to ensure safe operation of the aircraft. The letter should not describe everything in minute detail. The use of the same aircraft for overlapping programs is not precluded and the program letter can outline one or more programs. Upon showing compliance with 14 CFR § 91.319(b), the aircraft can be used to support other aircraft in the program or other experimental programs the manufacturer/applicant has underway, for example, to support flightcrew movements, to be used as a chase plane, to carry spare engines, etc. This support activity, in addition to the purpose for which the certificate is to be issued, should be included in the program letter or be included in the procedure described in paragraph 4127 of this order.

> **Note:** A new program letter will be required when significant changes to the aircraft configuration and program objectives are planned.

(2) Time or Number of Flights, 14 CFR § 21.193(d)(2). The applicant's program letter must include the estimated time or number of flights required to accomplish the program. The FAA will evaluate the request in comparison to the program in order to establish an appropriate time duration for the special airworthiness certificate.

(3) Areas. In the program letter, the applicant must provide sufficient detail to describe the areas over which the proposed flights are to be conducted. It is the responsibility of the FAA to establish boundaries of the flight test area, as well as takeoff, departure, and landing approach corridors that minimize hazards to persons and property in densely populated areas or congested airways.

(4) Describe Aircraft Configuration. Except for aircraft converted from a TC, the applicant must describe the aircraft's external configuration. The use of three-view sketches and three-dimensional photographs is acceptable.

(5) Program Letter. Figure 4-9 of this order shows a sample program letter that an applicant can use or expand upon as needed.

4073. Demilitarization of Former Military Aircraft. Former military aircraft should be demilitarized prior to application for airworthiness certification. It is not possible to define what the final configuration of these aircraft will be following this demilitarization. Therefore, because the demilitarization process most likely will involve a change to the aircraft configuration, FAA representatives should not consider an application for airworthiness certification unless demilitarization has been completed.

a. It is the policy of the DOD that surplus U.S. military property designated as arms, ammunition, implements of war, and other military items will be demilitarized to the extent necessary to preclude the unauthorized use of these military items. The intent behind this DOD policy is to destroy the military advantages inherent in certain types of property, to render harmless that property which is dangerous, and to protect the national interest. This DOD policy mandates that tactical, fighter, and bomber aircraft will be demilitarized to the extent that will render the aircraft not airworthy. This DOD policy is not applicable to military trainer, observation, or liaison aircraft. In addition, DOD does release a limited number of tactical, fighter, and bomber aircraft for operation in R&D programs. Typically, these aircraft may only be demilitarized to the extent that classified equipment has been removed.

> **Note:** This does not mean that all other U.S. surplus military aircraft should have been rendered not airworthy. For example, some U.S. military aircraft that were sold to other countries may be available for public sale. These aircraft are subject to the import requirements that are listed in paragraph 4073(b) of this order. In addition, other aircraft may have been constructed from surplus articles.

b. Former military aircraft imported from any other country require an import permit issued by the Department of the Treasury, Bureau of Alcohol, Tobacco, and Firearms (ATF). This permit is granted by the ATF using ATF Form 6, Application and Permit for Importation of Firearms, Ammunition, and Implements of War. In addition, these former military aircraft are required to be demilitarized in order to clear U.S. Customs. Compliance with demilitarization is evidenced by a completed ATF Form 6A, Release and Receipt of Imported Firearms, Ammunition, and Implements of War. Proof of demilitarization will be verified if the applicant presents copies of ATF Form 6 and ATF Form 6A that have been completed by appropriate officials of the Department of the Treasury. If the applicant is unable to produce ATF Form 6

or 6A, the FAA certificating office (CO) should contact the ATF Firearms and Explosives Import Branch to determine if copies of these forms are available for the particular aircraft. In cases for which ATF Form 6 or 6A are not required or not available, the FAA CO manager will determine the extent of demilitarization necessary prior to airworthiness certification.

> **Note:** Should there be any questions regarding ATF Form 6 or 6A requirements, contact the ATF Firearms and Explosives Import Branch at the Department of the Treasury.

4074. Aircraft Equipped with Ejection Seats, Ballistic Parachutes, or Jettisonable Stores. Former military TPA certificated for the purpose(s) of R&D, exhibition, or air racing may be eligible to operate with functional ejection seats. Only aircraft certificated for the purpose of R&D may be eligible to operate with functional jettisonable external fuel tanks or stores. The following requirements must be met in order to have these systems operational:

a. The applicant must provide objective evidence that the airport manager of the airport where the aircraft is based has been notified regarding both the presence of explosive devices in these systems and the planned operation of an experimental aircraft from that airport.

b. Jettisonable external fuel tank(s) or stores systems must be maintained in accordance with the manufacturer's procedures and inspected in accordance with the provisions of the FSDO-approved inspection program for the particular aircraft. The FAA will verify that there is a record entry indicating current serviceability of the jettison system(s).

c. Ejection seat systems must be maintained in accordance with the manufacturer's procedures and inspected in accordance with the provisions of the FSDO-approved inspection program for the particular aircraft. The FAA will verify that there is a record entry indicating current serviceability of the ejection system, including the status of any dated shelf-life articles.

d. The applicant must have provisions for securing the aircraft to prevent inadvertent operation of the jettison and/or ejection systems whenever the aircraft is parked.

e. The applicant must have provisions that provide for clear marking and identification of all explosive devices used in ejection seats, ballistic parachutes, and jettisonable systems. Aircraft markings must be applied externally and indicate that the aircraft is equipped with explosive devices. A special airworthiness certificate will not be issued before meeting this requirement.

4075. Flight Test Areas.

a. General. 14 CFR § 91.319(b) requires that an unproven aircraft be assigned to a flight test area. The assigned test area is prescribed in accordance with 14 CFR § 91.305. The FAA, when requested, should assist applicants in selecting areas that comply with 14 CFR § 91.305. The FAA is required to evaluate each application to determine that the flight test area does not exceed that which is reasonably required to accomplish the program. Actions pertaining to flight test areas should be coordinated with the nearest Air Traffic Services office.

b. Assigned Flight Test Areas. Under 14 CFR §§ 91.319(b) and 91.305, all initial flight operations of experimental aircraft must be limited to the assigned flight test area until the aircraft is shown to be controllable throughout its normal range of speeds and all maneuvers to be executed, and has not displayed any hazardous operating characteristics or design features.

(1) 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 corridor, the FAA must ensure that the selected flight corridor subjects the least number of persons and 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 corridor for subsequent operations. The description of the area selected by the applicant and agreed to by the FAA must be made a part of the operating limitations.

(2) In the case of an aircraft located at any airport surrounded by a densely populated area and lacking any acceptable approach/departure corridor, the FAA must deny the airworthiness certificate and process the denial in accordance with paragraph 4002 of this order. The applicant must be advised to relocate the aircraft by other means to a suitable airport.

> **Note:** An acceptable approach/departure corridor exists when the corridor provides reasonable opportunity(s) to execute an off-airport emergency landing that will not jeopardize other persons or property.

c. Operation Within an Assigned Flight Test Area. Except for amateur-built aircraft, there are no specific flight time requirements for operation within an assigned flight test area. Each case must be judged on the individual conditions, such as the type and complexity of the aircraft. For example, flight testing in conjunction with an STC modification may require only 1 hour in an assigned flight test area while the initial operation of a prototype jet aircraft or a military surplus jet aircraft may require 20 or more hours before the requirements of 14 CFR § 91.319(b) can be met. In any event, the FAA should not amend the operating limitations to permit flight outside of the assigned flight test area until the applicant certifies and the FAA finds compliance with 14 CFR § 91.319(b). This finding by the FAA may be a review of the aircraft records containing a statement by the pilot 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. Also, the maintenance history while in the test area must be satisfactory. The FAA may witness flights or inspect the aircraft if deemed necessary. The PC holder may show compliance with 14 CFR § 91.319(b) in accordance with its FAA-approved experimental operating procedure (see paragraph 4127 of this order).

d. Aerobatics.

(1) Aerobatic maneuvers may be permitted while the aircraft is in the assigned flight test area if, in the FAA's judgment, 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 satisfactorily 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.

(3) Those aircraft owners/operators wishing to include new aerobatic maneuvers will need to make a request for a new flight test area and follow the same conditions as noted in paragraph 4075d(2) of this order.

4076. Operating Outside Flight Test Areas.

a. Aircraft that have satisfied the requirements outlined under paragraph 4075c of this order may be operated outside of an assigned flight test area. Except as provided for in paragraph 4127 of this order, operation of the aircraft outside an assigned flight test area will require issuance of a new experimental airworthiness certificate with the new amended operating limitations.

b. Before authorizing an aircraft to operate outside of an assigned flight test area, the FAA should ensure the requirements of 14 CFR § 91.9 have been satisfied and are available in the aircraft. The FAA should prescribe those limitations listed in chapter 4, sections 7 through 11 of this order (as appropriate), and any others that might be appropriate. Except for amateur-built aircraft, if any major changes are made to an aircraft after it has been certificated for operation outside of a previously assigned flight test area, the cognizant FAA office must be notified. After the FAA offices have been notified and a determination is made that the aircraft needs to return to a flight test area, an amended certificate should be applied for with new limitations as needed. A new FAA Form 8130-7 is required whenever operating limitations are amended, because the date of the old limitations on the corresponding certificate would not be the same as the date of the new limitations, and alteration of the certificate to change the date is not permitted.

> **Note:** Operation of all group 1, 2, 3, 4, 5, 6, and 7 aircraft 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. Before issuing operating limitations for the aircraft, the FAA will coordinate approach and departure corridors with the FSDO operations unit and the air traffic control facility that has the geographic responsibility for the airport at which the aircraft will be based or operations conducted. In addition, the applicant will provide a highlighted aeronautical map or chart depicting the proposed operational area, including a list of the proposed alternate airports. The radius may not exceed the limits authorized for the applicable aircraft group. The map/chart is part of the aircraft operating limitations and must be carried aboard the aircraft when operating.

4077.-4080. Reserved.

Section 8. Experimental LSA Airworthiness Certifications

4081. General. As defined in 14 CFR § 1.1 and the provisions of 14 CFR §§ 21.191 and 21.193, an experimental purpose for the operation of LSA is categorized within six classes of aircraft: airplanes, gliders, powered parachutes, weight-shift-control aircraft (commonly called trikes), gyroplanes, and lighter-than-air aircraft (balloons and airships).

* **Note:** An aircraft is not eligible for certification in LSA if there are any modifications, additions, or changes, approved by the manufacturer or not, that conflict with the definition of an LSA in § 1.1, the eligibility requirements of 14 CFR part 21, or the operating requirements of 14 CFR part 91. If the aircraft is found ineligible, issue a denial letter and send a copy to the geographic FSDO.

a. Eligibility. Two types of LSA are eligible for an experimental airworthiness certificate:

(1) Light-sport kit aircraft or kit LSA eligible in accordance with 14 CFR § 21.191(i)(2) for an experimental LSA airworthiness certificate must meet the following criteria: *

* (a) The aircraft is manufactured to the requirements of the applicable FAA-accepted consensus standard that has been published through an NOA in the Federal Register, and manufactured by an LSA kit manufacturer issued a special airworthiness certificate in the LSA category for an aircraft of the same make and model in accordance with 14 CFR § 21.193(e)(1). *

(b) The manufacturer's SOC meets 14 CFR § 21.190(c), except for 14 CFR § 21.190(c)(7). Instead of meeting the requirements of 14 CFR § 21.190(c)(7), the manufacturer identifies assembly instructions for the aircraft that meet the applicable
* FAA-accepted consensus standard. *

(c) The applicant is able to provide the aircraft documentation required by 14 CFR § 21.193(e).

* (d) For an aircraft kit manufactured outside the United States, evidence that the aircraft kit was manufactured and assembled in a country with which the United States has a bilateral agreement concerning airplanes. For an aircraft assembled outside the United States from a kit, the same evidence of a bilateral agreement is required. In both instances the aircraft must be eligible for an airworthiness certificate, flight authorization, or other similar certification in its country of manufacture.

(2) Aircraft previously issued a Special LSA Category airworthiness certificate under 14 CFR § 21.190 may be eligible for an experimental LSA airworthiness certificate in accordance with 14 CFR 21.191(i)(3). This may occur when—

(a) The owner/applicant elects to no longer perform the LSA maintenance or service directives, in accordance with the manufacturer's instructions and the applicable FAA-accepted consensus standards. *

* (b) The LSA manufacturer's continued airworthiness operations/continued airworthiness system is not maintained or no longer exists. This causes a condition of LSA ineligibility and a reduction in continued operational safety that may invalidate this special airworthiness certificate, causing it to no longer be in effect. That aircraft may be eligible in another experimental purpose with modified conditions of operation. *

b. General Design and Construction.

* (1) An experimental certificate under 14 CFR § 21.191(i)(1) will no longer be issued. There is an existing fleet of LSA with experimental certificates for the purpose of operating an LSA under 14 CFR § 21.191(i)(1). These aircraft did not have to meet the requirements of any consensus standard. These aircraft must not have been issued a U.S. or foreign airworthiness certificate of any type. They must continue to not meet the provisions of 14 CFR § 103.1; they cannot be an ultralight vehicle. These aircraft must continue to be in a condition for safe operation as demonstrated through a review of the aircraft records and flight history, and/or a series of flight tests. *

(2) An LSA manufacturer's kit may be eligible for an experimental certificate for the purpose of operating an LSA under 14 CFR §§ 21.191(i)(2) and 21.193, provided the aircraft is constructed in accordance with the criteria set forth in the applicable consensus standard that has been identified as acceptable by the FAA. Notice of this FAA acceptance is published in the
* Federal Register. A list of the accepted standards can be found on the FAA website under Aircraft Certification, General Aviation & Recreational Aircraft, Light-Sport Aircraft, standards. * The aircraft must be assembled in accordance with the manufacturer's assembly instructions set forth in the applicable consensus standard. Before certification, alterations to the kit components or deviations from the assembly process must be coordinated with and approved by the LSA kit manufacturer and documented in the aircraft records.

(3) Aircraft previously issued a special airworthiness certificate in the light-sport category under 14 CFR § 21.190 may be eligible for an experimental certificate for the purpose of operating an LSA under 14 CFR § 21.191(i)(3). These aircraft have previously been flight
* tested and are not required to have additional flight testing unless they have been altered from their original configuration. All alterations, modifications, and additions or deletions to the aircraft must be approved in writing by the LSA kit manufacturer and recorded in the aircraft records before the original certification in experimental purpose for operation of LSA under 14 CFR § 21.191(i)(2).

(4) For a major change to the aircraft (such as an alteration, modification, addition, or deletion), the FAA may modify the experimental LSA operating limitations with special * restrictions for flight testing due to the aircraft modification.

c. Kit Assembly.

* (1) Eligible aircraft must be designed in accordance with the applicable FAA-accepted consensus standard, and assembled in accordance with the LSA kit manufacturer's assembly instructions to the applicable FAA-accepted consensus standards. Accordingly, the detailed * design data, quality systems, and procedures will not necessarily be the same as that of the holder

of a type design and PC for the production of aircraft. The components of LSA kit aircraft are not necessarily held to the requirements of type-certificated or supplement type-certificated aircraft, or those of parts manufacturer approval status.

* (2) The LSA kit does not have to meet the major portion requirements of 14 CFR § 21.191(g). However, the applicant must show evidence that the LSA is properly assembled in accordance with the manufacturer's assembly instructions for that aircraft and the applicable FAA-accepted consensus standard.

> **Note:** The FAA does not evaluate or approve LSA manufacturer's kits. There is no FAA listing of approved or evaluated LSA kits or manufacturers. *

d. Advising Applicants.

(1) The FAA inspection of an experimental LSA will be limited to a general airworthiness inspection when the aircraft is submitted for airworthiness certification. The FAA
* will not perform any progressive inspections during the construction or assembly of the aircraft. The FAA ASI or DAR will not have performed any part of the fabrication, construction, assembly, testing, or manufacturer's inspections to the aircraft. *
*

(2) When the prospective LSA kit builder applicant contacts the appropriate *
FAA office, the FAA should provide the prospective LSA kit builder applicant with the applicable forms and any guidance necessary to ensure a thorough understanding of applicable regulations.

(3) When an applicant is seeking to obtain an experimental certificate for LSA and intends to use the aircraft for flight instruction for compensation or hire, the applicant should be advised that this provision expired January 31, 2010, in accordance with 14 CFR § 91.319.
* Therefore, the ASI or DAR will not issue allowance of flight instruction for compensation or hire within the operating limitation portion of the experimental LSA airworthiness certificate.

(4) An applicant seeking to obtain an experimental LSA certificate for an LSA kit *
aircraft should be advised that the aircraft will have to be in compliance with 14 CFR § 91.319(b). To show this compliance, the applicant must perform flight testing that
* addresses the requirements, goals, and objectives of the applicable FAA-accepted consensus *
standard acceptance flight test. The flight test program will be developed in accordance with the
* manufacturer's AOI, maintenance and inspection procedures, and flight training supplement *
using the applicable consensus standard ground and flight testing procedures in conjunction with the operating limitations assigned. A flight test program demonstrates that the aircraft has been adequately tested and determined to be in a condition for safe operation within the aircraft's flight envelope in accordance with 14 CFR § 91.319(b).

* (5) The applicant seeking to obtain an experimental LSA certificate for a kit LSA should be advised the aircraft must not be modified or altered without prior manufacturer's written approval. *

(6) The FAA office, when requested, should furnish an applicant for an experimental LSA certificate with the following forms:

(a) Aeronautical Center Form 8050-1, Aircraft Registration Application;

(b) FAA Form 8130-6; and

(c) Aeronautical Center Form 8050-88A, Affidavit of Ownership for Experimental or Special Light-Sport Aircraft.

(7) At the time of airworthiness certification—

(a) The aircraft should be complete in every respect, and

(b) The applicant must submit all required documentation. Such documentation includes appropriate completed FAA forms, the aircraft's documentation in accordance with 14 CFR §§ 21.191 and 21.193, and, when applicable, the aircraft maintenance records in accordance with 14 CFR part 43. If the applicant cannot or will not provide the appropriate documentation, the applicant should be advised that the aircraft cannot be certificated as an experimental LSA until satisfactory evidence is provided to substantiate that the aircraft's required documentation is complete.

e. Weight and Balance.

(1) Before certification, the applicant should accurately weigh the aircraft in accordance with established weight and balance or weight and loading 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 markings required by 14 CFR § 91.9.

(2) Before certificating the aircraft, the FAA should verify that the weight and balance or weight and loading data is accurate for that aircraft, that the aircraft has been weighed correctly, and that the CG and its most forward and aft CG limits are established.

f. Transfer of Airworthiness Certificates. An airworthiness certificate is transferred with the aircraft (14 CFR § 21.179), for example, if there is a change of ownership or transfer of registration. There is no FAA inspection required after transfer of an aircraft with its airworthiness certificate unless it is determined that revised operating limitations are necessary. In this case, a new FAA Form 8130-7 must be issued to reflect the new date of the revised operating limitations. Therefore, the applicant must submit a properly completed FAA Form 8130-6.

* **g. Prototype Aircraft Produced by a Light-Sport Manufacturer.** When a light-sport prototype aircraft is flown by the manufacturer under an experimental R&D certificate (14 CFR § 21.191(a)) to ensure there are no adverse flight characteristics (14 CFR § 91.319(b)) and the manufacturer provides the necessary documentation (14 CFR § 21.190) with the appropriate FAA forms and applications, the aircraft is then eligible for transfer to LSA category certification.

(1) An application for airworthiness certificate in the special light-sport category or experimental LSA purpose cannot be accepted for a manufacturer's prototype (first of make or model LSA) aircraft. A method of verification for first of make or model is to query registry information for any previously U.S.-certificated LSA by that make and model (from that manufacturer) and/or check for certification and safety information on the FAA Make Model Directory for special LSA, located on the FAA website under Aircraft, General Aviation & Recreational Aircraft, LSA, sub-category standards. The FAA may first issue an experimental certificate for the purpose of R&D as long as the applicant's flight test program is in accordance with the applicable consensus standard.

(2) Following termination of an R&D program, such prototype aircraft may be eligible for an LSA category certificate, or an experimental purpose with appropriate operating limitations issued for that purpose. AIR-200 must be contacted before issuing the first LSA category (14 CFR § 21.190) airworthiness certificate to any new manufacturer's LSA or to a new LSA model from existing manufacturers.

(3) LSA manufacturers also may be eligible to receive an experimental certificate (14 CFR § 21.191(f)) for the purpose of conducting market surveys, sales demonstrations, and customer crew training as provided in 14 CFR § 21.195(a) and when in compliance with § 21.190(b)(2). The airworthiness certificate may be issued only after the applicant has satisfied the requirements of 14 CFR § 21.195(d).

4082. Certification Procedures. The procedures in this paragraph provide guidance material associated with experimental LSA airworthiness certification and the issuance of FAA Form 8130-7.

> **Note:** All DARs must meet the requirements specified in FAA Order 8100.8, Designee Management Handbook, having no conflict of interest when performing LSA airworthiness certification(s).

a. General. The FAA airworthiness certification process consists of a general airworthiness inspection of the aircraft. It is accomplished after the aircraft is completed and before the issuance of an experimental certificate. During this inspection, the FAA may not request disassembly of the aircraft. The only time disassembly must be requested is when there is a question of safety that would endanger the general public. The applicant must provide documented evidence that the aircraft has been manufactured and constructed to the applicable FAA-accepted consensus standards. The FAA will review the applicant's documentation supplied with the aircraft to verify it agrees with the identification and description given in the applicable FAA-accepted consensus standard, meets the definition of 14 CFR § 1.1 for certification, and meets the requirements of 14 CFR §§ 21.191 and 21.193 as applicable. *

* (1) During the airworthiness inspection process, discrepancies, omissions, and errors may be found. It is the responsibility of the ASI or DAR to inform the applicant of those discrepant items. The applicant/builder is responsible for following the manufacturer's instructions. However, the applicant/builder is not the LSA manufacturer. The discrepancies for supplied instructions, processes and procedures, manuals, and SOCs must be corrected and signed by the aircraft's manufacturer. If a discrepancy with an aircraft is found that is a manufacturer's issue, it may affect all aircraft produced. If this is discovered, contact the Production and Airworthiness Division, AIR-200, for further guidance. Only when the required corrections have been made can an airworthiness certificate be issued.

(2) In no instance will the FAA ASI or DAR have performed any of the fabrication, construction, assembly, testing, and/or manufacturer's quality inspections and closing work on or to the aircraft.

b. Inspection and Document Review. The FAA must—

(1) Obtain from the applicant a properly executed FAA Form 8130-6 and any other documents required for the certification. Samples of the airworthiness applications for experimental purpose operating LSA certificated under § 21.191(i) are located in AC 21-12. LSA kits and LSA assembled from kits manufactured outside the United States must be from a country with which the United States has a bilateral agreement concerning airplanes, and must have been eligible for an airworthiness certification or similar flight authorization had it remained in that country, in accordance with 14 CFR § 21.193(e)(6).

> **Note:** Light-sport category aircraft manufactured outside the United States (14 CFR § 21.190(d)) are not considered imported. Therefore, no check is used in block 11 and an origin of the aircraft is not annotated.

(2) Obtain for inspection the AOI/POH, maintenance and inspection procedures, and flight training supplement, and the LSA manufacturer's SOC, FAA Form 8130-15 (14 CFR § 21.190(b)) as required by 14 CFR § 21.193(e) for LSA kits, or 14 CFR § 21.190(b) and (c) for previously certificated special LSA category.

(a) For LSA kits (refer to 14 CFR § 21.191(i)(2)), obtain for inspection supporting documentation, the manufacturer's assembly instructions and approved flight test procedures, the final inspection acceptance record(s), aircraft registration information, and aircraft logbook(s).

(b) For previously certificated special LSA category aircraft, obtain for inspection supporting documentation, the production ground and flight test report acceptance record, the final inspection acceptance record(s), aircraft registration information, and aircraft logbook(s).

(c) Inspect the AOI/ POH, and the flight training supplement contents which may be incorporated into the AOI, ensuring these are physically present with and for each aircraft. These are regulatory required items for certification eligibility (§ 21.190(b)(1)). *

* *1* Check that the AOI and flight training supplement are for the aircraft being inspected. Verify the information contained in these documents is the corresponding and appropriate information for that aircraft as identified by the registration information and inspection of the aircraft.

2 Verify that the aircraft's installed equipment is in accordance with the AOI.

3 When inspecting an airplane, check that the AOI/POH data matches the regulatory requirements of § 1.1 Light-sport aircraft (2), (3), and (4). Ensure that the airspeed indicator markings match the requirements of the AOI/POH-calculated limitations.

4 Check for inclusion of weight and balance or weight and loading data for this aircraft as equipped. This is part of the (as designed and manufactured) permanent record for the aircraft, and is a basis for the associated operating and performance data located in this documentation.

5 Verify that there is a reporting system for maintenance, service, and safety documented in the AOI, the maintenance and inspection procedures (manual), or both in accordance with § 21.190(c)(5). The report may be in hard copy form, electronic media, or both. In either form of media, there must be instructions on how to provide the report to the manufacturer and retain a copy of the report in the aircraft records. If the only means given is to use electronic media, the ASI or DAR will verify the instructions are correct for their intended use and the electronic media is operational.

(d) Review the maintenance and inspection procedures, ensuring they are physically present with and for each aircraft, in accordance with 14 CFR § 21.193(e)(3).

1 Verify the maintenance and inspection procedures are correct for the model of the aircraft. The aircraft serial number must be annotated on the manual.

2 Verify the engine/powerplant maintenance and (optional) overhaul text is included in the maintenance manual. If the engine/powerplant maintenance and (optional) overhaul text is deferred to another manual (such as the engine original equipment manufacturer's manual, for example, ROTAX), then within the light-sport manufacturer's aircraft maintenance manual the text must refer the reader to the specific manual identification with revision and date. Ensure that referenced manuals are marked with the specific aircraft's unique serial number. It is the same for all other parts, articles, or appliances, type-certificated equipment or not, when the manufacturer's maintenance and inspection procedures (manual's) information is deferred to an external manual or procedure. Those referenced external manuals or procedures must be physically present with and for each aircraft, referenced, and annotated.

3 Verify the maintenance and inspection procedures identify critical components that require a replacement time, inspection interval, or related procedure. Verify that these components are permanently and legibly marked with serial numbers (or equivalent) (14 CFR § 45.15) on the aircraft. *

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

5 Verify the data contained in the documentation (such as the maintenance manuals, AOI, placards, and other manuals incorporated by reference) is consistent. An example of consistency is the AOI, maintenance manual(s), and aircraft's fuel tank placard all identify the same fuel requirements (with conversion noted).

6 Verify all applicable manufacturer's safety directives are entered into the aircraft's records. Verify the person making the entry into the logbook has the appropriate level of authorization to perform the task in accordance with the safety directive.

7 Check the aircraft's records for compliance to all applicable ADs. This requirement applies to LSA with type-certificated products or equipment incorporated into the design and/or as equipped. If an AD is issued against a type-certificated product installed in any experimental light-sport aircraft (except for the purpose of R&D), the manufacturer of the aircraft is required in accordance with the FAA-accepted consensus standard to issue a safety directive providing instructions on how to address the safety of flight issue on the specific aircraft. Compliance also applies to LSA make- and model-specific ADs.

(e) Review the aircraft manufacturer's Light-Sport Aircraft Statement of Compliance, FAA Form 8130-15 (affidavit) for accuracy and completeness in accordance with § 21.190(b)(1). Use this guidance and the information in paragraph 804 of this order to review the Form 8130-15. A sample Form 8130-15 is provided in Section 13, figures 4-19 and 4-20 (kit) of this order. Place a photocopy of the completed and inspected Form 8130-15 in the certification package for FAA records retention (AFS-750). Return the original to the applicant for retention in the aircraft's records. Any changes or additions to the information on the Form 8130-15 must be made by the person that signed the form. This person must be authorized by the manufacturer in their quality assurance system.

1 Examine the contents of the Form 8130-15 contained in section I, Aircraft Identification. Verify that the information is correct and appropriate for the aircraft identified by the registration information, the required documentation, and by the physical inspection of the aircraft and the aircraft's data plate.

2 Verify the applicant is using the correct form. Check the lower left-hand corner location of FAA Form 8130-15 for the correct number and revision.

3 If the manufacturer's address is outside the United States (block 2) as identified in §§ 21.190(d) and 21.193(e)(6), verify that the aircraft or LSA kit was manufactured in a country with which the United States has a bilateral agreement concerning airplanes. To check for bilateral agreements, see the AIR-40 listing of current bilateral agreements located on the FAA website. If there are questions regarding the country of manufacture, contact AFS-750 with reference to AC Form 8050-88A, Affidavit of Ownership for Experimental or Special Light-Sport Aircraft, for the first of make or model. If the country of manufacture does not match or does not have a bilateral agreement, then the aircraft cannot be certificated as LSA. *

* *4* Examine the contents of FAA Form 8130-15 contained in sections II, Applicable Users Manuals, and III, Manufacturer's Process Documents. Verify the consensus standards and user manual information (standard number, revision number, and title) is correct and is for the proper aircraft. For kit built LSA, ensure the assembly instruction consensus standard is listed.

5 Manufacturers must use the current consensus standard. However, manufacturers may use the previously accepted consensus standard until the NOA "may not be used" date. Compare the date of manufacture located in section I, block 4, of Form 8130-15, with the consensus standards listed in Section II and III. A matrix of FAA-accepted consensus standards and NOA information is located on the FAA website under Aircraft, General Aviation & Recreational Aircraft, LSA, sub-category standards. Further information on the FAA-accepted consensus standards may be obtained by querying "NOA" on the FAA website.

6 Verify that in Section III, Comments, in accordance with § 21.193(e)(1), there is a statement identifying the aircraft of the same make and model that was manufactured and assembled by the aircraft kit manufacturer and issued a special airworthiness certificate in the light-sport category is placed within this certification statement area. Evidence that an aircraft of the same make and model that was manufactured and assembled by the LSA kit manufacturer and issued a special airworthiness certificate in the light-sport category may be located elsewhere within the LSA kit documentation, but must be included and verified as part of this LSA kit certification. Verify evidence through electronic check of registry records.

7 Examine the contents of the Form 8130-15 contained in section IV, Manufacturer's Certification. Verify that there is a serial number in the blank provided in the certification statement and that the number matches block 3, the aircraft's data plate, and registration documentation. Ensure that the certification statement is worded correctly in this portion of the Form 8130-15. For aircraft previously certificated in special light-sport category, see paragraph 4039 b.(2)(c)5 of this order.

8 Examine the contents of the Form 8130-15 contained in section IV, Manufacturer's Certification. Verify that the name, signature, title, and date areas are filled in (minimum of one name is required). The person signing the form must be designated in the manufacturer's quality assurance system.

> **Note:** The following information is provided for the LSA ASI for reference only. Electronic copies of the consensus standards may be viewed through the FSIMS website. To navigate to the ASTM consensus standards go to Related INFO drop-down menu, other sites, sub-category Advisory Publications, ASTM, ASTM Custom Portal, search by consensus standard number, open appropriate standard. *

(3) Review documentation for LSA being certificated under 14 CFR § 21.191(i)(2). FAA Form 8130-15 is required.

* (4) Review the documentation provided by the applicant to determine that the registration requirements of 14 CFR part 47 have been met, and ensure that the aircraft registration marks match the registration documentation.

(5) Check with AFS-750 to determine if a denial letter exists for the particular aircraft. This may assist the inspector in determining aircraft eligibility.

> **Note:** AFS-750 should be contacted to ensure that the N-number has been properly issued. For example, has it been issued permanently or is it a temporary or reserved number that has not been issued permanently?

(6) Check the aircraft records to determine whether any required maintenance and inspections have been accomplished and to determine that all relevant and applicable ADs and service directives have been complied with. Records must be complete.

(7) Compare the aircraft's weight and balance or weight and loading data to the data listed in the AOI for accuracy. When a discrepancy is found during the inspection of the weight and balance or weight and loading data, the ASI or DAR will observe the weighing of the aircraft, and the calculations for the data. When a discrepancy between documentation continues to exist, then the aircraft cannot be certificated until the discrepant item(s) are corrected.

c. General Aircraft Inspection. The FAA must arrange with the applicant to make the aircraft available for inspection to—

(1) Verify the ID plate meets the requirements of 14 CFR § 45.11, as applicable.

(2) Verify the information on the ID plate is correct, matches the information on FAA Form 8130-6, and is in accordance with 14 CFR § 45.13, as applicable. Identification data required by § 45.13(a)(1), (2), and (3) is mandatory. Sections 45.13(a)(4) and (5) cannot be assigned to LSA, and are therefore not applicable. If there are spaces provided with headings for (4) and (5), those spaces will be marked with "NONE." When only spaces are provided for (4) and/or (5), no marking is required (see paragraph 4038 d(2)). Identification data (6) is optional for the manufacturer/builder. Any other optional data that the manufacturer/builder includes on the data plate must be in such a manner as not to confuse the mandatory data contents.

(3) Verify the aircraft nationality and registration number and identification markings are in accordance with 14 CFR part 45 and, as applicable, with 14 CFR §§ 45.14, 45.21, 45.23, 45.27, and 45.29.

(a) Check both exterior sides of the aircraft to ensure that the nationality registration marking is the same on both sides and matches that of the registration documentation, and that both nationality registration numbers are displayed in 3-inch minimum for airplanes and a 3-inch minimum for powered parachute, weight-shift-control and gliders in accordance with 14 CFR § 45.29(b)(1)(iii).

(b) Check both exterior sides of the aircraft to ensure that marking is the same on both sides when marked for multiple entry points, and that the aircraft has the word *

* "EXPERIMENTAL" displayed in 2-inch minimum and 6-inch maximum letters, in accordance with 14 CFR part 45.

(c) Inspect the aircraft to identify critical components for which a replacement time, inspection interval, or related procedure is specified in the maintenance and inspection procedures. Verify the applicable physical aircraft's parts, articles, and components are permanently and legibly marked with part numbers and serial numbers for compliance with § 45.14.

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

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

(5) Verify the cockpit instruments are appropriately marked, and needed placards are installed and placed for easy reference.

(6) 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 in accordance with the manufacturer's instructions and specification documentation.

(7) Verify an ELT is installed on airplanes when required, and is in accordance with 14 CFR § 91.207, before issuance of the airworthiness certification.

(8) 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. Markings 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. *

d. Certificate Issuance. Upon satisfactory completion of the records inspection, documentation review, and aircraft inspection, the FAA will issue the special airworthiness certificate for the purpose of operating an experimental LSA with appropriate operating limitations. The operating limitations must be attached to FAA Form 8130-7. The FAA must review the operating limitations with the applicant to ensure a clear understanding. The FAA may elect to issue an experimental LSA airworthiness certificate on a one-time basis to determine that the aircraft meets the requirements of 14 CFR § 91.319(b). 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 as follows:

(1) For the phase I limitations, the FAA must prescribe all operating limitations appropriate for the applicant to demonstrate compliance with 14 CFR § 91.319(b) in the assigned

flight test area. This includes a limitation requiring the owner/operator to endorse the aircraft logbook with a statement certifying that the prescribed flight hours have been completed, and the aircraft has been shown to comply with 14 CFR § 91.319(b) and the requirements of the applicable consensus standard. The owner/operator may then operate in accordance with phase II.

(2) For the phase II limitations, the FAA may prescribe operating limitations for experimental LSA for an unlimited duration, as appropriate.

(3) Under 14 CFR § 91.319(i), the FAA may prescribe any additional limitations in phase I or phase II deemed necessary in the interest of safety.

* (4) If the aircraft meets all the requirements for the certification, the FAA must— *

(a) Make an aircraft logbook entry.

(b) Issue FAA Form 8130-7 with appropriate operating limitations.

(c) Complete sections V and VIII of FAA Form 8130-6, in accordance with the
* instructions contained in paragraph 801 of this order. *

(d) Examine, review, and route the certification file in accordance with the
* guidance of this paragraph and the instructions contained in chapter 8 of this order.

(e) A photocopy of the completed and as-inspected Form 8130-15 and the production flight test acceptance records (kit LSA have no production flight test records) will be placed in the certification package for FAA records retention.

(5) If the aircraft does not meet the requirements for the certification requested and the airworthiness certificate is denied, the FAA ASI or DAR must— *

(a) Write a letter to the applicant stating the reason(s) for denying the airworthiness certificate.

* (b) Attach a copy of the denial letter and when applicable, copies of the substantiating documentation to FAA Form 8130-6 and forward it to AFS-750 to be made part of * the aircraft record.

4083. Flight Test Areas.

a. General. 14 CFR § 91.319(b) requires that an unproven aircraft be assigned to a flight test area. The assigned test area is prescribed in accordance with 14 CFR § 91.305. The FAA, when requested, should assist applicants in selecting areas that comply with 14 CFR § 91.305. The FAA is required to evaluate each application to determine that the flight test area does not exceed what is reasonably required to accomplish the program. Actions pertaining to flight test areas must be coordinated with the nearest office of the Air Traffic Service.

b. Assigned Flight Test Area. Under 14 CFR §§ 91.305 and 91.319(b), all initial flight operations of experimental aircraft must be limited to the assigned flight test area until the aircraft is shown to be controllable throughout its normal range of speeds and all maneuvers to be executed, and has not displayed any hazardous operating characteristics or design features.

(1) 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 of flight, the FAA must ensure that a route of flight is selected that subjects the fewest persons and least property to possible hazards. In addition, upon leaving such an airport, the aircraft should 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 corridor for subsequent operations. The description of the area selected by the applicant and agreed to by the FAA must be made a part of the operating limitations.

(2) In the case of an aircraft located at any airport surrounded by a densely populated area and lacking any acceptable approach/departure route of flight, the FAA must deny the airworthiness certificate and process the denial in accordance with paragraph 4002 of this order. The applicant must be advised to relocate the aircraft by other means to a suitable airport.

> **Note:** An acceptable approach/departure route of flight may be considered to exist when the route of flight provides a reasonable opportunity to execute an off-airport emergency landing that will not jeopardize other persons or property.

c. Assignment to the Flight Test Area. Although the period of assignment is not established by regulation, the following time is suggested as a guideline when issuing airworthiness certificates for experimental LSA:

* (1) LSA issued original experimental airworthiness certificates for 14 CFR § 21.191(i)(2) LSA must be limited to operation within an assigned flight test area for a minimum of 5 hours for all classes of LSA to determine aircraft controllability throughout its design limits. *

(2) Previously noncertificated ultralight-like vehicles or other aircraft that meet the definition of an LSA as defined in 14 CFR § 1.1 should not be limited to operation within an assigned flight test area, provided the following are met:

(a) Evidence is shown of routine inspections;

(b) It is shown through flight records that the aircraft is controllable throughout its normal range of speeds and throughout all maneuvers to be executed, and has no hazardous operating characteristics or design features; and

(c) All aircraft records are presented.

(3) Aircraft previously issued a special airworthiness certificate in the light-sport category under 14 CFR § 21.190, applying for an experimental certificate for the purpose of operating LSA under 14 CFR § 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 modifications or changes were made after the issuance of the original special LSA category airworthiness * certificate.

(4) Following any major change, an LSA must be assigned to a flight test area for an appropriate time to conduct a flight test and evaluate that the aircraft is in a condition for safe operation. The guidance baseline for this testing is 5 hours of flight time within the flight test * area. The FAA may prescribe any additional limitations and/or flight time within the flight test area deemed necessary in the interest of safety. *

4084. Issuance of Experimental Light-Sport Operating Limitations.

a. Operating limitations must be designed to fit the specific situation encountered. The FAA may impose any additional limitations deemed necessary in the interest of safety. The FAA must review each imposed operating limitation with the applicant to ensure the applicant understands the operating limitations.

b. Operating limitations for phase I flight testing to meet the requirements of 14 CFR § 91.319(b) are not applied to those aircraft surrendering an LSA category certificate and applying for an experimental certification for the purpose of operating LSA when the aircraft has previously been flight tested and is in a condition for safe operation, and all information is documented in the aircraft's records. This exclusion from phase I flight testing does not apply to those transferals of aircraft airworthiness certification when the purpose is to incorporate a major * change or modification to the aircraft that would require compliance to 14 CFR § 91.319(b). *

c. The following operating limitations must be prescribed for the operation of experimental LSA when certification has been conducted under the provisions 14 CFR § 21.191(i)(1), (2), or (3), and will be issued as shown below. Any deviation from the text must be coordinated in accordance with this order.

(1) No person may operate this aircraft for other than the purpose of meeting the requirements of 14 CFR § 91.319(b) during phase I flight testing and, for the purpose of operating LSA, after meeting these requirements as stated in the program letter (required by 14 CFR § 21.193) for this aircraft. In addition, this aircraft must be operated in accordance with the applicable air traffic and general operating rules of 14 CFR part 91 and all additional limitations herein prescribed under the provisions of 14 CFR § 91.319(i). These operating limitations are a part of FAA Form 8130-7, must be carried in the aircraft at all times, and must be available to the pilot in command of the aircraft.

(2) This aircraft must display the word "experimental" in accordance with 14 CFR § 45.23(b).

(3) This aircraft does not meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention on International Civil Aviation. The owner/operator of this aircraft must obtain written permission from another CAA before operating this aircraft in or over that country. That written permission must be carried aboard the aircraft together with the U.S. airworthiness certificate and, upon request, be made available to an ASI or the CAA in the country of operation.

(4) Application must be made to the geographically responsible FSDO or MIDO for any amendment to these operating limitations.

(5) During phase I flight testing to meet the requirements of 14 CFR § 91.319(b), or as a result of the incorporation of a major change, all flights must be conducted within the assigned geographic area.

(a) The area must be described by radius, coordinates, and/or landmarks.

(b) The designated area must be over open water or sparsely populated areas having light air traffic.

(c) The size of the area must be adequate to safely conduct the anticipated maneuvers and tests.

Note: In the case of an airport surrounded by a densely populated area, see paragraph 4075b(1) of this order.

(6) Flight testing required for phase I operations or as a result of the incorporation of a major change will be conducted in the assigned test area. Flight test operations will only be conducted under VFR day conditions, with the pilot as the sole occupant of the aircraft. This aircraft must be operated for at least _____ hours in the assigned geographic area. Following the satisfactory completion of the required number of flight hours in the flight test area, the pilot must certify in the aircraft records that the aircraft has been shown to comply with 14 CFR § 91.319(b) with a statement that includes the following information: **"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 operating characteristics or design features, and is safe for operation. The flight test was completed under the following conditions: maximum operating weight, style/set of wing or sail, maximum demonstrated airspeed, and minimum demonstrated stall speed."** All major changes or modifications will be listed in the aircraft records and the compliance statement will be restated with the changes listed. The aircraft may not be operated in excess of the weights and speeds demonstrated.

Note: An LSA-issued original experimental certificate or one issued as a result of the incorporation of a major change should be limited to operations within an assigned flight test area for a minimum of 5 hours for all classes of LSA.

(7) Any change to the flight test area location or size must be coordinated with the geographically responsible FSDO where the aircraft is based, with FAA concurrence received in writing.

(8) Except for takeoffs and landings, this aircraft may not be operated over densely populated areas or in congested airways.

Note: This limitation is applicable for phase I and II and should be issued in accordance with paragraph 4075b(1) and (2) of this order.

(9) This aircraft is prohibited from operating in congested airways or over densely populated areas, unless directed by air traffic control, or unless sufficient altitude is maintained to effect a safe emergency landing in the event of a power unit failure, without hazard to persons or property on the ground.

Note: This limitation is applicable to the aircraft after it has satisfactorily completed all requirements for phase I flight testing, has the appropriate endorsement in the aircraft logbook, and is operating in phase II.

(10) This aircraft is to be operated under VFR day only.

(11) After completion of phase I flight testing, unless appropriately equipped for night and/or instrument flight in accordance with 14 CFR § 91.205, this aircraft is to be operated under VFR day only.

(12) No person may operate this aircraft for carrying persons or property for compensation or hire.

Note: This limitation must be issued for all aircraft certificated under 14 CFR § 21.191(i).

(13) No person may operate this aircraft for compensation or hire, except this aircraft may be used for compensation or hire to conduct towing of a light-sport glider or an unpowered ultralight vehicle in accordance with 14 CFR § 91.309.

Note: Limitation (13) applies to towing and has no expiration date. The gliders that can be towed must meet the definition in 14 CFR § 1.1 or 14 CFR § 103.1. When limitation (13) applies, limitation (23) also applies.

(14) The pilot in command of this aircraft must advise the passenger of the experimental nature of this aircraft and that it does not meet the certification requirements of a standard certificated aircraft.

(15) This aircraft must contain the placards and markings as required by 14 CFR § 91.9. In addition, the placards and markings must be inspected for legibility and clarity, and the associated systems inspected for easy access and operation, to ensure they function in accordance with the manufacturer's specifications during each condition inspection.

(16) This aircraft is prohibited from aerobatic flight, that is, an intentional maneuver involving an abrupt change in the aircraft's attitude, an abnormal attitude, or abnormal acceleration not necessary for normal flight.

* **Note:** When the manufacturer states within the AOI that the aircraft is capable of aerobatic flight, limitation (17) will be used instead of limitation (16). *

(17) This aircraft may conduct aerobatic flight in accordance with the provisions of 14 CFR § 91.303. Aerobatics must not be attempted until sufficient flight experience has been gained to establish that the aircraft is satisfactorily controllable. The aircraft may only conduct
* those aerobatic flight maneuvers addressed in the AOI and that have been satisfactorily *
accomplished during flight testing and recorded in the aircraft records. The aircraft may only conduct those aerobatic flight maneuvers that have been satisfactorily accomplished during flight testing and recorded in the aircraft maintenance records by use of the following, or a similarly worded, statement: **"I certify that the following aerobatic maneuvers have been test flown, and that the aircraft is controllable throughout the maneuvers' normal range of speeds and is safe for operation. The flight-tested aerobatic maneuvers and speeds are _____ at _____, _____ at _____, _____ at _____, and _____ at _____."**

Note: Aerobatic flights may be permitted in the assigned test area. The applicant should be advised that aerobatics or violent maneuvers should not be attempted until sufficient flight experience has been gained to establish that the aircraft is satisfactorily controllable. These operating limitations may be modified to include only those aerobatics/maneuvers that have been satisfactorily accomplished and recorded in the aircraft records during the flight test period. These aerobatic maneuvers should be permitted upon leaving the assigned test area. Appropriate limitations identifying the aerobatics/maneuvers and conditions under which they may be performed should be prescribed. The FAA may witness aerobatic maneuvers if deemed necessary.

(18) The pilot in command of this aircraft must hold at least—

(a) A student pilot certificate with a _____ category, _____ class, _____ make/model privilege endorsement by an authorized instructor; or

(b) A sport pilot certificate, with a _____ category, _____ class, privilege endorsement (see 14 CFR § 61.317); or

(c) A recreational pilot certificate or higher with sport pilot privileges, with a _____ category, _____ class, privilege endorsement (see 14 CFR § 61.317); or

(d) A recreational pilot certificate or higher.

Note: This limitation must be aircraft-specific. When the aircraft clearly fits a category or class, the ASI or designee must list the category and class. When it is an aircraft for which a category and class has not been defined, select a category and class that has operating and handling characteristics that most closely resemble those of the aircraft.

(19) This aircraft must not be used for banner towing operations or intentional parachute jumping.

(20) The pilot in command of this aircraft must notify air traffic control of the experimental nature of this aircraft when operating into or out of airports with an operational control tower. When filing IFR, the experimental nature of this aircraft must be listed in the remarks section of the flight plan.

(21) Aircraft instruments and equipment installed and used under 14 CFR § 91.205 must be inspected and maintained in accordance with the requirements of part 91. Any maintenance or inspection of this equipment must be recorded in the aircraft maintenance records.

(22) No person may operate this aircraft unless within the preceding 12 calendar months it has had a condition inspection performed in accordance with the scope and detail to 14 CFR part 43, appendix D, or other FAA-approved programs, and was found to be in a condition for safe operation. As part of the condition inspection, cockpit instruments must be appropriately marked and needed placards installed in accordance with 14 CFR § 91.9. In addition, system-essential controls must be in good condition, securely mounted, clearly marked, and provide for ease of operation. This inspection will be recorded in the aircraft maintenance records.

(23) No person may operate this aircraft to tow a light-sport glider or unpowered ultralight vehicle for compensation or hire or conduct flight training for compensation or hire in this aircraft unless within the preceding 100 hours of time in service the aircraft has been inspected by a certificated light-sport repairman with a maintenance rating, an appropriately rated certificated mechanic, an appropriately rated repair station in accordance with inspection procedures developed by the aircraft manufacturer, in accordance with the scope and detail of 14 CFR part 43, appendix D, or a person acceptable to the FAA.

(24) Condition 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**] in accordance with the scope and detail of 14 CFR part 43, appendix D, or the 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, and the name, signature, certificate number, and type of certificate held by the person performing the inspection.

(25) An experimental LSA owner/operator as a repairman for this aircraft under 14 CFR § 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.

4085.-4095 Reserved.

Section 9. Experimental Amateur-Built Airworthiness Certifications

4096. General. Under the provisions of 14 CFR § 21.191(g), an amateur-built aircraft is defined as an aircraft of which the major portion has been fabricated and assembled by a person(s) who undertook the construction project solely for their own education or recreation.

a. Amateur-built aircraft may be constructed from—

(1) An amateur builder's original design, or

(2) Purchased plans.

b. Some kits have been evaluated by the FAA; some have not. These evaluations are not required by the regulations, nor is a manufacturer required to have a kit evaluated by the FAA before selling it. Kit evaluations determine whether aircraft fabricated and assembled by an amateur builder from an evaluated kit may meet the major portion requirement of 14 CFR § 21.191(g) and be eligible for an experimental amateur-built airworthiness certificate.

c. Amateur builders who contact their local FAA managing office should be advised of the availability of forms and AC 20-27, Certification and Operation of Amateur-Built Aircraft, to assist them in planning their project. See paragraph 4101b of this order for a complete list of available guidance.

4097. Eligibility.

a. Basic Guidelines. Amateur-built aircraft are eligible for a special airworthiness certificate in the experimental category, for the purpose of operating amateur-built aircraft when—

(1) The FAA finds that the aircraft complies with acceptable aeronautical standards and practices,

(2) The aircraft is in condition for safe operation, and

(3) The applicant (individual or group) presents satisfactory evidence that the major portion of the aircraft was fabricated and assembled solely for their own educational or recreational purposes.

> **Note:** Fabrication is defined as to perform work on any article such as layout, bending, countersinking, straightening, cutting, sewing, gluing/bonding, layup, forming, shaping, trimming, drilling, deburring, machining, applying protective coatings, surface preparation and priming, riveting, welding or heat treating, and transforming the article toward or into its finished state.

b. Statement of Eligibility. The applicant must submit a notarized FAA Form 8130-12, Eligibility Statement, Amateur-Built Aircraft (see figure 4-10 of this order), certifying the major portion was fabricated and assembled for educational or recreational purposes.

(1) The form specifies that an amateur builder identify if commercial assistance was used in the construction of the aircraft and identify the source of the assistance.

(2) Evidence and records must be available to support these statements and provided to the FAA upon request.

(3) Records that are typically requested are listed in paragraph 4101e of this order.

c. Additional Information and Demonstrating Level of Knowledge. To determine level of knowledge, the FAA may ask the applicant to provide information during the airworthiness inspection. For example, the FAA could ask the applicant to describe a particular construction task or technique used to fabricate the aircraft or provide information as to the type of materials. These discussions enable the FAA to evaluate the involvement of the applicant in the construction of the aircraft.

d. Prototype Aircraft Produced by an Amateur-Built Aircraft Kit Manufacturer. In some cases, prototype aircraft originally certificated under market survey/crew training were used to prove their design for amateur-built purposes. However, such aircraft are considered to be produced as a furtherance of a business, in that their design is intended to be sold as plans and/or kits, and therefore are not eligible for amateur-built aircraft status.

(1) These prototype aircraft are not produced by persons "solely for their own education or recreation," and therefore are not eligible for an experimental airworthiness certificate under 14 CFR § 21.191(g).

(2) Following termination of their use in the business development activity, such prototype aircraft may be eligible for an experimental certificate for another purpose(s).

(3) In those instances where an aircraft is constructed at a manufacturing facility by employees or principals of that company, the applicant must demonstrate to the FAA that the aircraft was not produced to be used in the furtherance of the business activities of that company.

(4) Kit aircraft manufactured and assembled by a business, as either a prototype or for sale to other persons, are not considered amateur-built and do not meet the education or recreation requirements of 14 CFR § 21.191(g). Applications for such aircraft will not be accepted.

e. Records. If records are not available to support the eligibility statement, FAA Form 8130-12, the FAA will not be able to find compliance to the education, recreation, and major portion requirements of 14 CFR § 21.191(g).

4098. Determination of Major Portion. The determination of major portion is made by evaluating the amount of work accomplished by the amateur builder(s) against the total amount of work necessary to complete the aircraft, excluding standard procured items. The major portion of the aircraft is defined as more than 50 percent of the fabrication and assembly tasks, commonly referred to as the "51-percent rule." An aircraft is not eligible for an experimental amateur-built certificate under 14 CFR § 21.191(g) if the major portion of the aircraft fabrication and assembly tasks are not completed by an amateur builder(s).

a. Use of Prior Policy. If an aircraft kit was evaluated and placed on the FAA List of Amateur-Built Aircraft Kits or if a non-evaluated aircraft kit was purchased from the manufacturer before September 30, 2009, the prior policy will be used. However, other factors, such as a major change to the kit by the manufacturer or a builder's use of commercial assistance, will preclude the use of prior policy. Figure 4-21 of this order depicts the use of the prior policy.

b. FAA Use of the Amateur-Built Aircraft Fabrication and Assembly Checklist (2009). The Amateur-Built Aircraft Fabrication and Assembly Checklist (2009) is to be used by the FAA as an aid in determining compliance with the major portion requirement of 14 CFR § 21.191(g). A specific checklist has been developed for fixed-wing aircraft. Checklists for other types of aircraft will be developed. Instructions for completion are included on the form. See FAA Order 8130.35, Amateur-Built Aircraft National Kit Evaluation Team (NKET), for a copy and instructions of the checklist. The Amateur-Built Aircraft Fabrication and Assembly Checklist (2009) must be used when—

(1) Performing FAA kit evaluations by the NKET to determine if an aircraft fabricated and assembled from a kit may meet the major portion requirement of 14 CFR § 21.191(g).

(2) Commercial assistance was used by the amateur builder(s) during construction.

(3) The amateur builder made modifications to an aircraft kit included on the FAA List of Amateur-Built Aircraft Kits that potentially affects the major portion determination.

(4) The aircraft was built from prefabricated major components that are readily available from aircraft parts suppliers, other than those components listed in paragraph 4099a(2) of this order.

(5) The aircraft was built using any salvaged articles from aircraft that have been type certificated. For additional details and limitations affecting this practice, see paragraph 4099b through d of this order.

(6) The aircraft was built from a kit that has not been evaluated or found eligible by the FAA.

(7) Providing guidance to a kit manufacturer to determine if a proposed amateur-built kit may meet the major portion requirement of 14 CFR § 21.191(g).

(8) There are questions that arise as to the determination of major portion.

Note. Copies of the Amateur-Built Aircraft Fabrication and Assembly Checklist (2009) and/or FAA Form 8000-38, as appropriate, for each kit on the FAA List of Amateur-Built Aircraft Kits are available on the FAA website, under the "General Aviation & Recreational Aircraft-Ultralights & Amateur-Built Aircraft" section.

c. Providing Commercial and/or Educational Assistance. Amateur builders may contract for commercial assistance, but should notify the FAA if they intend to use commercial assistance. Amateur builders may also receive commercial educational assistance in the fabrication or assembly of specific articles, and the completion of tasks or processes involved in the construction of an aircraft. In some cases, this commercial assistance may be provided by kit manufacturers. The FAA may credit commercial assistance provided for educational purposes toward the major portion determination. However, this educational assistance cannot exceed a demonstration on how to perform the task.

(1) The amateur builder needs to submit a notarized FAA Form 8130-12, certifying the major portion was fabricated and assembled for educational or recreational purposes. The form specifies that an amateur builder identify if commercial assistance was used in the construction of the aircraft, and identify the source of the assistance. In addition, the amount of commercial assistance needs to be annotated on the Amateur-Built Aircraft Fabrication and Assembly Checklist (2009) for the specific make and model of aircraft. Evidence and records should be available to support these statements and provided to the FAA upon request.

(2) Any fabrication or assembly tasks contracted to another party (for hire) or provided by a commercial assistance center, including commercial assistance provided by a kit manufacturer, must not prevent the amateur builder(s) from meeting the major portion requirement. Fabrication knowledge is necessary for the FAA to issue the amateur builder a repairman certificate as the primary builder of the aircraft, to which the privileges of the certificate are applicable, as provided under 14 CFR § 65.104.

(3) The FAA may request to observe fabrication and assembly activities at any commercial assistance facility to determine whether the project can meet the major portion requirement of 14 CFR § 21.191(g).

4099. Design and Construction. The FAA should be reasonable in its requests for design data from amateur builders, keeping in mind that in most instances only one aircraft is involved. Accordingly, the amateur builder(s) are not required to have the detailed design data, quality systems, and procedures that holders of type and production certificates are required to have for the serial production of duplicate aircraft. Often, the amateur builder will only have the information provided with the kit. However, the amateur builder should be strongly encouraged to maintain the documentation listed in paragraph 4101e of this order to substantiate the fabrication and assembly process and show compliance with 14 CFR § 21.191(g).

a. Use of Commercially Produced Products and Articles. To meet the intent of 14 CFR § 21.191(g) and to be eligible for an experimental airworthiness certificate, satisfactory evidence must be presented to show that the aircraft was not assembled from completely prefabricated products, articles, or kits.

(1) The FAA recognizes that amateur builders cannot be expected to have fabricated every product and article that makes up the aircraft and that some products and articles will be acquired from commercial sources.

(2) Items such as engines, engine accessories, propellers, rotor blades, rotor hubs, tires, wheel and brake assemblies, instruments, and standard aircraft hardware, including pulleys, bell cranks, rod ends, bearings, bolts, rivets, hot air balloon burners, and fuel tanks, are acceptable and may be procured on the open market. The use of these products and articles are not counted against the amateur builder or kit manufacturer when the FAA determines whether the amateur-built aircraft has met the major portion requirement.

b. Use of Salvaged Articles from Type-Certificated Aircraft. The use of used or salvaged articles (for example, landing gear, horizontal stabilizer, and engine mount) from type-certificated aircraft is permitted, as long as they are in a condition for safe operation, however—

(1) When a project involves a major article, such as wings, fuselage, or tail assembly, contact AIR-200 for a determination of eligibility to 14 CFR §21.191(g). AIR-200 will coordinate with Flight Standards Service, Aircraft Maintenance Division, AFS-300 personnel to resolve such issues.

(2) No credit will be given to the amateur builder(s) for any work on these salvaged articles when determining whether the amateur-built aircraft has met the major portion requirement. This would include any “rebuilding” or “restoring” activities to return these articles to an airworthy condition.

(3) 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 (2009). However, assembly credit may be given in those cases where used or salvaged articles are mated to portions of the aircraft fabricated and assembled by the amateur builder.

(4) Amateur builders should be made aware that excessive use of prefabricated or salvaged articles when building their aircraft may render the aircraft ineligible for amateur-built status as defined in 14 CFR § 21.191(g). The use of a significantly complete airframe or combination of major articles such as wings and fuselage, tail plane assembly from a type-certificated aircraft, or a compilation of aircraft, would most likely render the aircraft ineligible for amateur-built status as defined in 14 CFR § 21.191(g).

(5) As soon as it is known that a project involves the use of a complete airframe or combination of major articles such as wings, fuselage, or tail assembly, contact AIR-200 for additional guidance. AIR-200 will coordinate with AFS-300 personnel to resolve such issues.

c. Type-Certificated Aircraft. Alterations, rebuilding, and repairs to a type-certificated aircraft or article will be categorized as falling under 14 CFR part 43. The amateur builder will receive no credit for these actions toward fabrication or assembly.

> **Note:** The practice of performing alterations, repairs, and rebuilding on previously type-certificated aircraft for the purpose of obtaining an experimental amateur-built airworthiness certificate is not authorized under 14 CFR § 21.191(g). Such maintenance actions properly fall under 14 CFR part 43. Applications for airworthiness inspections on such aircraft will not be accepted. (See paragraphs 4099b through d of this order.)

(1) This policy has been in effect since 1952 under section 1.74-3 of the CAM 1, which specifically states that "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."

(2) Use the normal STC process for modifications to these aircraft. They need to be kept under their existing maintenance programs to ensure continued airworthiness.

d. Use of Military Surplus, Spare Articles. The amateur builder will receive no credit toward fabrication or assembly for amateur-built aircraft projects where military surplus, spare articles are used. Their use may compromise the builder's ability to meet 14 CFR § 21.191(g) major portion requirements. As soon as it is known that a project involves the use of a complete airframe or combination of major articles from a military aircraft such as wings, fuselage, or tail assembly, contact AIR-200 for additional guidance. AIR-200 will coordinate with AFS-300 personnel to resolve such issues.

e. Use of Amateur-Built Kits.

(1) An aircraft fabricated and assembled from a kit may be eligible for amateur-built certification, provided the major portion of the aircraft has been fabricated and assembled by the amateur builder(s) solely for their own education or recreation. The applicant must have satisfactory evidence to support the major portion (greater than 50 percent) requirement and the education/recreation statement on FAA Form 8130-12. This evidence is typically in the form of a builder's log or equivalent, and includes photographs that document the multitude of steps included in each of the listed tasks in the Amateur-Built Aircraft Fabrication and Assembly Checklist (2009). In addition, such documentation needs to include materials and techniques used, construction dates, locations, and detailed descriptions (see paragraph 4101e of this order for a complete list). If the builder's log or equivalent does not provide sufficient detail, the FAA may not be able to find compliance with 14 CFR § 21.191(g).

(2) All fabrication or assembly tasks contracted to another party (that is, for compensation or hire) or provided by a commercial assistance center, when added to the manufacturer's total credits, must be less than the major portion of the construction project. An aircraft assembled from a kit composed entirely of completely finished prefabricated articles is not eligible for an experimental amateur-built airworthiness certificate.

(3) The major portion of a kit should be composed of raw stock, such as lengths of wood, tubing, and extrusions, which may have been cut to an approximate length. A certain quantity of prefabricated articles, such as heat-treated ribs, bulkheads, or complex articles made from sheet metal, fiberglass, composites, or polystyrene would also be acceptable, however—

(a) The kit must still allow an amateur builder to meet the major portion requirement, and the applicant must show to the satisfaction of the FAA that the completion of the aircraft was not simply an assembly operation.

(b) Caution is recommended for kits that provide large articles, such as complete fuselages and wing structures requiring minimal supplemental fabrication and assembly.

(4) Some kits may include aircraft-specific jigs, assembly tools and fixtures, templates, raw stock, or other means to simplify the fabrication and assembly process. If an amateur builder uses such items, the FAA will determine whether the amateur builder will still fabricate and assemble the major portion of the aircraft and advise the amateur builder accordingly.

(5) Amateur builders should obtain a copy of the completed FAA kit evaluation from their respective kit manufacturer if available. A list of FAA-evaluated kits is available on the FAA's website at http://www.faa.gov. The completed evaluation will enable the amateur builder to determine how much fabrication and assembly remains to be completed by the amateur builder, and if any percentage of that work could be performed using commercial assistance.

4100. FAA Evaluation of Amateur-Built Aircraft Kits.

a. General. The FAA performs kit evaluations to determine if an aircraft constructed from a prefabricated kit, following the manufacturer's instructions, may meet the major portion requirement of 14 CFR § 21.191(g). The FAA does not certify amateur-built aircraft kits or approve kit manufacturers. The outcome of these evaluations must not be construed as meaning the kit is FAA "certified," "certificated," or "approved," and kit manufacturers shall not represent their kits as such.

(1) The placing of a kit on the FAA List of Amateur-Built Aircraft Kits is not a prerequisite for issuance of an amateur-built airworthiness certification.

(2) If an aircraft is fabricated and assembled from a kit that does not appear on the List of Amateur-Built Aircraft Kits, the FAA must make a major portion determination at the time of airworthiness certification.

b. Determination of Credit. The FAA has adopted a task-based approach when evaluating amateur-built kits. Other variables, like time needed to complete a task, are not to be used. For simple repetitive fabrication tasks (that is, riveting, measuring, cutting, trimming, sanding, drilling, gluing, and layup) there should be enough work for the amateur builder to learn proficiency in each of those tasks. However, this does not mean that all the credit for the tasks may then be given on the Amateur-Built Aircraft Fabrication and Assembly Checklist (2009) to the amateur builder. Rather, an incremental percentage, resulting in partial credit, may be accounted for on the checklist.

c. NKET. Kit evaluations are performed at the manufacturer's facility or its distributor, by the FAA's NKET. The team is composed of FAA personnel with experience in the evaluation and certification of amateur-built aircraft. For additional information on the NKET, see FAA Order 8130.35.

d. Manufacturers Requesting a Kit Evaluation. Kit manufacturers desiring an FAA kit evaluation are directed to AC 20-27 for further information.

4101. Advising Applicants. Many individuals who want to build their own aircraft have little or no experience with respect to aeronautical practices, workmanship, or design. An excellent source for advice in such matters is the Experiment Aircraft Association (EAA), located in Oshkosh, Wisconsin. Information on EAA programs and benefits may be obtained via the EAA website at http://www.eaa.org.

a. Contacting the FAA. Amateur builders who contact the FAA should be provided the information and guidance needed to ensure a thorough understanding of amateur-built regulations and requirements. The FAA should also explain the various points in the process when FAA involvement may be necessary before construction proceeds.

b. Providing FAA Forms for Registration and Certification. FAA MIDOs and FSDOs may furnish amateur builders with the following forms and ACs, or indicate their availability on the Internet:

(1) Aeronautical Center Form 8050-1;

(2) FAA Form 8130-6;

(3) FAA Form 8130-12;

(4) Aeronautical Center Form 8050-88; and

(5) AC 20-27.

c. In-Process Inspections. The FAA usually will not perform in-process inspections for determining airworthiness during the fabrication and assembly process. However, the FAA has to make a determination that the aircraft is in a condition for safe operation. Therefore, the amateur builder's documentation needs to indicate all in-process inspections by knowledgeable persons, such as EAA technical counselors or certificated mechanics. All in-process inspection documentation needs to include dates and names of all person(s) involved.

d. FAA Pre-Cover Inspections. The FAA may conduct pre-cover inspections at its own discretion during the fabrication and assembly process for the purpose of determining if the major portion requirement of 14 CFR § 21.191(g) has been met. As with in-process inspections, all pre-cover inspections need to be thoroughly documented to include dates and names of all person(s) involved. In no instance will the FAA perform any of the fabrication or construction work on an aircraft they are certificating.

e. Proper Documentation. Amateur builder(s) need to be able to provide adequate and sufficient documentation to detail the construction and inspections of their aircraft.

(1) These records need to clearly indicate what was fabricated, assembled, or inspected, by whom, and the date the activity was performed.

(2) Documentation should clearly show who performed the task(s), describe when and where the tasks were performed, depict the methods of acceptable aeronautical construction and practices, and document the use of commercial and noncommercial assistance.

(3) The FAA must be provided with sufficient information to make a major portion determination. This documentation may include the following:

(a) The Amateur-Built Aircraft Fabrication and Assembly Checklist (2009).

(b) Comprehensive builder's logs in any format, to include photographs of all the steps included in each of the listed tasks in the Amateur-Builder Aircraft Fabrication and Assembly Checklist (2009), materials and techniques used in construction, as well as dates, locations, and detailed descriptions.

(c) Photographs/video/DVD.

(d) Drawings and engineering specifications.

(e) Kit manufacturer's data, when necessary.

(f) Relevant documentation (for example, plans) and references (for example, handbooks) used.

(g) Documentation concerning any commercial assistance used, including receipts.

(h) Documentation concerning any non-commercial assistance used.

(i) Article inventories and histories.

(j) Receipts and catalogs.

(k) Logbook entries.

f. Showing Compliance to 14 CFR § 91.319(b). The applicant should be advised that after the experimental amateur-built airworthiness certificate has been issued, they must show compliance to 14 CFR § 91.319(b). This is done by developing a flight test program that addresses the requirements, goals, and objectives of each test flight. The flight test program should be developed in accordance with AC 90-89, Amateur-Built Aircraft and Ultralight Flight Testing Handbook, or its equivalent in scope and detail. Flight test programs serve two purposes:

(1) They ensure the aircraft has been adequately tested and determined to be safe to fly within the aircraft's flight envelope.

(2) The flight test data is used to develop an accurate and complete aircraft flight manual and to establish emergency procedures.

Note: The EAA Flight Advisor program has been established to assist applicants in developing flight test programs.

4102. Certification Procedures. The procedures in these paragraphs provide guidance concerning amateur-built airworthiness certification and the issuance of FAA Form 8130-7, Special Airworthiness Certificate. FAA inspection of an amateur-built aircraft will be limited to a general airworthiness inspection when the aircraft is submitted for airworthiness certification. During this inspection, the FAA may not request extensive disassembly of the aircraft if the amateur builder can provide documented evidence of fabrication, assembly, and in-process inspections. The only time disassembly should be requested is when there is a lack of adequate documentation as described above, or if there is a suspected safety issue that would endanger the public.

a. Documentation in Support of Eligibility. It is necessary for the applicant to show and the FAA to find that the aircraft complies with the requirements of 14 CFR § 21.191(g). Common documentation in support of eligibility is typically in the form of a builder's log and substantiating photographs (see paragraph 4101e of this order for a complete list).

b. Major Portion Determination. The FAA must always make a major portion determination when an amateur-built aircraft has been presented for certification.

c. Deviating from Kits and/or Using Commercial Assistance. When the FAA identifies an aircraft as meeting the major portion requirement, at the time of certification, the FAA will review the applicant's documentation. Deviations from the FAA-identified kit configuration or changes that would result in an increase in the amount of commercial assistance will require the FAA to determine (before fabrication and assembly, and using Amateur-Built Aircraft Fabrication and Assembly Checklist (2009)) that the kit still meets the major portion requirement.

d. FAA Responsibilities at the Time of Certification. At the time of airworthiness certification, the FAA must—

(1) Ensure the aircraft is complete and all documentation is sufficient, credible, and adequate. If the applicant cannot, or will not, provide a statement of eligibility (FAA Form 8130-12), or the documentation is inadequate to make a major portion determination, the applicant should be advised that the aircraft cannot be certificated as an amateur-built aircraft and a denial letter will be issued.

(2) Examine records that the aircraft has been weighed in accordance with established weight and balance procedures to determine the aircraft's empty, gross, and most forward and aft CG location, including the weight and balance for the initial flight tests in order to help reduce stall, spin, and other control-related accidents.

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

(b) If the aircraft is constructed from a kit or built from purchased plans, relevant existing documentation is used.

(c) If the amateur builder has made changes to a manufacturer's kit that affect the CG, the predetermined data must be recalculated based on the change(s).

(d) The completed weight and balance report, including load limits for flightcrew, oil, fuel, and baggage, should be available in the aircraft, along with the other applicable placards, listings, and markings required by 14 CFR § 91.9.

e. Certification Documentation. The FAA needs to obtain from the applicant the following FAA forms and documentation, and ensure they are properly executed:

(1) Aeronautical Center Form 8050-3 (a copy or online verification of registration).

(2) FAA Form 8130-6.

(3) A notarized FAA Form 8130-12 certifying that the major portion of the aircraft was fabricated and assembled by the applicant(s) for their own education or recreation purposes and that evidence exists to support this statement (see paragraph 4101e of this order).

(4) Sufficient information to identify the aircraft, such as photographs or three-view drawings.

(5) As described in paragraph 4101e of this order, sufficient, credible, and adequate documentation to show and the FAA to find compliance with the major portion requirement of 14 CFR § 21.191(g).

(6) As described in paragraph 4101c and d of this order, documentation indicating all in-process and precover inspections.

(7) A program letter identifying the aircraft, the purpose of the certificate, the area over which the operations are to be conducted, and the duration of the program. The program letter is based on the requirements of 14 CFR § 21.193(d).

(8) In addition, the applicant may be asked to submit additional information during the airworthiness inspection to assist the FAA in determining if the applicant is eligible for a repairman certificate under 14 CFR § 65.104.

f. FAA Records Review. Completion of FAA Form 8130-12 must not be used as the sole evidence of the applicant's compliance with the education, recreation, and major portion requirements of 14 CFR § 21.191(g). All relevant documentation must be reviewed. The FAA must—

(1) Review the documentation provided by the applicant to determine that the registration requirements of 14 CFR part 47 have been met, and ensure the aircraft is marked in accordance with 14 CFR part 45.

(2) Check with AFS-750 to determine if a denial letter exists for the particular aircraft. This may assist the FAA in determining aircraft eligibility.

(3) Review the aircraft records to determine whether any required maintenance or inspections have been accomplished.

(4) Ensure there is a signed and dated statement from the owner in the aircraft records, that the aircraft has had an inspection performed in accordance with 14 CFR part 43, appendix D, or other approved programs, and was found to be in a condition for safe operation. The inspection will help reduce errors made during construction of the aircraft. This statement will support the owner's inspection and airworthiness statement on block III of FAA Form 8130-6. AC 90-89, appendix 1, as revised, may be used.

> **Note:** There is no requirement for airframe and powerplant mechanics to sign off on amateur-built airworthiness inspections. The aircraft builder's signature on FAA Form 8130-6, block III, attests to the airworthiness of the amateur-built aircraft.

(5) Verify the entries on the Amateur-Built Aircraft Fabrication and Assembly Checklist (2009) to ensure the applicant has fabricated and assembled the major portion.

g. Aircraft Inspection. The FAA must arrange with the applicant to make the aircraft available for inspection to determine, at a minimum, the following:

(1) The ID plate meets the requirements of 14 CFR § 45.11(a), as applicable.

(2) The information on the ID plate matches the information on FAA Form 8130-6 and Aeronautical Center Form 8050-3. The pink copy of Aeronautical Center Form AC 8050-1 cannot be used for original certification).

(3) The aircraft nationality and registration marks are in accordance with 14 CFR part 45, subpart C.

(4) The flight control system, engine(s), propeller(s), pitot static system, and associated instruments operate properly.

(5) The cockpit instruments are appropriately marked, and needed placards are installed and placed for easy reference.

(6) System controls (for example, fuel selector(s) and electrical switches/breakers) are appropriately placed, clearly marked, provide easy access and operation, and function as intended by the amateur builder/owner.

(7) An ELT is installed, if required (14 CFR § 91.207).

(8) All explosive devices used in ballistic parachutes are clearly marked and identified.

Note: The only time extensive disassembly should be requested is if there is a safety concern. Safety concerns may be mitigated through detailed photographs or other documentation (see paragraph 4101e of this order).

h. Certificate Issuance. Upon satisfactory completion of the airworthiness inspection and documentation review, the FAA will issue the special airworthiness certificate and the operating limitations for that aircraft. The operating limitations (see paragraph 4104 of this order) will be attached to FAA Form 8130-7. The FAA must review the operating limitations with the applicant to ensure a clear understanding of the limitations. The FAA will issue phase I and phase II operating limitations for an unlimited duration during the initial airworthiness certification. The FAA may elect to issue phase I and phase II limitations separately only when a documented safety issue exists. The operating limitations should be prescribed in two phases in the same document as follows:

(1) For the phase I limitations, the FAA must prescribe all operating limitations appropriate for the applicant to demonstrate compliance with 14 CFR § 91.319(b) in the assigned flight test area. This includes a limitation requiring the owner/operator to endorse the aircraft logbook and maintenance records with a statement certifying that the prescribed flight hours have been completed, and the aircraft has been shown to comply with 14 CFR § 91.319(b). The owner/operator may then operate in accordance with phase II.

(2) For the phase II limitations, the FAA must prescribe operating limitations, as appropriate, for the operation of an amateur-built aircraft for an unlimited duration.

(3) Under 14 CFR § 91.319(i), the FAA may prescribe any additional limitations in phase I or phase II deemed necessary in the interest of safety.

(4) If the aircraft meets the requirements for the certification requested, the FAA must—

(a) Make an aircraft logbook and maintenance records entry.

(b) Issue FAA Form 8130-7.

(c) Complete sections V and VIII of FAA Form 8130-6, in accordance with the instructions contained in chapter 8 of this order.

(d) Examine, review, and route the certification file, in accordance with the instructions contained in chapter 8 of this order.

(5) If the aircraft does not meet the requirements for the certification requested and the airworthiness certificate is denied, the FAA must—

(a) Write a letter to the applicant stating the reason(s) for denying the airworthiness certificate.

(b) Attach a copy of the denial letter to the original FAA Forms 8130-6 and 8130-12 and forward to AFS-750 to be made part of the aircraft record.

(c) Return to the applicant the documentation (photographs and three-view drawings) submitted for airworthiness certification.

(d) Advise the applicant that all documentation indicated in paragraph 4102e of this order needs to be resubmitted at the time of reapplication.

i. Transfer of Airworthiness Certificates. An airworthiness certificate is transferred with the aircraft (14 CFR § 21.179), for example, if there is a change of ownership or transfer of registration. There is no FAA inspection required after transfer of an aircraft with its airworthiness certificate, unless it is determined that revised operating limitations are necessary. In this case, a new FAA Form 8130-7 must be issued to reflect the new date of the revised operating limitations. FAA Form 8130-6 will be required to be submitted by the applicant.

j. Expired or Foreign Airworthiness Certificates. In some cases, amateur-built aircraft are sold with an expired airworthiness certificate or foreign airworthiness certificate. In such cases, an applicant may request and receive a special airworthiness certificate for the purpose of operating amateur-built aircraft, only if the aircraft previously was certificated under, and continues to meet 14 CFR § 21.191(g). In this case, a new FAA Form 8130-7 would be issued along with new operating limitations, but without the eligibility to obtain a repairman certificate for that aircraft. The new certificate should be issued only after the FAA has verified airworthiness by following the appropriate procedures in paragraph 4002 (Certification Procedures) of this order.

k. Special Considerations. In addition to the above certification requirements, if an applicant's aircraft is an unevaluated foreign amateur-built kit, the FAA must perform a major portion determination using the Amateur-Built Aircraft Fabrication and Assembly Checklist (2009). If compliance to the major portion requirement of 14 CFR § 21.191(g) cannot be ascertained, a special airworthiness certificate for the purpose of operating amateur-built aircraft must not be issued.

l. Canadian Applicants. A Canadian applicant with a design for an amateur-built aircraft kit may make an application to Transport Canada Civil Aviation (TCCA) for evaluation of the kit design. Upon receipt of the application, TCCA will review the design for compliance with the U.S. major portion requirements of 14 CFR § 21.191(g), and forward it to the Aircraft Certification Service, Production and Airworthiness Division, AIR-200. The process for FAA
* approval is contained in the Implementation Procedures for Airworthiness (IPA) with Transport Canada. *

m. Operation of Canadian-Registered Amateur-Built Aircraft in the United States. Canadian-registered amateur-built aircraft are issued a special C of A with operating limitations set by TCCA. Operation of Canadian-registered amateur-built aircraft certified under the provisions of Canadian air regulations in the United States is permitted by the issuance of a SFA under 14 CFR § 91.715. This authorization must be obtained before operation in the United States is permitted. The authorization may be requested electronically via the FAA website at http://www.faa.gov. Additional guidance on the issuance of SFAs for Canadian-registered amateur-built aircraft may be found in paragraph 707 of this order.

n. Canadian Amateur-Built Aircraft. There are differences between Canadian and U.S. regulations and policies governing the issuance of airworthiness certificates concerning amateur-built aircraft. Aircraft built in Canada as amateur-built aircraft and brought into the United States are not eligible to receive an FAA-issued experimental airworthiness certificate as an amateur-built aircraft. However, applicants may be considered for eligibility if—

(1) They provide the FAA an official TCCA document stating that the applicant did in fact fabricate and assemble the major portion of the aircraft within the meaning of, and in compliance with, 14 CFR § 21.191(g), or

(2) They must show evidence of meeting 14 CFR § 21.191(g).

4103. Flight Test Areas.

a. General. 14 CFR § 91.319(b) requires that an unproven aircraft be assigned to a flight test area. The assigned test area is prescribed in accordance with 14 CFR § 91.305. The FAA, when requested, should assist applicants in selecting areas that comply with 14 CFR § 91.305. The FAA is required to evaluate each application to determine that the flight test area does not exceed that which is reasonably required to accomplish the program. Actions pertaining to flight test areas must be coordinated with the nearest office of the Air Traffic Service.

b. Assigned Flight Test Area. Under 14 CFR §§ 91.319(b) and 91.305, all initial flight operations of experimental aircraft must be limited to the assigned flight test area until the aircraft is shown to be controllable throughout its normal range of speeds and all maneuvers to be executed, and has not displayed any hazardous operating characteristics or design features.

(1) 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 of flight, the FAA must ensure that a route of flight is selected which subjects the fewest persons and least property to possible hazards. In addition, upon leaving such an airport, the aircraft should 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 corridor for subsequent operations. The description of the area selected by the applicant and agreed to by the FAA must be made a part of the operating limitations; or

(2) In the case of an aircraft located at any airport surrounded by a densely populated area and lacking any acceptable approach/departure route of flight, the FAA must deny the airworthiness certificate and process the denial in accordance with paragraph 4102 of this order. The applicant must be advised to relocate the aircraft by other means to a suitable airport.

c. Assigned Flight Test Area. The procedures outlined under paragraph 4075 of this order are applicable to amateur-built aircraft. Although the period of assignment is not established by regulation, the following times are suggested as guidelines when issuing original airworthiness certificates for amateur-built aircraft:

(1) Amateur-built aircraft issued original airworthiness certificates should be limited to operation within an assigned flight test area for a minimum of 25 hours when a type-certificated engine/propeller combination is installed. A minimum of 40 hours is required

when a non-type-certificated engine, propeller, or engine/propeller combination is installed. Furthermore, if the type-certificated engine, propeller, or engine/propeller combination installed have been altered in a way that differs from an approved type design in a TCDS, a minimum of 40 hours shall be required.

(2) Amateur-built gliders, balloons, dirigibles, and ultralight vehicles that meet the requirements of 14 CFR § 21.191(g), and for which original airworthiness certification is sought, should be limited to operation within an assigned flight test area for at least 10 hours of operation, including at least five takeoffs and landings.

(3) Following any major change, an amateur-built aircraft must be assigned to a flight test area for a minimum of 5 hours.

d. Operation Outside the Flight Test Area. The procedures outlined under paragraph 4076 of this order are applicable for amateur-built aircraft. During operation outside the flight test area, the following placard must be displayed in the aircraft in full view of all occupants: "NOTE: PASSENGER WARNING—THIS AIRCRAFT IS AMATEUR-BUILT AND DOES NOT COMPLY WITH FEDERAL SAFETY REGULATIONS FOR STANDARD AIRCRAFT."

Note: This placard is not necessary for single-place aircraft.

4104. Issuance of Experimental Amateur-Built Operating Limitations.

a. Operating limitations must be designed to fit the specific situation encountered. The ASI may impose any additional limitations deemed necessary in the interest of safety. The ASI and/or designee must review each imposed operating limitation with the applicant to ensure that the operating limitations are understood by the applicant.

b. The following operating limitations shall be prescribed to experimental amateur-built aircraft:

(1) No person may operate this aircraft for other than the purpose of meeting the requirements of 14 CFR § 91.319(b) during phase I flight testing, and for recreation and education after meeting these requirements as stated in the program letter (required by 14 CFR § 21.193) for this aircraft. In addition, this aircraft must be operated in accordance with applicable air traffic and general operating rules of 14 CFR part 91 and all additional limitations herein prescribed under the provisions of 14 CFR § 91.319(i). These operating limitations are a part of FAA Form 8130-7, and are to be carried in the aircraft at all times and be available to the pilot in command of the aircraft.

(2) During phase I flight testing to meet the requirements of 14 CFR § 91.319(b), all flights must be conducted within the geographical area described as follows:

(a) The area must be described by radius, coordinates, and/or landmarks.

(b) The designated area must be over open water or sparsely populated areas having light air traffic.

(c) The size of the area must be that required to safely conduct anticipated maneuvers and tests, as appropriate.

Note: In the case of an airport surrounded by a densely populated area, see paragraph 4075b(1) of this order.

(3) This aircraft must be operated for at least _____ hours in the assigned geographic area.

Note: See paragraph 4103c(1) of this order for hour requirements. ASIs may assign longer test hours when it is necessary to determine compliance with 14 CFR § 91.319(b).

(4) All test flights, at a minimum, must be conducted under day VFR only. Guidance concerning the scope and detail of test flights can be found in AC 90-89. 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 14 CFR § 91.319(b). Compliance with 14 CFR § 91.319(b) must be recorded in the aircraft 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 operating characteristics or design features, and is safe for operation. The following aircraft operating data has been demonstrated during the flight testing: speeds Vso _____, Vx _____, and Vy _____, and the weight _____ and CG location _____ at which they were obtained."**

(5) Except for takeoffs and landings, this aircraft may not be operated over densely populated areas or in congested airways.

Note: This limitation is applicable for phases I and II and should be issued in accordance with paragraphs 4075b(1) and (2) of this order.

(6) This aircraft is prohibited from operating in congested airways or over densely populated areas unless directed by air traffic control, or unless sufficient altitude is maintained to effect a safe emergency landing in the event of a power unit failure, without hazard to persons or property on the ground.

Note: This limitation is applicable to the aircraft after it has satisfactorily completed all requirements for phase I flight testing, has the appropriate endorsement in the aircraft logbook and maintenance records, and is operating in phase II.

* (7) During Phase 1 flight testing, this aircraft is to be operated under VFR, day only. *

(8) After completion of phase I flight testing, unless appropriately equipped for night and/or instrument flight in accordance with 14 CFR § 91.205, this aircraft is to be operated under VFR, day only.

(9) Aircraft instruments and equipment installed and used under 14 CFR § 91.205 must be inspected and maintained in accordance with the requirements of 14 CFR part 91. Any maintenance or inspection of this equipment must be recorded in the aircraft logbook and maintenance records.

(10) During the flight testing phase, no person may be carried in this aircraft during flight unless that person is essential to the purpose of the flight.

(11) No person may operate this aircraft for carrying persons or property for compensation or hire.

(12) The pilot in command of this aircraft must advise each passenger of the experimental nature of this aircraft, and explain that it does not meet the certification requirements of a standard certificated aircraft.

(13) This aircraft must contain the placards or markings, as required by 14 CFR § 91.9. In addition, the placards and markings must be inspected for legibility and clarity, and the associated systems inspected for easy access and operation, to ensure they function as intended by the amateur builder/owner during each condition inspection.

(14) This aircraft must display the word "EXPERIMENTAL" in accordance with 14 CFR § 45.23(b).

(15) This aircraft is prohibited from aerobatic flight, that is, an intentional maneuver involving an abrupt change in the aircraft's attitude, an abnormal attitude, or abnormal acceleration not necessary for normal flight.

> **Note:** If the amateur builder states that the aircraft is capable of aerobatic flight, limitation 16 will be used in lieu of limitation 15.

(16) This aircraft may conduct aerobatic flight in accordance with the provisions of 14 CFR § 91.303. Aerobatics must not be attempted until sufficient flight experience has been gained to establish that the aircraft is satisfactorily controllable and in compliance with 14 CFR § 91.319(b). The aircraft may only conduct those aerobatic flight maneuvers that have been satisfactorily accomplished during flight testing and recorded in the aircraft logbook and maintenance records by use of the following, or a similarly worded, statement: **"I certify that the following aerobatic maneuvers have been test flown and that the aircraft is controllable throughout the maneuvers' normal range of speeds, and is safe for operation. The flight-tested aerobatic maneuvers are _____, _____, _____, and _____."**

Note: Aerobatic flights may be permitted in the assigned test area. The applicant should be advised that aerobatics or violent maneuvers should not be attempted until sufficient flight experience has been gained to establish that the aircraft is satisfactorily controllable. These operating limitations may be modified to include only those aerobatics/maneuvers that have been satisfactorily accomplished and recorded in the aircraft records during the flight test period. These aerobatic maneuvers should be permitted upon leaving the assigned test area. Appropriate limitations identifying the aerobatics/maneuvers and conditions under which they may be performed should be prescribed. The FAA may witness aerobatic maneuvers, if deemed necessary.

(17) The pilot in command of this aircraft must hold an appropriate category/class rating. If required, the pilot in command also must hold a type rating in accordance with 14 CFR part 61, or an LOA issued by an FAA Flight Standards Operations Inspector.

Note: This limitation applies to any turbojet/turbofan-powered aircraft, any aircraft with a maximum takeoff weight exceeding 12,500 pounds, and any other aircraft when deemed necessary. The Flight Standards Service inspectors should see FAA Order 8700.1, General Aviation Inspector's Handbook, for further guidance.

(18) The pilot in command of this aircraft must hold a pilot certificate or an authorized instructor's logbook endorsement. The pilot in command also must meet the requirements of 14 CFR § 61.31(e), (f), (g), (h), (i), and (j), as appropriate.

Note: This operating limitation applies to most amateur-built aircraft as a standard operating limitation (reference 14 CFR § 61.31(k)).

(19) After incorporating a major change as described in 14 CFR § 21.93, the aircraft owner is required to reestablish compliance with 14 CFR § 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. All operations must be conducted under day VFR conditions in a sparsely populated area. 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 a detailed aircraft logbook and maintenance records 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 14 CFR § 91.319(b). Compliance with 14 CFR § 91.319(b) must be recorded in the aircraft 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. The following aircraft operating data has been demonstrated during the flight testing: speeds Vso _____, Vx _____, and Vy _____, and the weight _____, and CG location _____ at which they were obtained."

(20) This aircraft must not be used for glider towing, banner towing, or intentional parachute jumping.

(21) This aircraft does not meet the requirements of the applicable, comprehensive, and detailed airworthiness code, as provided by Annex 8 to the Convention on International Civil Aviation. The owner/operator of this aircraft must obtain written permission from another CAA before operating this aircraft in or over that country. That written permission must be carried aboard the aircraft together with the U.S. airworthiness certificate and, upon request, be made available to an FAA inspector or the CAA in the country of operation.

(22) No person must operate this aircraft unless within the preceding 12 calendar months it has had a condition inspection performed in accordance with the scope and detail of 14 CFR part 43, appendix D, or other FAA-approved programs, and was found to be in a condition for safe operation. As part of the condition inspection, cockpit instruments must be appropriately marked and needed placards installed in accordance with 14 CFR § 91.9. In addition, system-essential controls must be in good condition, securely mounted, clearly marked, and provide for ease of operation. This inspection will be recorded in the aircraft logbook and maintenance records.

(23) Condition inspections must be recorded in the aircraft logbook and maintenance records showing the following, or a similarly worded, statement: **"I certify that this aircraft has been inspected on [insert date] in accordance with the scope and detail of 14 CFR part 43, appendix D, 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.

> **Note:** Limitations 24 and 25 of this paragraph will be issued in lieu of limitations 22 and 23 of this paragraph for turbine-powered amateur-built aircraft.

(24) This aircraft must not be operated unless it is inspected and maintained in accordance with an inspection program selected, established, identified, and used as set forth in 14 CFR § 91.409(e) through (h). This inspection must be recorded in the aircraft logbook and maintenance records.

(25) Inspections must be recorded in the aircraft logbook and maintenance records showing the following, or a similarly worded, statement: **"I certify that this aircraft has been inspected on [insert date] in accordance with the scope and detail of the [identify program, title] FSDO-approved program dated _____, and 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.

(26) An experimental aircraft builder certificated as a repairman for this aircraft under 14 CFR § 65.104 or an appropriately rated FAA-certificated mechanic may perform the condition inspection required by these operating limitations.

(27) Application must be made to the geographically responsible FSDO or MIDO for any revision to these operating limitations.

(28) The pilot in command of this aircraft must notify air traffic control of the experimental nature of this aircraft when operating into or out of airports with an operational control tower. When filing Instrument Flight Rules (IFR), the experimental nature of this aircraft must be listed in the remarks section of the flight plan.

4105.-4106. Reserved.

Section 10. Certification and Operation of Aircraft Under the Experimental Purpose(s) of Exhibition and Air Racing

4107. General. Under the provisions of 14 CFR § 21.191(d), exhibition aircraft are defined as aircraft that exhibit the aircraft's flight capabilities, performance, or unusual characteristics at airshows, fly-ins, aviation 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. Under the provisions of 14 CFR § 21.191(e), air racing aircraft are defined as aircraft that participate in air races, including (for such participants) practicing for such air races and flying to and from racing events.

a. Exhibition. A certificate for experimental exhibition must only be issued when an aircraft is to be used for valid exhibition purposes. Included in those purposes are organized airshows, organized fly-in activities, organized exhibitions, youth education events, shopping mall/school/similar static displays, organized aerobatic competition, fly-ins or meets, and movie or television productions. The duration of an airworthiness certificate for exhibition is unlimited.

b. Air Racing. A certificate for experimental air racing must only be issued when an aircraft is to be used for valid air racing purposes, including organized air races or sail plane competitive events. The duration of an airworthiness certificate for air racing is unlimited.

c. Home Base Changes or Ownership Transfers. When an aircraft's home base is changed or there is a transfer of ownership, the owner/operator must notify the local FSDO having jurisdiction over the area in which the aircraft will be based within 30 days, and—

(1) Provide the FSDO with a copy of the FAA-approved inspection program (if required for the aircraft). The person responsible for scheduling the inspections must be identified in the program letter to the FSDO. The gaining FSDO should accept the previously approved program, but may review it to ensure the adequacy of the program.

(2) The gaining FSDO will not require the aircraft's special airworthiness certificate and operating limitations to be reissued, unless the aircraft is in Phase I test flight operations, the current limitations require reissuance, or the owner requests reissuance or amendment.

(3) Upon transfer of ownership, the gaining FSDO will require the new owner to submit a new program letter to ensure the new owner is familiar with the limitations of the experimental exhibition aircraft. A new proficiency area is required for Groups 6 and 7 aircraft as described in paragraph 4110 of this order.

(4) Copies of the aircraft registration, special airworthiness certificate, and operating limitations are on file with the FAA Aircraft Registration Branch, and the aircraft owner does not need to provide copies to the gaining FSDO.

d. Existing Airworthiness Certificates and Operating Limitations. All previously issued airworthiness certificates and operating limitations will remain valid unless changes are requested by the applicant or reexamined by the FAA in accordance with 49 U.S.C. 44709.

4108. Former Military Aircraft.

a. Background. Many of the aircraft that are presented for airworthiness certification for the purpose(s) of exhibition or air racing are former military aircraft, both U.S. and non-U.S. The FAA acknowledges the significant role military aircraft have played in our aviation heritage and the importance of preserving their legacy for future generations. The exhibition of former military aircraft at aviation events for demonstration and display provides the public a rare view into our aviation past. Therefore, it is the policy of the FAA to permit the operation of former military aircraft for civilian use, consistent with the need to safeguard the general public.

b. Former Military Aircraft. These aircraft have historically operated in the United States for R&D, air racing, and exhibition purposes in the experimental category. It is the policy of the FAA that eligible aircraft will be certificated in the experimental category when operated for the special purposes of exhibition and/or air racing.

Note: Not all former military aircraft require experimental airworthiness certificates. Some models have a valid TC and are eligible for other airworthiness certificates.

c. Limitations. To ensure the safe operation of these aircraft and minimize adverse environmental impact, the FAA has established appropriate and reasonable operating limitations. Operating limitations developed jointly by the FAA Aircraft Certification Service and FAA Flight Standards Service are contained in paragraph 4113 of this order.

d. Maintenance and Inspections. The ability of civilian operators to maintain and operate these aircraft depends on their background and experience, training and facilities, availability of technical manuals and design information, and the complexity of the aircraft involved. Aircraft inspection guidelines are contained in the FAA Inspector’s Handbook; FAA Order 8900.1. Qualification standards for flight crew members have been developed by the Flight Standards Service and are contained in the FAA Inspector's Handbook.

e. Environmental Impact. Applicants for certification of experimental exhibition aircraft must be advised that these aircraft were designed and manufactured without the acoustical treatment provided for current commercial and business aircraft. They also must be advised of industry-developed procedures and guidelines designed to minimize the impact such aircraft impose at airports and the surrounding communities. Aircraft operators must accept the

responsibility for operating their aircraft in such a manner as to reduce the environmental impact to the lowest practicable level consistent with safe operation.

4109. Brokering. 14 CFR § 21.191(d) was not intended to allow for the brokering or marketing of experimental aircraft. This includes individuals who manufacture, import, or assemble aircraft, and then apply for and receive experimental exhibition airworthiness certificates so they can sell the aircraft to buyers. 14 CFR § 21.191(d) ONLY provides for the exhibition of an aircraft's flight capabilities, performance, or unusual characteristics at airshows, and for motion picture, television, and similar productions. COs must ensure that all applications for exhibition airworthiness certificates are for the purposes specified under 14 CFR § 21.191(d), and are from the registered owners who will exhibit the aircraft for those purposes. Applicants also must provide the applicable information specified in 14 CFR § 21.193.

4110. Groups of Aircraft. Aircraft eligible for experimental airworthiness certification are divided into seven groups. This was done in order to establish standardized operating limitations and inspection requirements. Operating limitations for each group are provided in paragraph 4113 of this order. The FAA will determine which group the aircraft will operate in based on the following definitions. An aircraft that meets any one of the criteria falls in that group. An aircraft with an ejection seat is always in group 7. Questions concerning the appropriate group for specific aircraft will be referred to the FAA National Program Office for Vintage and Experimental Aircraft, AFS-800.

a. Group 1 Aircraft.

(1) Description of Aircraft.

(a) Gliders, both unpowered and powered.

(b) The aircraft must be in full compliance with the manufacturer's or country of origin's maintenance and/or inspection programs (if provided).

(c) If the State of Manufacture or CAA does not provide an inspection program, the aircraft must have an annual condition inspection that meets the scope and detail of 14 CFR part 43, appendix D.

(d) The aircraft must be in full compliance with manufacturer's or country of origin life limits (if specified).

(2) Type of Aircraft. This group includes gliders; unpowered, self launching, and sustaining.

b. Group 2 Aircraft.

(1) Description of Aircraft.

(a) Piston or turbo propeller powered.

(b) Maximum gross takeoff weight not more than 12,500 lb.

(c) Stall speeds of 61 knots or less.

(d) If multiengine, is operated at weights and altitudes such that the aircraft is capable of continuing a takeoff after the failure of the critical power plant.

(e) Not equipped with an operable ejection seat.

(f) Must be in compliance with the manufacturer's or country of origin's maintenance, and/or inspection programs (if provided).

(g) If the manufacturer or country of origin does not provide an inspection program, the aircraft must have an annual condition inspection that meets the scope and detail of 14 CFR part 43, appendix D.

(h) The aircraft must be in full compliance with manufacturer's or country of origin life limits (if specified).

(2) Type of Aircraft. Examples of aircraft that could operate under this group include, but are not limited to, aircraft such as the Yak-52; SU-31; SIAI-Marchetti S.M.1019, AN-2; all single-engine piston-powered WWII fighters; and small helicopters.

c. Group 3 Aircraft.

(1) Description of Aircraft.

(a) Piston or turbo propeller powered with a takeoff rating of greater than 800 HP (per engine) and a V_{NE} greater than 250 knots.

(b) If multiengine, is operated at weights and altitudes such that the aircraft is capable of continuing a takeoff after the failure of the critical power plant.

(c) Not equipped with an operable ejection seat.

(d) The aircraft must be in full compliance with the manufacturer's or country of origin's maintenance and/or inspection programs (if specified).

(e) If the manufacturer or country of origin does not provide an inspection program, the aircraft must have an annual condition inspection that meets the scope and detail of 14 CFR part 43, appendix D.

(f) The aircraft must be in full compliance with manufacturer's or country of origin life limits.

(2) Type of Aircraft. Examples of aircraft that could operate under this group include, but are not limited to, aircraft such as the P-51; T-28; Yak-9; RI-OV10; and Hawker Sea Fury.

d. Group 4 Aircraft.

(1) Description of Aircraft.

(a) Piston- or turbine-powered.

(b) Maximum gross takeoff weight in excess of 12,500 lb.

(c) Not equipped with an operable ejection seat.

(d) Must be maintained in full compliance with manufacturer, country of origin, or FAA-approved maintenance and inspection programs.

(e) If the manufacturer or country of origin does not provide an inspection program, the owner/operator must select, establish, identify, and use an inspection program as set forth in 14 CFR § 91.409(f), (g), and (h).

(f) The aircraft must be in full compliance with manufacturer or country of origin life limits (if specified).

(2) Type of Aircraft. This group includes, but is not limited to, aircraft such as the IL-78; B-29; PB4Y; and OV-1.

e. Group 5 Aircraft.

(1) Description of Aircraft.

(a) Piston- or turbine-powered.

* (b) Maximum gross takeoff weight of 12,500 lb or less. *

(c) If multiengine, operated at weights or altitudes such that the aircraft is not capable of maintaining a positive rate of climb after failure of the critical engine.

(d) Not equipped with an operable ejection seat.

(e) The aircraft must be in full compliance with the manufacturer, country of origin, or FAA-approved maintenance and inspection programs. If the manufacturer or country of origin does not provide an inspection program, the owner/operator must select, establish, identify, and use an inspection program as set forth in 14 CFR § 91.409(f), (g), and (h).

(f) The aircraft must be in full compliance with manufacturer or country of origin life limits (if specified).

(2) Type of Aircraft. This group includes, but is not limited to, aircraft such as the: L-29; L-39; T-33; and CM-170.

f. Group 6 Aircraft.

(1) Description of Aircraft. This group includes aircraft from any Group 1, 2, 3, 4 or 5, but is not maintained in accordance with the manufacturer's maintenance and/or inspection programs and life limits or approved life extensions.

(2) Type of Aircraft. This group includes aircraft that fit in to other groups but have not been maintained and inspected in accordance with an approved program, have an undocumented service/maintenance/inspection history, or are not in compliance with their life limits.

(3) Proficiency Area. A proficiency area will be established for the aircraft within this group. All proficiency flights will be conducted in airspace not more than one-half the range of the aircraft from the aircraft's home base airport and must be clearly described in the program letter. The proficiency area may be depicted using a map or it may be described by geographic land marks, airports, or aids to navigation. The maximum dimension of the proficiency area will not exceed 600 Nautical Miles (NM).

g. Group 7 Aircraft.

(1) Description of Aircraft.

(a) Unable to comply with 14 CFR § 91.117(a) in normal cruise configuration.

(b) Manufacturer's or country of origin emergency checklist requires bailout or ejection in the event of an engine or other system failure.

(c) If multiengine, not capable of continuing a takeoff after the failure of the critical power plant.

(d) Equipped with an operable ejection seat.

(e) Not maintained in accordance with the manufacturer's maintenance, inspection, and life limits (if specified).

(f) Rocket-powered aircraft.

(2) Type of Aircraft. This group includes aircraft that do not fit in to other groups and/or pose a higher risk to the general public. This group includes, but is not limited to subsonic aircraft such as the AV-8 Harrier; and supersonic aircraft such as the MIG-21, F-104, F-4, and SU-27.

(3) Proficiency Area. A proficiency area will be established for the aircraft within this group. All proficiency flights will be conducted in airspace not more than one-half the range of the aircraft from the aircraft's home base airport and must be clearly described in the program letter. The proficiency area may be depicted using a map or it may be described by geographic landmarks, airports, or aids to navigation. The maximum dimension of the proficiency area will not exceed 600 NM.

4111. Special Initial Certification Requirements. The following provides information and guidance concerning the initial airworthiness certification for experimental aircraft for the purpose(s) of exhibition and/or air racing. These steps are in the normal order of occurrence for the certification of these aircraft.

a. Demilitarization of Former Military Aircraft. For demilitarization of former military aircraft, see paragraph 4073 of this order.

b. Records Inspection. In addition to the record inspection requirements of paragraph 4002a of this order, the FAA must—

(1) Obtain from the applicant a program letter in accordance with 14 CFR § 21.193, setting forth the purpose(s) for which the aircraft will be used. The program letter must be specific as to the intended use under the purpose request and must include the information as required by limitation #3 found in paragraph 4113b(3) of this order.

(2) Ensure that the applicant has written in or translated into the English language all of the necessary maintenance, inspection, operating, and flight manual(s) required to safely operate the aircraft.

(3) Verify that maintenance records reflect records of inspections, overhauls, repairs, time-in-service on life-limited articles and engines, etc., and that all records are current. In
* addition, for Group 4 and 5 aircraft, if appropriate, make an entry in the aircraft logbook showing *
the following (or similarly worded) statement: "The inspection program for this aircraft has been approved by the [insert name of FSDO] on [insert approval date] by [insert printed name of ASI], signed by approving Inspector."

> **Note:** The requirements in 14 CFR § 91.409(e) are applicable via an operating limitation issued at the time of certification for all turbojet powered and large aircraft. One of the requirements provides for the replacement of life-limited articles at a time specified in documents approved by the FAA.

(4) For turbine powered and large aircraft (maximum gross take-off weight in excess of 12,500 pounds), aircraft as described in paragraph 4110 of this order, verify that the applicant has an FSDO-approved inspection program that meets the requirements of 14 CFR § 91.409 and complies with the manufacturer's program. Guidance regarding inspection programs can be found in FAA Order 8900.1

> **Note:** A special airworthiness certificate shall not be issued for these
* aircraft without a FSDO-approved inspection program, unless issued
Group 6 or 7 operating limitations. *

(5) Verify that the appropriately rated FAA-certificated mechanic has made an entry in the aircraft records documenting the applicable inspections as referenced in paragraph 4111d of this order for all aircraft (including new) within 60 days before submitting FAA Form 8130-6.

c. Aircraft Inspection. The FAA will perform an inspection to the extent necessary to ensure that a prior inspection of the aircraft and aircraft systems has been accomplished in accordance with the inspection requirements as identified in paragraph 4002b of this order. The FAA will verify that instruments, instrument markings, and placards are as required by the CFR and are identified in the English language. In addition, the FAA will verify that all measurements are converted to standard U.S. units of measure for those instruments necessary for operation in the U.S. air traffic system.

> **Note:** Depending on the intended operation, the applicable reference would be 14 CFR § 91.205(b), VFR (day); 14 CFR § 91.205(c), VFR (night); or 14 CFR § 91.205(d), IFR. Operators should be alerted that there are specific requirements under 14 CFR part 91 for maintenance and inspection of the various aircraft instruments, and that those requirements are applicable for these aircraft if the instruments are installed, for example, 14 CFR §§ 91.173 through 91.187, 91.215, 91.217, 91.219, 91.411, 91.413, etc.

4112. Certification Procedures.

a. Once it has been determined that the aircraft meets the requirements for the special airworthiness certification requested, the FAA must—

(1) Make an aircraft record entry showing the following, or similarly worded statement: "I find this aircraft meets the requirements for a special airworthiness certificate for the purpose(s) of [identify purpose(s)], and have issued a special airworthiness certificate and operating limitations dated _____. The next inspection is due _____. Signed: John Doe, Aviation Safety Inspector, NM48."

(2) Issue the special airworthiness certificate and appropriate operating limitations in accordance with this order.

b. Denial. If the aircraft does not meet the certification requirements and the special airworthiness certificate is denied, the FAA will provide a letter to the applicant stating the reason(s) for denial and, if feasible, identify which steps may be accomplished to meet the certification requirements. Should this occur, a copy of the denial letter will be attached to FAA Form 8130-6 and forwarded to AFS-750, and made a part of the aircraft's record.

c. Phases. For the purpose of this section:

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

(2) Phase 2 means: an aircraft that has completed Phase 1 testing and has not been altered from the tested configuration, or flown outside the flight tested envelope. Modifications that invalidate Phase 2 limitations are:

(a) Structural modifications;

(b) Aerodynamic modifications, including externally mounted equipment except as permitted in limitation (15) found in paragraph 4113 of this order; and

(c) Change of engine make, model, or power rating (thrust or horse power).

Note 1: The owner/operator may return the aircraft to Phase 1 in order to flight test specific items as required by these limitations without invalidating the issued limitations; however, major modifications such as those listed above may require new operating limitations in accordance with limitation (32) found in paragraph 4113 of this order.

Note 2: The FAA may elect to process the aircraft on a one-time certification basis, for example, via the issuance of only one special airworthiness certificate of unlimited duration. In these instances, when issuing the special airworthiness certificate for the purpose(s) of exhibition and/or air racing, the operating limitations will be prescribed in two phases in the same document.

4113. Issuance of Experimental Exhibition and Air Racing Operating Limitations.

a. Operating limitations. The FAA may impose any additional limitations deemed necessary in the interest of safety, only after coordination with AFS-800 and AIR-200. The FAA must review each imposed operating limitation with the applicant to ensure that the operating limitations are understood by the applicant.

b. Issuance. Operating limitations must be issued in accordance with table 4-1 below:

Table 4-1. Operating Limitations to be Issued

R = Required N = Not required P = Prohibited I = If required by Aircraft Type
OL = Operating Limitation

OL		1	2	3	4	5	6	7	8	9	10	11	12
GROUP	1	R	R	R	R	N	N	N	N	R	R	R	R
	2	R	R	R	R	N	N	N	N	R	R	R	R
	3	R	R	R	R	R	N	N	R	R	R	R	R
	4	R	R	R	R	R	R	R	R	R	R	R	R
	5	R	R	R	R	R	R	I	R	R	R	R	R
	6	R	R	R	R	R	R	I	R	R	R	R	R
	7	R	R	R	R	R	R	I	R	R	R	R	R

OL		13	14	15	16	17	18	19	20	21	22	23	24
GROUP	1	R	R	R	R	R	R	N	N	R	N	N	R
	2	R	R	R	R	R	R	N	N	R	N	N	R
	3	R	R	R	R	R	R	N	N	R	N	N	R
	4	R	R	R	R	R	R	N	N	R	N	N	R
	5	R	R	R	R	R	P	R	N	R	N	N	R
	6	R	R	R	R	R	P	P	R	P	R	R	R
	7	R	R	R	R	R	P	P	R	R	R	R	R

OL		25	26	27	28	29	30	31	32	33	34	35	36
GROUP	1	R	R	R	R	N	N	R	R	R	R	N	R
	2	N	R	R	R	R	R	R	R	R	R	N	R
	3	N	R	R	R	R	R	N	N	R	R	N	R
	4	N	R	R	R	R	R	N	N	R	R	N	R
	5	N	R	R	R	R	R	N	N	R	R	N	R
	6	N	R	**P**	R	R	R	N	N	R	R	R	R
	7	N	R	**P**	R	R	R	N	N	R	R	R	R

OL		37	38	39	40	41	42	43	44	45			
+ GROUP	1	R	R	R	N	R	R	R	R	N			
	2	R	R	R	N	R	R	R	R	N			
	3	R	R	R	N	R	R	R	R	N			
	4	R	R	R	R	R	R	R	R	N			
	5	R	R	R	R	R	R	R	R	N			
	6	R	R	R	R	R	R	R	R	R			
	7	R	R	R	R	R	R	R	R	N			

(1) No person may operate this aircraft for other than the purpose of exhibition, or to
* participate in events, in accordance with 14 CFR § 21.191(d) or § 21.191(e). This aircraft must * be operated in accordance with all air traffic and general operating rules of 14 CFR part 91, all limitations herein prescribed, and as described in the owner operator's program letter. These operating limitations are a part of FAA Form 8130-7, and are to be carried in the aircraft at all times and be available to the pilot in command of the aircraft.

(2) No person may operate this aircraft unless FAA Form 8130-7 is displayed at the cabin or cockpit entrance so that it is visible to passengers or flightcrew members, the word "EXPERIMENTAL" is displayed in accordance with 14 CFR § 45.23, and the aircraft contains the placards and markings required by 14 CFR § 91.9. The pilot in command of this aircraft must advise passengers of the experimental nature of this aircraft and that it does not meet the certification requirements of a standard certificated aircraft.

(3) The owner operator must submit an annual program letter to the geographically responsible FSDO where the aircraft is based. All operations must be conducted in accordance with these limitations and the program letter. 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. The program letter must include the following information:

(a) The aircraft's home base.

(b) The name of the person responsible for the operation and maintenance of the aircraft.

(c) A list of events at which the aircraft will be exhibited (the list may be amended as necessary).

(d) For Group 6 and Group 7 aircraft, the proficiency area. The proficiency area may be depicted using a map or it may be described by geographic landmarks, airports, or aids to navigation.

(4) The pilot in command of this aircraft must hold an appropriate category and class rating.

(5) In addition to the requirements of limitation (4) of this paragraph; the pilot in command also 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 LOA issued by an FAA Flight Standards Operations Inspector.

Note: For the purpose of completing the practical test for the issuance of an experimental aircraft authorization, a qualified instructor may make a logbook endorsement permitting limited local solo operations for a period of not more than 30 days.

(6) In addition to the requirements of limitation (4) of this paragraph, the pilot in command also 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 LOA issued by an FAA Flight Standards Operations Inspector, or

(d) For the purpose of completing the practical test for the issuance of an experimental aircraft authorization, a qualified instructor may make a logbook endorsement permitting limited local solo operations (provided that a second in command is not required by 14 CFR § 91.531) for a period of not more than 30 days.

Note: An experimental aircraft authorization or temporary LOA is issued in accordance with the procedures described in the FSIMS under the title "Airman Qualification Requirements for Aircraft for Which the Operating Limitations require an FAA-issued authorization to act as pilot in command."

(7) Additional crewmembers such as second in command as required by 14 CFR § 91.531, or flight engineers must hold appropriate airmen certificates. The additional required crewmembers must also meet the qualification, training, and recency of experience requirements of 14 CFR part 61 or part 63 as appropriate.

(8) The pilot in command must have completed a flight review in accordance with 14 CFR part 61 from a qualified instructor in a high performance aircraft. Additionally, if the pilot has not completed three takeoffs and landings within the preceding 180 days in this aircraft make and model or comparable aircraft, the pilot must receive training from a qualified instructor in this aircraft make and model or comparable aircraft.

(9) During Phase I test flight operations, this aircraft is to be operated under VFR, day only, and no person may be carried in this aircraft during flight unless that person is a required crewmember. The local FSDO must approve if a person is essential for the test flight.

(10) During Phase I test flight operations, no person may flight test an aircraft except over open water or sparsely populated areas having light air traffic.

(11) During Phase I test flight operations, this aircraft may only operate from [identify name of airport(s)] until the requirements of 14 CFR § 91.319(b) have been met.

(12) During Phase I test flight operations, this aircraft must be operated for at least _____hours with at least _____takeoffs and landings (to a full stop), and all operations must be conducted in the geographic area described as follows:

(a) The size of the test flight area must be the minimum required to safely conduct the anticipated maneuvers and tests.

(b) The area must be described by radius, and/or landmarks, or as depicted on an attached chart.

(c) The minimum number of hours and minimum number of takeoffs and landings should be based on the aircraft's condition and records and the total time on the aircraft and its engine(s).

(d) For aircraft other than newly manufactured or built, the number of hours normally should normally be 10 and the minimum number of takeoffs and landings should be five.

Note: For newly manufactured or newly built aircraft, Phase I test flight limitations similar in scope to paragraph 4013b(3) and 4013b(4) of this order will be added to these operating limitations.

(13) During Phase I test flight operations, 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 14 CFR § 91.319(b). Compliance must be recorded in the aircraft 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 operating characteristics or design features, and is safe for operation."

(14) During Phase I test flight operations, aerobatic maneuvers intended to be performed must be satisfactorily accomplished and recorded in the aircraft records during the flight test period. In addition to the requirements of 14 CFR § 91.303, appropriate limitations identifying the aerobatic maneuvers and conditions under which they may be performed shall be included in the aircraft records.

(15) During Phase I test flight operations, if the aircraft will have removable externally mounted equipment, it must be test flown in all configurations. An entry must be made in the aircraft records indicating the configurations flight tested, unless the original manufacturer's flight test data for that equipment is included in the aircraft limitations.

(16) During Phase II operations, this aircraft is prohibited from flight with any externally mounted equipment except in compliance with limitation (15) of this paragraph.

Note: The owner may place the aircraft back into Phase 1 for the sole purpose of flight testing the added external equipment; in this case the owner must comply with limitation (15) requirements of this paragraph.

(17) During Phase II operations, 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,

(18) During Phase II operations, except for takeoffs and landings (within class B, C, D, or E surface airspace designated for the airport, or 5 NM, whichever is greater), this aircraft may not be operated over densely populated, or congested areas except in compliance with 14 CFR § 91.119, or in an emergency situation. When exercising this authorization, the pilot in command must avoid densely populated areas and congested areas whenever possible.

(19) During Phase II operations, this aircraft may not be operated over densely populated or congested areas. The pilot in command must operate at altitudes and over routes that ensure compliance with 14 CFR § 91.119(a) at all times and avoid densely populated and congested areas.

(20) During all operations, this aircraft may not be operated over densely populated areas or in congested airways. All operations must be conducted in a manner and in areas that, in the event of a bailout, ejection (unless otherwise authorized by AFS-800), or in-flight structural failure, persons or property on the surface or other aircraft in flight are not endangered.

(21) During Phase II operations, no person may be carried in this aircraft during the exhibition of the aircraft's flight capabilities, performance, or unusual characteristics at airshows, or for motion picture, television, or similar productions, unless essential for the purpose of the flight. 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. The pilot in command of this aircraft must advise the passenger of the experimental nature of this aircraft and that it does not meet the certification requirements of a standard certificated aircraft.

(22) During Phase II operations of Group 6 and Group 7 aircraft, all proficiency/practice flights must be conducted within the geographical area described in the applicant's program letter and any modifications to that letter, but that area will not be more than one-half the range of the aircraft from the aircraft's home base airport. An exception is permitted for proficiency flying outside of the area stated above for organized formation flying, training, or pilot checkout in conjunction with a specific event listed in the applicant's program letter (or amendments).

(23) During Phase II operations of Group 6 and Group 7 aircraft, flights for maintenance of the aircraft are permitted outside the defined proficiency area, provided the maintenance facility airport is listed in the required program letter. (Maintenance, as defined in 14 CFR § 1.1, is the reference for the purpose of these flights.) The maintenance performed in connection with the flight must be recorded in the aircraft records in accordance with 14 CFR part 43.

(24) During Phase II operations, aerobatic maneuvers that were not satisfactorily accomplished and recorded during the Phase I flight test time period may not be performed.

> **Note:** The owner may place the aircraft back into Phase 1 for the sole purpose of adding additional aerobatic maneuvers to the aircraft authorized maneuvers. In this case, the owner must comply with limitation (13) requirements of this paragraph.

(25) During Phase II operations, the following placard, pertaining to gliders and sailplanes having experimental certificates, must be displayed in the cockpit in full view of the pilot in addition to the requirements of 14 CFR § 91.9. "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 _____."

(26) This aircraft must not be used for glider towing, banner towing, or recreational/sport parachute jumping.

(27) During Phase II operations, night and/or instrument flight is approved, provided the aircraft is equipped as described in 14 CFR § 91.205. Instruments and equipment installed for night and/or instrument flight must be inspected and maintained in accordance with the applicable requirements of 14 CFR part 91. All maintenance or inspection of this equipment must be recorded in the aircraft maintenance records.

(28) Equipment installed to meet regulatory requirements must be inspected and maintained in accordance with the applicable requirements of 14 CFR part 91. Any maintenance or inspection of this equipment must be recorded in the aircraft maintenance records.

(29) All large airplanes, turbojet airplanes, turbopropeller-powered multiengine airplanes, or turbine-powered rotorcraft must be maintained in with accordance an FAA-approved inspection program meeting the scope and content as described in 14 CFR § 91.409(f). Completion of these inspections must be recorded in the aircraft maintenance records.

(30) Inspections for all large airplanes, turbojet airplanes, turbopropeller-powered multiengine airplanes, and turbine-powered rotorcraft 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] in accordance with the scope and detail of [identify applicable inspection program] and found to be in a condition for safe operation."

(31) No person may operate aircraft other than those described in limitations (29) and (30) of this paragraph unless within the preceding 12 calendar months it has had a condition inspection performed in accordance with the scope and detail of 14 CFR part 43, appendix D, or other FAA-approved programs, and was found to be in a condition for safe operation. This inspection will be recorded in the aircraft maintenance records.

(32) Condition inspections for aircraft other than those described in limitations (29) and (30) of this paragraph 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] in accordance with the scope and detail of 14 CFR part 43, appendix D, and found to be in a condition for safe operation." The entry will include the aircraft's total time-in-service and the name, signature, certificate number, and type of certificate held by the person performing the inspection.

(33) Only FAA-certificated mechanics with appropriate ratings as authorized by 14 CFR § 43.3 may perform inspections required by these operating limitations.

(34) The cognizant FSDO must be notified, and its response received in writing, prior to flying this aircraft after incorporation of a major change as defined by 14 CFR § 21.93 in order to determine whether new operating limitations will be required. The FSDO response should be entered in the aircraft's records and a copy sent the FAA Aircraft Registration Branch, AFS-750, P.O. Box 25504, Oklahoma City, Oklahoma 73125 for recording in the aircraft's permanent records.

(35) Aircraft equipped with live ejection seats must be clearly externally marked to ensure that emergency personnel are aware of the hazard presented by the system. The ejection seat system must be maintained in accordance with the manufacturer's procedures and inspected in accordance with the inspection program applicable to this aircraft. In addition, the ejection seat system must be mechanically secured to prevent inadvertent operation of the system any time the aircraft is parked or out of service.

(36) The special airworthiness certificate and attached operating limitations for this aircraft have no expiration date.

(37) When an aircraft's home base is changed or there is a transfer of ownership, the new owner/operator will take any or all of the following actions within 30 days:

(a) Submit a new program letter to the geographically responsible FSDO.

(b) If an approved inspection program is specified in these operating limitations, submit a copy to the geographically responsible FSDO. The gaining FSDO will not change the previously approved program unless it can be substantiated that the previously approved program no longer meets FAA requirements.

(c) The gaining FSDO will not require the aircraft's airworthiness certificate or operating limitations to be reissued, unless the aircraft requires Phase I test flight operations.

(38) This aircraft does not meet the requirements of the applicable, comprehensive, and detailed airworthiness code as provided by Annex 8 to the Convention on International Civil Aviation. The owner/operator of this aircraft must obtain written permission from another country's CAA before operating this aircraft in or over that country. That written permission must be carried aboard the aircraft together with the U.S. airworthiness certificate and, upon request, be made available to an ASI or the CAA in the country of operation.

(39) Application must be made to the geographically responsible FSDO for any revision to these operating limitations.

(40) Supersonic flight (true flight Mach number greater than 1) is prohibited unless specifically authorized under 14 CFR § 91.817(a) by the FAA Office of Aviation Policy Planning and Environment (AEP).

(41) The special airworthiness certificate and attached operating limitations for this aircraft have no expiration date. New proficiency areas must be described for Group 6 or 7 aircraft.

(42) FAA approval of maintenance and inspection interval extensions requires that the owner operator submit documentation and data justifying the extension to the local FSDO for elevation for concurrence.

(43) Approval of life limit extensions may be approved by the FAA only if the original manufacturer approves and provides documentation supporting the extension. In the case that original manufacturer data is not available, an appropriately qualified DER may provide data to substantiate life limit extension, but the FAA must concur with the results of the data.

(44) Aircraft originally incorporating fatigue life recording systems must maintain the system and comply with the original manufacturer fatigue limits. If the fatigue life system is removed, or is inoperative, the aircraft cannot be operated in any group other than Group 6.

(45) Operations are limited to minimum required crew. The carriage of passengers is prohibited at all times.

* **Note:** For fat ultralight vehicles and ultralight-like vehicles not meeting the provisions of 14 CFR § 103.1, add limitation (45) to these operating limitations and delete limitation (21). *

4114.-4124 Reserved.

Section 11. Certification and Operation of Aircraft Under the Experimental Purpose(s) of Research and Development, Showing Compliance with Regulations, Crew Training, Market Surveys, and Operating Kit-Built Aircraft

4125. General. Under the provisions of 14 CFR § 21.191(a), R&D aircraft are defined as aircraft that test new design concepts, aircraft equipment, installations, operating techniques, or new uses for aircraft. Under the provisions of 14 CFR § 21.191(b), show compliance aircraft are defined as aircraft that conduct flight tests and other operations to show compliance with the regulations. This includes flights to show compliance for the issuance of TCs and STCs, major design changes, and function and reliability requirements. Under the provisions of 14 CFR § 21.191(c), crew training aircraft are defined as aircraft involved in the training of the applicant's flightcrews. Under the provisions of 14 CFR § 21.191(f), market survey aircraft are defined as aircraft that are used for conducting market surveys, sales demonstrations, and customer crew training as provided for in 14 CFR § 21.195. Under the provisions of 14 CFR § 21.191(h), operating kit-built aircraft is defined as operation of a PCA that meets the criteria of §14 CFR 21.24(a)(1) that was assembled by a person from a kit manufactured by the holder of a PC for that kit, without the supervision and quality system of the PC holder under 14 CFR § 21.184(a). Unless further defined in paragraphs 4125a through e of this order, the

duration of an experimental certificate for R&D (showing compliance with regulations, crew training, market surveys, or kit-built aircraft) is found in paragraph 4003 of this order.

a. Research and Development. Any aircraft would be eligible for an experimental certificate under this purpose. See FAA Order 8130.29, Issuance of Special Airworthiness Certificate for Show Compliance and/or Research and Development Flight Testing, for specific guidance on R&D certification. Although the operations may eventually lead to a TC, they may be conducted by the applicant only as a matter of research or to determine whether an idea warrants further development. In addition to the operations specified in 14 CFR § 21.191(a), the operation of a chase plane, a tanker used for in-flight icing tests, or other aircraft not otherwise eligible for a standard or an experimental certificate (R&D), but necessary for use in direct connection with the R&D project, is considered to be within the scope of this purpose. Aircraft currently certificated in the experimental category for the purposes of exhibition or air racing also may be eligible for a special airworthiness certificate for the experimental purpose of R&D. Also, former military aircraft are often used in R&D projects, and it is appropriate to use the guidance in this order when performing R&D certification of former military aircraft.

b. Showing Compliance with Regulations. 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. See FAA Order 8130.29 for specific guidance for showing compliance. In addition to the operations specified in 14 CFR § 21.191(b), the operation of a chase plane or other aircraft not otherwise eligible for a standard or experimental certificate, but necessary for use in direct connection with a type certification project, is considered to be within the scope of this purpose.

c. Crew Training. Under 14 CFR § 21.191(c), this purpose is limited to only the applicant's flightcrews, which normally would be the manufacturer's employees necessary to be
* trained in experimental aircraft. These flightcrews operate aircraft being flight-tested in type certification programs or for production flight testing. *

d. Market Surveys. A U.S. manufacturer of aircraft or engines and persons that alter aircraft may apply for a special airworthiness certificate in the experimental category for the purpose of market surveys, sales demonstrations, and customer crew training under 14 CFR § 21.195. Amateur-built aircraft kit manufacturers also may be eligible to give customer familiarization training under 14 CFR § 21.191(f). The FAA representative must ensure that the provisions of 14 CFR § 21.195 are met before issuing the experimental certificate. The applicant must provide the FAA representative with the estimated time or number of flights required for the market survey operation as well as the area or itinerary over which the operations are to be conducted under 14 CFR § 21.193(d)(2) and (3). The duration of the certificate should be limited to the time needed for the described operations effective for 1 year or less after the date of issuance. A longer duration may be provided for a PC holder who has an approved procedure for experimental operations. The MIDO manager has the option to extend the duration for other situations.

e. Operating Kit-Built Aircraft. If a PCA kit is assembled without the benefit of the PC holder's supervision, the aircraft may qualify for an experimental certificate in accordance with 14 CFR § 21.191(h). The purchaser or owner of the kit is not required to assemble or fabricate any specific portion of the kit; assistance for some or all of the work may be obtained from other sources, such as the PC holder or some other fabricator. The kit, however, must have been manufactured by a PC holder.

4126. Special Certification Requirements. In addition to the certification procedures in paragraph 4002 of this order, see paragraph 4073 of this order for demilitarization of former military aircraft.

4127. PC Holder and Modifier Experimental Operating Procedure. PC holders and modifiers may submit to their local managing office for FAA approval a procedure describing the operation of experimental aircraft. After it is approved, the procedure may be listed in the operating limitations as indicated in paragraph 4128b of this order. The principal inspector (PI) may exclude certain aircraft from the privileges of either all or part of this procedure, for example, the first of a model, such as the B757/B767, or a nonproduction R&D aircraft. The procedure should include at least the following elements:

a. A description of the test area that will be used to show compliance with 14 CFR § 91.319(b). This area must be described by a radius, coordinates, and/or landmarks, and 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. Multiple-purpose certificates may require individually prescribed geographical areas.

b. A daily flight log that must be maintained by the pilot that shows compliance with 14 CFR § 91.319(b) and inspection of the aircraft prior to release for flights in the expanded test area. The flight log will be maintained for the duration of the certificate for review by the PI.

c. 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. A description of the method used to define the persons who may be carried during these operations. The following must be incorporated into this procedure:

(1) A requirement that the pilot in command advise each passenger of the experimental nature of the aircraft, in accordance with 14 CFR § 91.319(d).

(2) A method of recording persons carried on each flight. These records must be maintained for the duration of the certificate for review by the PI.

(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 14 CFR §§ 91.319(b) and 21.195.

(b) The aircraft has been proven in accordance with paragraph 4128b(3) of this order.

(c) 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.

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

(e) The following placard is displayed inside the aircraft, in letters at least three-eighths of an inch high and in a location easily visible and legible to all persons entering the aircraft: **"NOTICE: THIS AIRCRAFT DOES NOT COMPLY WITH FEDERAL SAFETY REGULATIONS FOR STANDARD AIRCRAFT."** (This placard is not necessary for single-place aircraft).

e. A description of the method used to determine that the aircraft is in a condition appropriate for the purpose intended when changing from one purpose to another (multiple-purpose certificates), and to document the results of this determination in a log or daily flight sheet (for example, changing from R&D to market survey).

f. Any other condition deemed necessary in the interest of safety by the PI.

g. A requirement that a copy of this procedure must be carried in the aircraft while operating under the privileges of this procedure. A copy of this procedure also may be included or directly referenced in the PC holder's quality manual for the convenience of the manufacturer and the PI. Any enforcement deemed appropriate would be under 14 CFR § 91.319 and not 14 CFR part 21, subpart F, Production Under Type Certificate Only, or subpart G, Production Certificates.

4128. Issuance of Experimental Research and Development, Showing Compliance with Regulations, Crew Training, Market Surveys, and Operating Kit-Built Aircraft Operating Limitations.

a. Operating limitations must be designed to fit the specific situation encountered. The ASI may impose any additional limitations deemed necessary in the interest of safety. The ASI and/or designee must review each imposed operating limitation with the applicant to ensure that the operating limitations are understood by the applicant.

b. The following operating limitations must be prescribed as applicable:

Note: The applicability is identified in boldface parentheses at the end of each limitation.

(1) No person may operate this aircraft unless FAA Form 8130-7 is displayed at the cabin or cockpit entrance and visible to passengers or flightcrew members.
(Applicability: All)

(2) No person may operate this aircraft for other than the purpose of R&D, showing compliance with regulations, crew training, market surveys, or operating kit-built aircraft, to accomplish the flight operation outlined in the program letter dated _____, which describes compliance with 14 CFR § 21.193(d), and has been made available to the pilot in command of the aircraft. In addition, this aircraft must be operated in accordance with applicable air traffic and general operating rules of 14 CFR part 91, and all additional limitations herein prescribed under the provisions of 14 CFR § 91.319(i).
(Applicability: All)

(3) All flights must be conducted within the geographical area described as follows: The area must be described 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. Multiple-purpose certificates may require individually prescribed geographical areas.
(Applicability: All)

Note: This applies to all certificates issued to show compliance with 14 CFR § 91.319(b). When the FAA finds compliance, the operating limitations will be revised to remove the limitation. The aircraft will not be allowed to operate over densely populated areas or in congested airways in accordance with 14 CFR § 91.319(c). The FAA may permit takeoffs and landings to be conducted over densely populated areas or in congested airways. If this operating limitation is issued, it should say, "Except for takeoffs and landings, this aircraft must not be operated over densely populated areas or in congested airways." Limitation (5) in this paragraph may be specified in lieu of this operating limitation for PC holders who have submitted a procedure in accordance with paragraph 4127 of this order.

(4) All flights of this aircraft must be conducted within the geographic area indicated on the chart as follows:
(Applicability: All except kit-built)

Note: This limitation will be prescribed to expand the area after the FAA finds compliance with 14 CFR § 91.319(b). This limitation applies to the following purposes: R&D, showing compliance, crew training, and market surveys. Limitation (5) in this paragraph may be specified in lieu of this operating limitation for PC holders who have submitted a procedure in accordance with paragraph 4127 of this order.

(5) All flights must be conducted in accordance with [that is, describe the PC holder's approved operating procedure, for example, ABC Aircraft Co. Experimental Operating Procedure No. 12 (dated)].
(Applicability: All except kit-built)

Note: Limitation (5) in this paragraph may be specified in lieu of limitations (3) and (4) in this paragraph for PC holders that have submitted a procedure in accordance with paragraph 4127 of this order.

(6) When changing between operating purposes of a multiple-purpose certificate, 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 aircraft logbook.
(Applicability: All except kit-built)

Note: This limitation is not applicable when a PC holder's experimental operating procedure is specified (see paragraph 4127 of this order).

(7) This aircraft must not be operated unless it is inspected and maintained in accordance with appropriate military technical publications and/or manufacturer's recommendations. The owner/operator must select, establish, identify, and use an inspection program as set forth in 14 CFR § 91.409(e), (f), (g), and (h). This inspection program must be recorded in the aircraft maintenance records.
(Applicability: All except kit-built)

(8) The pilot in command of this aircraft must hold an appropriate category/class rating. If required for the type of aircraft to be flown, the pilot in command also must hold either an appropriate type rating or an LOA issued by an FAA Flight Standards Operations Inspector.
(Applicability: All)

Note 1: An LOA is issued in accordance with the procedures described in FAA Order 8900.1, volume 5, chapter 9, section 2 for all training and eligibility requirements.

Note 2: This limitation is applicable to any turbine-powered or reciprocating engine-powered aircraft with a total power greater than 800 horsepower, rotorcraft, aircraft with a maximum takeoff weight exceeding 12,500 pounds, or any other aircraft when deemed necessary. FAA Flight Standards Operations Inspectors should see FAA Order 8900.1 for further guidance.

(9) This aircraft is to be operated under VFR, day only.
(Applicability: All)

Note: 14 CFR § 91.319(d)(2) provides for VFR, day only. If other operations are requested, the authorization will be prescribed as a limitation by selecting operating limitation (10) and/or (11) in this paragraph, as appropriate, and by deleting this limitation.

(10) This aircraft may be operated under VFR, day and/or night.
(Applicability: All)

> **Note:** 14 CFR § 91.319(d)(2) provides for VFR, day only, unless otherwise specifically authorized by the FAA. This limitation gives that authorization. If other operations are requested, the aircraft must be equipped in accordance with 14 CFR § 91.205.

(11) This aircraft may be operated under IFR, and must be properly equipped for instrument flight in accordance with 14 CFR § 91.205.
(Applicability: All)

> **Note:** 14 CFR § 91.319(d)(2) provides for VFR, day only, unless otherwise specifically authorized by the FAA. This limitation gives that authorization. If other operations are requested, the aircraft must be equipped in accordance with 14 CFR § 91.205.

(12) No person may operate this aircraft for carrying persons or property for compensation or hire.
(Applicability: All)

(13) No person may be carried in this aircraft during flight unless that person is essential to the purpose of the flight.
(Applicability: R&D and show compliance only)

> **Note:** This limitation may be deleted for PC holders and limitation (14) in this paragraph may be specified instead.

(14) Persons may be carried in accordance with [describe the PC holder's approved operating procedure, for example, ABC Aircraft Co. Experimental Operating Procedure No. 12 (dated)].
(Applicability: All except kit-built)

> **Note:** This limitation is applicable only for PC holders that have submitted a procedure in accordance with paragraph 4127 of this order.

(15) The pilot in command of this aircraft must advise each passenger of the experimental nature of this aircraft, and explain that it does not meet the certification requirements of a standard certificated aircraft.
(Applicability: All)

(16) This aircraft must contain the placards, markings, etc., (or other operating instructions developed for an STC modification) required by 14 CFR § 91.9.
(Applicability: All)

> **Note:** Inspectors also will identify the flight manual, flight manual supplements, markings, drawings, etc., as required.

(17) This aircraft is prohibited from aerobatic flight, that is, an intentional maneuver involving an abrupt change in the aircraft's attitude, an abnormal attitude, or abnormal acceleration not necessary for normal flight.
(Applicability: All)

> **Note:** Aerobatic flights may be permitted in the assigned test area. The applicant should be advised that aerobatics or violent maneuvers should not be attempted until sufficient flight experience has been gained to establish that the aircraft is satisfactorily controllable. These operating limitations may be modified to include only those aerobatics/maneuvers that have been satisfactorily accomplished and recorded in the aircraft records during the flight test period. These aerobatics/maneuvers may be permitted upon leaving that assigned test area. Appropriate limitations identifying the aerobatics/maneuvers and conditions under which they may be performed should be prescribed. The FAA may witness aerobatics/maneuvers if deemed necessary.

(18) This aircraft may conduct aerobatic flight in accordance with 14 CFR § 91.303. Aerobatics must not be attempted until sufficient flight experience has been gained to establish that the aircraft is satisfactorily controllable and in compliance with 14 CFR § 91.319(b). Aerobatic maneuvers intended to be performed must be satisfactorily accomplished and recorded in the aircraft records during the flight test period.
(Applicability: All)

(19) The cognizant FSDO must be notified, and its response received in writing, prior to flying this aircraft after incorporation of a major change as defined by 14 CFR § 21.93.
(Applicability: All except for R&D and show compliance)

> **Note:** Limitation (5) in this paragraph may be specified in lieu of this limitation for PC holders that have submitted a procedure in accordance with paragraph 4127 of this order.

(20) This aircraft must not be used for glider towing, banner towing, or intentional parachute jumping.
(Applicability: All)

(21) No person must operate this aircraft unless within the preceding 12 calendar months it has had a condition inspection performed in accordance with the scope and detail of 14 CFR part 43, appendix D, or other FAA-approved programs, and was found to be in a condition for safe operation. This inspection will be recorded in the aircraft maintenance records.
(Applicability: All)

(22) FAA-certificated repair stations and FAA-certificated mechanics with appropriate ratings as authorized by 14 CFR § 43.3 may perform inspections required by these operating limitations.
(Applicability: All)

(23) 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] in accordance with the scope and detail of 14 CFR part 43, appendix D, or other FAA-approved programs, and was found to be in a condition for safe operation." The entry will include the aircraft's total time-in-service, and the name, signature, certificate number, and type of certificate held by the person performing the inspection.
(Applicability: All)

(24) If aircraft, engine, or propeller operating limitations are exceeded, an appropriate entry will be made in the aircraft records.
(Applicability: All except kit-built)

> **Note:** This limitation applies only when an aircraft is temporarily in the experimental category and will be returned to the original certificate status, for example, STC project.

(25) This aircraft must not be operated unless it is maintained and inspected in accordance with the requirements of 14 CFR part 43.
(Applicability: All)

> **Note:** This operating limitation is applicable to any aircraft that previously had been issued a different type of airworthiness certificate prior to applying for a special airworthiness certificate (see 14 CFR § 43.1(b)).

(26) This aircraft must display the word "EXPERIMENTAL" in accordance with 14 CFR § 45.23(b).
(Applicability: All)

(27) The pilot in command of this aircraft must notify air traffic control of the experimental nature of this aircraft when operating into or out of airports with operating control towers. The pilot in command must plan routing that will avoid densely populated areas and congested airways when operating VFR.
(Applicability: All)

(28) This aircraft does not meet the requirements of the applicable, comprehensive, and detailed airworthiness code as provided by Annex 8 to the Convention on International Civil Aviation. The owner/operator of this aircraft must obtain written permission from another country's CAA prior to operating this aircraft in or over that country. That written permission must be carried aboard the aircraft together with the U.S. airworthiness certificate and, upon request, be made available to an FAA inspector or the CAA in the country of operation.
(Applicability: All)

(29) Aircraft instruments and equipment installed and used under 14 CFR § 91.205 must be inspected and maintained in accordance with the requirements of 14 CFR parts 43 and 91. Any maintenance or inspection of this equipment must be recorded in the aircraft maintenance records.
(Applicability: All)

(30) Application must be made to the geographically responsible FSDO or MIDO [insert name of office] for any revision to these operating limitations.
(Applicability: All)

(31) 14 CFR § 47.45 requires that the FAA Aircraft Registry must be notified within 30 days of any change in the aircraft registrant's address. Such notification is to be made by submitting Aeronautical Center Form 8050-1 to AFS-750 in Oklahoma City, Oklahoma.
(Applicability: All)

(32) Condition inspections must be performed in accordance with 14 CFR part 43, appendix D at least every 100 flight hours. The inspections must be performed by an FAA-certificated mechanic with appropriate ratings as defined in 14 CFR § 43.3.
(Applicability: All)

(33) Familiarization flights must be conducted only over sparsely populated areas. If aerobatics are involved, the applicant must inform the local FAA office and additional limitations may be imposed as necessary.
(Applicability: All)

4129.-4135. Reserved.

Section 12. Provisional Airworthiness Certification

4136. General. Under the provisions of 14 CFR part 21, subpart I, two classes of provisional airworthiness certificates may be issued. Class I certificates may be issued for all categories, whereas Class II certificates are issued for transport category aircraft only. In each case, a corresponding provisional TC or provisional amendment to the TC must be in effect to be eligible for a corresponding provisional airworthiness certificate.

4137. Eligibility. Only a U.S. aircraft manufacturer, aircraft engine manufacturer, or certificated air carrier may apply for provisional airworthiness certificates as provided in 14 CFR part 21, subpart I. 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, upon determination that the application and attachments are satisfactory, inspection of the aircraft is necessary only to the extent required to determine that it is in a condition for safe operation when operated within its operating limitations.

4138. Special Purpose Operations. The special purpose operations for which provisionally certificated aircraft may be operated are contained in 14 CFR § 91.317. These operations include—

a. Training flightcrew members, including simulated air carrier 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; and

e. Service testing of aircraft.

4139. Statement of Conformity. A properly completed FAA Form 8130-9 containing the information required by 14 CFR §§ 21.221 and 21.223 may be used by the manufacturer as its conformity statement and should be attached to FAA Form 8130-6.

4140. Certification Procedures. The FAA should follow the appropriate procedures outlined in paragraph 4002 of this order.

4141. Special Airworthiness Certificate, FAA Form 8130-7. Upon determination that the aircraft conforms to its provisional TC or provisional amendment to a TC and that it is in a condition for safe operation, the FAA should issue FAA Form 8130-7. The issuance of a provisional airworthiness certificate, corresponding to a provisional amendment to a TC in accordance with 14 CFR § 21.225, is considered to be an original issuance in the provisional category.

4142. 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 individual aircraft. The FAA must ensure that these operating limitations are available in the aircraft in compliance with 14 CFR § 91.9. Limitations and restrictions as required by 14 CFR § 91.317, and which are not included in placards or the provisional flight manual, must be enumerated on a separate sheet and displayed with the provisional airworthiness certificate.

4143.-4160. Reserved.

Section 13. Special Flight Permits

4161. General.

a. Special flight permits are issued for aircraft that currently may not meet applicable airworthiness requirements, but are capable of safe flight. A special flight permit is not an authorization to deviate from the requirements of 14 CFR part 91.

(1) Section 14 CFR 21.197(a) applies to aircraft that may not meet applicable airworthiness requirements and that will be operated for a purpose specified in 14 CFR § 21.197(a)(1) through (5).

(2) Section 14 CFR 21.197(b) applies to those aircraft that meet all of the applicable airworthiness requirements except those that cannot be met because of an overweight condition.

(3) Section 14 CFR 21.197(c) applies only to holders of operating certificates issued under 14 CFR part 121 or 135 for aircraft operated and maintained under a continuous airworthiness maintenance program. The instructions for issuance of a special flight permit with a continuing authorization are contained in FAA Order 8900.1, volume 4, chapter 13, section 1.

b. Forms 8130-6 and 8130-7 are used for the administration of 14 CFR §§ 21.197 and 21.199. The instructions for completion of these forms are contained in chapter 8 of this order, except as noted in this section.

c. Special flight permits for purposes other than production flight testing and customer demonstration flights will be issued by the FSDO/MIDO/international field office (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/IFO receiving the request, the applicant should be referred to the appropriate office. This paragraph does not apply to 14 CFR part 121 or 135 certificate holders.

> **Note:** ODA holders and designees may issue special flight permits if it is an authorized function. See Order 8100.15 (ODA) and FAA Order 8100.8, Designee Management Handbook, for further clarification and guidance.

d. Special flight permits issued to 14 CFR part 121 or 135 certificate holders who do not have a continuous authorization normally will be issued by their certificate holding district office (CHDO). However, with the CHDO's concurrence, these special flight permits may be issued by the office having geographical responsibility.

e. Under special conditions, special flight permits may be issued to 14 CFR part 145 repair facilities for the purpose of delivering aircraft from international locations to the United States. In this instance, the special flight permit 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 special flight permits, 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 special flight permit, 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 prior to flight utilizing an ASI or qualified designee.

f. The validity of the special flight permit is not affected by the operation of the aircraft outside the border of the United States as long as it is operated for the intended purpose under 14 CFR § 21.197 and within the timeframe specified on the permit. The special flight permit does not authorize flight over countries other than the United States without permission of that country. If such operation is contemplated, the effective date of the permit is contingent on compliance with section D(2) of the permit and it becomes the responsibility of the owner/operator to obtain such permission.

Note: This paragraph does not apply to authorizations covered by FAA Order 8900.1, volume 4, chapter 13, section 1.

g. In accordance with 14 CFR § 39.23, some operations specifications may give an operator the authority including the provision to fly an aircraft to a repair station to perform work required by an AD. If the operator does not have this authority, the local FSDO may issue a special flight permit in accordance with 14 CFR § 21.197(a) unless the airworthiness directive states otherwise.

(1) In cases where the special flight permit paragraph is intentionally missing from an AD, 14 CFR § 39.23 authorizes the issuance of a special flight permit, if the AD was published after August 21, 2002 (the effective date of 14 CFR § 39.23). In all new ADs, the special flight permit is authorized by 14 CFR § 39.23, and not the AD, unless the engineer determines that the aircraft cannot be moved safely, and therefore the AD will include a paragraph that does not allow any special flight permit or has certain restrictions.

(2) The ASI also has the authority under 14 CFR § 39.23 to deny a special flight permit request for safety reasons as well as adding operating restrictions to the proposed route of flight. An example of a justified denial would be a special flight permit request for operation over large bodies of water or mountainous terrain with a single-engine aircraft that has an AD applicable to the engine or propeller.

h. If the product is not an aircraft, and the AD does not provide for the product's operation during a ferry flight, in accordance with 14 CFR § 39.7 the product may not be operated during such a flight. If the aircraft on which the product is installed can be operated safely without operating the product, a special flight permit could be issued in accordance with 14 CFR § 21.197(a) with a limitation that the product be rendered inoperative for flight.

4162. Purposes. 14 CFR § 21.197 prescribes the general purposes for which a special flight permit may be issued. The following specific operations also are considered to be within the scope of the general provisions:

a. Any flight of a U.S.-registered aircraft covered by 14 CFR § 21.197, if the aircraft is capable of safe flight, even though a TC has not been issued.

b. The delivery of an aircraft of either U.S. or non-U.S. manufacture to the base of the purchaser 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 14 CFR § 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 in accordance with 14 CFR § 21.190(c)(7).

4163. Application and Issuance (General).

a. When the application for a special flight permit is found in compliance with all requirements, the FAA should issue FAA Form 8130-7, with operating limitations deemed necessary for safe operation. The operating limitations must be enumerated on a separate sheet, identified by the aircraft registration and serial number, dated, and signed. The applicant should be advised that FAA Form 8130-7 and attached operating limitations must be displayed in the aircraft in accordance 14 CFR § 91.203(b).

b. The FAA may assist the applicant by completing FAA Form 8130-6 based on information furnished by telephone, letter, or fax. 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 letter dated _____." If the information provided is adequate, and all requirements for issuance are satisfied, the ASI may issue a telegraphic or faxed special flight permit with appropriate limitations (except 14 CFR § 21.197(b) for overweight operations). These limitations will include inspection requirements as deemed necessary. The telegraphic or faxed copy of the special flight permit and prescribed operating limitations must be displayed in the aircraft in accordance with 14 CFR § 91.203(b) prior to conducting the special flight.

> **Note:** Designees cannot issue a telegraphic or faxed special flight permit. The 14 CFR part 135 air carrier must have an approved program to operate nine or less passenger seats. All designees are required to physically perform the inspection necessary to ensure the aircraft is eligible for the special flight permit.

c. If a district office processes numerous applications for telegraphic or faxed special flight permits, a standard format may be filed with the local office.

d. When FAA Form 8130-6 has been completed, the ASI will complete the telegraphic or faxed special flight permit to include any additional operating limitations that may be required. The completed and signed permit may then be transmitted by fax. The faxed copy of the permit that is received for display in the aircraft at the point of departure will be considered the original permit.

e. A copy of each certification document should be retained in the files of the issuing office. Only copies required per paragraph 807a(1) of this order, as applicable, are to be forwarded to AFS-750.

4164. Aircraft Inspections.

a. It is the responsibility of the FAA to determine which inspections or tests are necessary to ensure that the aircraft is capable of safe flight for the intended purpose.

b. The FAA should make, or require the applicant to make, appropriate inspections or tests considered necessary for safe flight.

c. The FAA should inspect damaged aircraft or an aircraft for which the airworthiness is questionable in any respect. Additionally, the FAA or the designee should inspect the LSA for which a special flight permit may be issued. The FAA is authorized, at its discretion, to allow a properly certificated mechanic or a repair station to conduct the necessary aircraft inspection(s) in support of the issuance of a special flight permit.

> **Note:** If an affirmative, technical determination cannot be made that a particular aircraft is capable of safe operation because of insufficient design, inspection, or maintenance data that normally is available for a type-certificated aircraft, the special flight permit should not be issued.

d. When the FAA requires the applicant to make the inspection, the applicant must be advised that such inspections must be—

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

(2) Documented in the aircraft logbook by the authorized person who conducted the inspection.

4165. Special Operating Limitations. The FAA should establish limitations as deemed necessary for safe operation. Because individual circumstances may vary greatly, a list of limitations applicable in every case cannot be provided. The objective is to ensure safe operation of the aircraft. If necessary, solicit the technical assistance of other FAA offices or specialties. Limitations should be clear and concise so they can be easily understood. In addition to the limitations deemed necessary for the particular flight, the following items must be considered when 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 pilot in command 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, etc.

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

j. Airspeed limits.

k. 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 hazardous exposure to persons or property.

l. Runway selections, if considered necessary for safety.

m. Communications required with airport tower personnel to inform them prior to takeoff or landing of the nonstandard condition of the aircraft.

n. When flight over another country is planned, the ASI must emphasize to the applicant that special permission must be obtained from the country over which the aircraft will be operated. In addition, section C of FAA Form 8130-7 should contain the statement, "Subject to D(2) on reverse side." (figure 4-13 of this order).

> **Note:** When required to fly over an ICAO member state, the operating limitations issued with the special flight permit should 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 here the item(s) which do not comply with the airworthiness requirements for standard aircraft]."

o. Any other limitation that should be prescribed for the particular flight.

4166. Special Flight Permit for Operation of Overweight Aircraft.

a. General.

(1) The FAA has two primary concerns when issuing special flight permits 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 in accordance with FAA-approved data.

(3) 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 (except for rotorcraft).

(4) 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.

(5) 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.

(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 4166a(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 in accordance with the requirements of 14 CFR § 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 14 CFR part 21" (figure 4-14 of this order).

(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 should be tested for the maximum pressure differential existing between cabin pressurization and aircraft maximum operating altitude with fuel tank(s) empty.

(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) prior to 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 prior to 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 under 14 CFR § 23.1001 (amendment 23-7), 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 special flight permit.

(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) 14 CFR § 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. See paragraphs 4128 and 4141 of this order, and 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).

4167. Special Flight Permit for Production Flight Testing. A special flight permit issued for production flight testing may be used by a manufacturer to meet the requirements of 14 CFR § 91.203 when operating new production aircraft for the purpose of production flight testing, as provided in 14 CFR § 21.197. This permit may be used with Aeronautical Center Forms 8050-3 and 8050-6, or Aeronautical Center Form 8050-1, and is transferable from one aircraft to another, except for LSA, which require one special flight permit for each aircraft. The permit normally is valid only for the purpose of production flight testing. However, when deemed appropriate, the MIDO/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 4168 of this order. The applicable operating limitations are printed in block B on the reverse side of FAA Form 8130-7 (figure 4-1 of this order).

a. Eligibility.

(1) A manufacturer producing aircraft under 14 CFR part 21, subpart F or G, is eligible to obtain special flight permits for production flight testing.

(2) A manufacturer producing aircraft prior to issuance of the TC also is eligible for a special flight permit for production flight testing provided the following conditions are met:

(a) The manufacturer holds a TC and a currently effective PC for at least one other aircraft in the same category.

(b) The FAA official flight test program is in progress.

(c) A prototype aircraft of that model has been flown by the manufacturer under an experimental certificate to ensure that there are no adverse flight characteristics and that production test pilots are fully familiar with the aircraft.

(d) An FAA-accepted production flight test procedure and checklist for the aircraft involved will be used to ensure that all requirements for production flight tests are fulfilled.

(e) The aircraft is not being flown by the manufacturer for purposes other than production flight tests, except as identified in paragraph 4168 of this order.

(f) Limitations have been established to define the production flight test area.

(3) A manufacturer producing LSA under 14 CFR § 21.190 is eligible to obtain special flight permits for production flight testing within the provisions established in paragraph 4040 of this order.

(4) There may be cases where a TC/PC holder is selling new aircraft to the foreign military that are not produced under their PC and do not have a TC. The aircraft manufacturer may be eligible for 14 CFR § 21.197 special flight permits for production flight testing under 14 CFR § 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 special flight permits for production flight testing as deemed necessary for satisfactory coverage of the aircraft involved. The number of special flight permits for production flight testing issued to the manufacturer must be limited to actual need.

(2) A MIDO that has issued special flight permits for production flight testing should maintain suitable accountability records that show expiration dates not exceeding 12 months from the date of issuance, and the number of permits issued to each manufacturer. 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 serial number may be reassigned to a manufacturer each year. The issuing official must sign each permit and associated limitations in permanent blue or black ink above the typed name.

4168. Special Flight Permit for Conducting Customer Demonstration Flights. A special flight permit may be used by a manufacturer to meet the requirements of 14 CFR § 91.203 when operating a new production aircraft for the purpose of conducting customer demonstration flights in accordance with 14 CFR § 21.197(a)(5). This permit may be used with Aeronautical Center Form 8050-3, 8050-6, or 8050-1. This permit is normally issued only for the purpose of customer demonstration. However, as stated in paragraph 4167 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 special flight permit purposes. 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. A special flight permit 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, the issuing FAA representative must inspect the aircraft and prescribe the operating limitations in accordance with paragraphs 4128 and 4165 of this order, as deemed necessary for safe operation. It is not necessary to repeat the limitations on the reverse side of FAA Form 8130-7, except for the statement, "Subject to D(2) on reverse side," which must be entered in block C on the face side of the form. The demonstration flight area(s) also must be listed on the operating limitations. Special flight permits may be issued only for the period needed to complete demonstration flights, usually not to exceed 90 days.

(3) If the MIDO determines that the PC holder has procedures in place to safeguard the storage and issuance of special flight permits for customer demonstration flights, permits that are transferable from one aircraft to another may be issued. It is still necessary to prescribe operating limitations in accordance with paragraphs 4128 and 4165 of this order, as deemed necessary for safe operation. The statement, "Subject to D(2) on reverse side" must be entered in block C on the face side of FAA Form 8130-7. The expiration date shown on FAA Form 8130-7 and the associated limitations must not exceed 12 months from the date of issuance. The permits issued in this manner should be serialized so as to differentiate them from any production flight permits which may have been issued. The number of special flight permits for conducting customer demonstration flights issued to a manufacturer must be limited to actual need.

(4) The MIDO issuing special flight permits for customer demonstration flights will maintain a copy of the complete file in accordance with record retention requirements.

4169. Special Flight Permit for Certain Large Aircraft for which 14 CFR 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.

a. Eligibility. A special flight permit may be issued for certain large aircraft for which 14 CFR part 125 is not applicable. In those cases, the provisions of paragraph 4169b of this order must be met.

b. Application and Issue.

(1) Prior to issuance of a special flight permit, the applicant must select, identify in the aircraft maintenance records, and use one of the programs specified in 14 CFR § 91.409(f). If the program selected contains provisions addressing situation-specific inspection of the aircraft, then those provisions may be used to ensure safe operation of the aircraft. If the program selected does not contain those provisions, the FAA will specify the appropriate inspections and/or tests required to ensure safe operation.

Note: Only Flight Standards ASIs can approve the inspection program.

(2) In some cases the applicant may not intend to place the aircraft in service following the flight authorized by the special flight permit. In this case the applicant may wish to select, identify, and use the program specified in 14 CFR § 91.409(f)(4). Unless provisions for additional flights are provided for in the FAA-approved program, no additional flights are permitted.

(3) The following examples are provided to illustrate how the above procedures may be applied:

Example 1: ABC Airlines, operating a B-777 aircraft in air carrier service, wishes to lease another B-777 from XYZ Leasing. The subject aircraft has been in storage for 1 year. ABC Airlines wishes to operate the aircraft from the point of storage to a maintenance facility prior to placing the aircraft in service with the airline. ABC Airlines may choose to select, identify in the maintenance records, and use the inspection program that is part of ABC Airlines' Continuous Airworthiness Maintenance Program (CAMP) for its B-777, as provided in 14 CFR § 91.409(f)(4). If the selected CAMP contains provisions for inspection prior to the flight of the aircraft being removed from storage, 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 must require ABC Airlines to make appropriate inspections or tests necessary to ensure safe operation.

Example 2: XYZ Leasing wishes to operate its A-300 from one storage location to another. When applying for the special flight permit, 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 FAA issues the special flight permit with the conditions and limitations under which XYZ may operate its aircraft following the satisfactory completion of the inspections and tests described. XYZ may then select, identify, and use the description of inspections and tests approved by the Flight Standards ASI as the inspection program under which the aircraft is to be operated for the purpose of this flight only.

(4) 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. In-service aircraft that have been routinely maintained and/or inspected under an approved inspection program may not require more than the normal inspections routinely required.

(5) Aircraft that have been damaged or have been out of service for an extended period of time may require additional inspections or tests to ensure safety. Aircraft that have been damaged may require engineering evaluations or special tests to determine airworthiness. In the case of aircraft that have been out of service, the way the aircraft was stored should be evaluated. In many cases, aircraft in storage have been routinely maintained and inspected, and have had preventive maintenance performed at regular intervals. These aircraft normally would require less attention before any anticipated flight. However, any aircraft that has been in storage for an extended period of time requires, at the very 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.

(6) Indiscriminate operation of these types of aircraft should be discouraged by restricting the operation of the aircraft to specific airports and to a specific flight path. The special flight permit should be issued for no more than 7 days.

(7) When the flight characteristics of the aircraft have not been appreciably altered, persons other than flightcrew members and/or persons essential to the operation of the aircraft may be carried aboard during flight operations authorized by a special flight permit. In those cases, the passenger-carrying requirements of 14 CFR part 91 will apply.

(8) An FAA Flight Standards Operations Inspector, type rated in the aircraft, should be consulted regarding the adequacy and appropriateness of the conditions and limitations of the special flight permit.

(9) Special flight permits for large aircraft are issued by the FSDO having geographic responsibility for the area in which the aircraft is located. A CHDO may issue a special flight permit for its 14 CFR part 121, 125, or 133 aircraft operations or 14 CFR part 137, Agricultural aircraft operations, certificate holders who do not have a continuing authorization, but only for those aircraft listed on the certificate holder's aircraft listing. A CHDO may not issue a special flight permit for an aircraft located outside the CHDO's geographic boundaries unless that aircraft is listed on the certificate holder's aircraft listing.

(10) In order to provide proper surveillance and oversight of the flight operations of these types of aircraft, it is recommended that the issuing office advise the destination FSDO or regional airworthiness branch of the conditions and limitations of the special flight permit, as well as the aircraft's anticipated arrival time and destination.

(11) The operation of noise-restricted aircraft requires an SFA issued in accordance with 14 CFR § 91.858 and must be obtained by applying 30 days in advance to the FAA's Office of Environment and Energy (AEE). A special flight permit is not required in these instances and will not be issued unless the aircraft does not meet applicable airworthiness standards as provided in 14 CFR § 21.197. All other inspection program requirements apply.

Figure 4-1. Sample FAA Form 8130-7, Special Airworthiness Certificate

Front

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

SPECIAL AIRWORTHINESS CERTIFICATE

A	CATEGORY/DESIGNATION		
	PURPOSE		
B	MANU-FACTURER	NAME	
		ADDRESS	
C	FLIGHT	FROM	
		TO	
D	N-		SERIAL NO.
	BUILDER		MODEL
E	DATE OF ISSUANCE		EXPIRY
	OPERATING LIMITATIONS DATED		ARE PART OF THIS CERTIFICATE
	SIGNATURE OF FAA REPRESENTATIVE		DESIGNATION OR OFFICE NO.

Any alteration, reproduction or misuse of this certificate may be punishable by a fine not exceeding $1,000 or imprisonment not exceeding 3 years, or both. THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE TITLE 14, CODE OF FEDERAL REGULATIONS (CFR).

FAA Form 8130-7 (04-11) Previous Edition 07/04 May be Used until Depleted *SEE REVERSE SIDE* *NSN: 0052-00-693-4000*

Back

A	This airworthiness certificate is issued under the authority of Public Law 104-6, 49 United States Code (USC) 44704 and Title 14 Code of Federal Regulations (CFR).
B	The airworthiness certificate authorizes the manufacturer named on the reverse side to conduct production fight tests, and only production flight tests, of aircraft registered in his name. No person may conduct production flight tests under this certificate: (1) Carrying persons or property for compensation or hire: and/or (2) Carrying persons not essential to the purpose of the flight.
C	This airworthiness certificate authorizes the flight specified on the reverse side for the purpose shown in Block A.
D	This airworthiness certificate certifies that as of the date of issuance, the aircraft to which issued has been inspected and found to meet the requirements of the applicable CFR. The aircraft does not meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention On International Civil Aviation. No person may operate the aircraft described on the reverse side: (1) except in accordance with the applicable CFR and in accordance with conditions and limitations which may be prescribed by the FAA as part of this certificate; (2) over any foreign country without the special permission of that country.
E	Unless sooner surrendered, suspended, or revoked, this airworthiness certificate is effective for the duration and under the conditions prescribed in 14 CFR, Part 21, Section 21.181 or 21.217.

Figure 4-2. Sample FAA Form 8130-7, Special Airworthiness Certificate for Restricted Category Aircraft Certificated Under 14 CFR § 21.25(b)(7)

Front

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

SPECIAL AIRWORTHINESS CERTIFICATE

A	CATEGORY/DESIGNATION RESTRICTED		
	PURPOSE 14 CFR 21.25(b)(7)(OTHER), SEE ATTACHED LIMITATIONS		
B	MANU-FACTURER	NAME	
		ADDRESS	
C	FLIGHT	~~FROM~~ SEE ATTACHED OPERATING LIMITATIONS	
		~~TO~~ SEE ITEM D, REVERSE SIDE OF THIS CERTIFICATE	
D	N-		SERIAL NO.
	BUILDER		MODEL
E	DATE OF ISSUANCE		EXPIRY
	OPERATING LIMITATIONS DATED		ARE PART OF THIS CERTIFICATE
	SIGNATURE OF FAA REPRESENTATIVE		DESIGNATION OR OFFICE NO.

Any alteration, reproduction or misuse of this certificate may be punishable by a fine not exceeding $1,000 or imprisonment not exceeding 3 years, or both. THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE TITLE 14, CODE OF FEDERAL REGULATIONS (CFR).

FAA Form 8130-7 (04-11) Previous Edition 07/04 May be Used until Depleted *SEE REVERSE SIDE* *NSN: 0052-00-693-4000*

Back

A	This airworthiness certificate is issued under the authority of Public Law 104-6, 49 United States Code (USC) 44704 and Title 14 Code of Federal Regulations (CFR).
B	The airworthiness certificate authorizes the manufacturer named on the reverse side to conduct production fight tests, and only production flight tests, of aircraft registered in his name. No person may conduct production flight tests under this certificate: (1) Carrying persons or property for compensation or hire: and/or (2) Carrying persons not essential to the purpose of the flight.
C	This airworthiness certificate authorizes the flight specified on the reverse side for the purpose shown in Block A.
D	This airworthiness certificate certifies that as of the date of issuance, the aircraft to which issued has been inspected and found to meet the requirements of the applicable CFR. The aircraft does not meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention On International Civil Aviation. No person may operate the aircraft described on the reverse side: (1) except in accordance with the applicable CFR and in accordance with conditions and limitations which may be prescribed by the FAA as part of this certificate; (2) over any foreign country without the special permission of that country.
E	Unless sooner surrendered, suspended, or revoked, this airworthiness certificate is effective for the duration and under the conditions prescribed in 14 CFR, Part 21, Section 21.181 or 21.217.

Figure 4-3. Sample FAA Form 8130-7, Special Airworthiness Certificate for Primary Category Aircraft Certificated Under 14 CFR § 21.184(a)

Front

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

SPECIAL AIRWORTHINESS CERTIFICATE

A	CATEGORY/DESIGNATION PRIMARY CATEGORY		
	PURPOSE N/A		
B	MANU-FACTURER	NAME N/A	
		ADDRESS N/A	
C	FLIGHT	FROM N/A	
		TO N/A	
D	N- 2EZ		SERIAL NO. F0002
	BUILDER Flight Corp		MODEL F-C-1A
E	DATE OF ISSUANCE 01/31/2001		EXPIRY Unlimited
	OPERATING LIMITATIONS DATED		ARE PART OF THIS CERTIFICATE
	SIGNATURE OF FAA REPRESENTATIVE Bob Gooday *Bob Gooday*		DESIGNATION OR OFFICE NO. CE43

Any alteration, reproduction or misuse of this certificate may be punishable by a fine not exceeding $1,000 or imprisonment not exceeding 3 years, or both. THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE TITLE 14, CODE OF FEDERAL REGULATIONS (CFR).

FAA Form 8130-7 (04-11) Previous Edition 07/04 May be Used until Depleted *SEE REVERSE SIDE* *NSN: 0052-00-693-4000*

Back

A	This airworthiness certificate is issued under the authority of Public Law 104-6, 49 United States Code (USC) 44704 and Title 14 Code of Federal Regulations (CFR).
B	The airworthiness certificate authorizes the manufacturer named on the reverse side to conduct production fight tests, and only production flight tests, of aircraft registered in his name. No person may conduct production flight tests under this certificate: (1) Carrying persons or property for compensation or hire: and/or (2) Carrying persons not essential to the purpose of the flight.
C	This airworthiness certificate authorizes the flight specified on the reverse side for the purpose shown in Block A.
D	This airworthiness certificate certifies that as of the date of issuance, the aircraft to which issued has been inspected and found to meet the requirements of the applicable CFR. The aircraft does not meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention On International Civil Aviation. No person may operate the aircraft described on the reverse side: (1) except in accordance with the applicable CFR and in accordance with conditions and limitations which may be prescribed by the FAA as part of this certificate; (2) over any foreign country without the special permission of that country.
E	Unless sooner surrendered, suspended, or revoked, this airworthiness certificate is effective for the duration and under the conditions prescribed in 14 CFR, Part 21, Section 21.181 or 21.217.

Figure 4-4. Sample FAA Form 8130-7, Special Airworthiness Certificate for Primary Category Aircraft Certificated Under 14 CFR § 21.184(b)

Front

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

SPECIAL AIRWORTHINESS CERTIFICATE

A	CATEGORY/DESIGNATION PRIMARY CATEGORY		
	PURPOSE N/A		
B	MANU-FACTURER	NAME N/A	
		ADDRESS N/A	
C	FLIGHT	FROM N/A	
		TO N/A	
D	N- 345FT		SERIAL NO. FL009
	BUILDER Flight LTD.		MODEL FL-1A
E	DATE OF ISSUANCE 01/31/2001		EXPIRY Unlimited
	OPERATING LIMITATIONS DATED		ARE PART OF THIS CERTIFICATE
	SIGNATURE OF FAA REPRESENTATIVE Sue Lacy *Sue Lacy*		DESIGNATION OR OFFICE NO. CE45

Any alteration, reproduction or misuse of this certificate may be punishable by a fine not exceeding $1,000 or imprisonment not exceeding 3 years, or both. THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE TITLE 14, CODE OF FEDERAL REGULATIONS (CFR).

FAA Form 8130-7 (04-11) Previous Edition 07/04 May be Used until Depleted *SEE REVERSE SIDE* *NSN: 0052-00-693-4000*

Back

A	This airworthiness certificate is issued under the authority of Public Law 104-6, 49 United States Code (USC) 44704 and Title 14 Code of Federal Regulations (CFR).
B	The airworthiness certificate authorizes the manufacturer named on the reverse side to conduct production fight tests, and only production flight tests, of aircraft registered in his name. No person may conduct production flight tests under this certificate: (1) Carrying persons or property for compensation or hire: and/or (2) Carrying persons not essential to the purpose of the flight.
C	This airworthiness certificate authorizes the flight specified on the reverse side for the purpose shown in Block A.
D	This airworthiness certificate certifies that as of the date of issuance, the aircraft to which issued has been inspected and found to meet the requirements of the applicable CFR. The aircraft does not meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention On International Civil Aviation. No person may operate the aircraft described on the reverse side: (1) except in accordance with the applicable CFR and in accordance with conditions and limitations which may be prescribed by the FAA as part of this certificate; (2) over any foreign country without the special permission of that country.
E	Unless sooner surrendered, suspended, or revoked, this airworthiness certificate is effective for the duration and under the conditions prescribed in 14 CFR, Part 21, Section 21.181 or 21.217.

Figure 4-5. Sample FAA Form 8130-7, Special Airworthiness Certificate for Primary Category Aircraft Certificated Under 14 CFR § 21.184(c)

Front

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

SPECIAL AIRWORTHINESS CERTIFICATE

A	CATEGORY/DESIGNATION PRIMARY CATEGORY		
	PURPOSE N/A		
B	MANU-FACTURER	NAME N/A	
		ADDRESS N/A	
C	FLIGHT	FROM N/A	
		TO N/A	
D	N- 7897T		SERIAL NO. 172A-001
	BUILDER Cessna Aircraft Corp.		MODEL 172A
E	DATE OF ISSUANCE 01/31/2001		EXPIRY Unlimited
	OPERATING LIMITATIONS DATED		ARE PART OF THIS CERTIFICATE
	SIGNATURE OF FAA REPRESENTATIVE Joe Mendez *Joe Mendez*		DESIGNATION OR OFFICE NO. NW24

Any alteration, reproduction or misuse of this certificate may be punishable by a fine not exceeding $1,000 or imprisonment not exceeding 3 years, or both. THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE TITLE 14, CODE OF FEDERAL REGULATIONS (CFR).

FAA Form 8130-7 (04-11) Previous Edition 07/04 May be Used until Depleted *SEE REVERSE SIDE* *NSN: 0052-00-693-4000*

Back

A	This airworthiness certificate is issued under the authority of Public Law 104-6, 49 United States Code (USC) 44704 and Title 14 Code of Federal Regulations (CFR).
B	The airworthiness certificate authorizes the manufacturer named on the reverse side to conduct production fight tests, and only production flight tests, of aircraft registered in his name. No person may conduct production flight tests under this certificate: (1) Carrying persons or property for compensation or hire: and/or (2) Carrying persons not essential to the purpose of the flight.
C	This airworthiness certificate authorizes the flight specified on the reverse side for the purpose shown in Block A.
D	This airworthiness certificate certifies that as of the date of issuance, the aircraft to which issued has been inspected and found to meet the requirements of the applicable CFR. The aircraft does not meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention On International Civil Aviation. No person may operate the aircraft described on the reverse side: (1) except in accordance with the applicable CFR and in accordance with conditions and limitations which may be prescribed by the FAA as part of this certificate; (2) over any foreign country without the special permission of that country.
E	Unless sooner surrendered, suspended, or revoked, this airworthiness certificate is effective for the duration and under the conditions prescribed in 14 CFR, Part 21, Section 21.181 or 21.217.

Figure 4-6. Sample Operating Limitations for Primary Category Aircraft Certificated Under 14 CFR § 21.184(c)

PRIMARY CATEGORY AIRCRAFT OPERATING LIMITATIONS

Make: CESSNA Registration Number: N7897T
Model: 172A Serial Number: 172A-001

1. No person may operate a primary category aircraft for carrying persons or property for compensation or hire.

2. No person may operate a primary category aircraft that is maintained by the pilot-owner under an approved special inspection and maintenance program except:

a. The pilot-owner; or

b. A designee of the pilot-owner, provided that the pilot-owner does not receive compensation for the use of the aircraft.

3. No person may operate a primary category aircraft certificated under 14 CFR § 21.184 unless within the preceding 12 calendar months the annual inspection required by 14 CFR § 91.409(a) has been performed. A 100-hour inspection required by 14 CFR § 91.409(b) is required if the aircraft is used for rental or flight instruction for hire. The aircraft may only be returned to service by persons authorized by 14 CFR § 43.7.

4. A primary category aircraft does not meet the requirements of applicable, comprehensive, and detailed airworthiness code as provided by Annex 8 to the Convention on International Civil Aviation. It may not be operated over any other country without the special permission of the country. Evidence of that permission must be carried aboard the aircraft along with the U.S. airworthiness certificate, and be made available to the Federal Aviation Administration or Civil Aviation Authority in the country of operation upon request.

Name	Signature	Designation or Office No.	Date

Figure 4-7. Sample FAA Form 8130-7, Special Airworthiness Certificate for Experimental To Show Compliance With The CFR

Front

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

SPECIAL AIRWORTHINESS CERTIFICATE

A	CATEGORY/DESIGNATION Experimental		
	PURPOSE To Show Compliance With the CFR		
B	MANU-FACTURER	NAME N/A	
		ADDRESS N/A	
C	FLIGHT	FROM N/A	
		TO N/A	
D	N- 654GL		SERIAL NO. NX09
	BUILDER Night		MODEL N7-XRay
E	DATE OF ISSUANCE 01/31/2001		EXPIRY 01/31/2002
	OPERATING LIMITATIONS DATED 01/31/2001		ARE PART OF THIS CERTIFICATE
	SIGNATURE OF FAA REPRESENTATIVE Larry Kim *Larry Kim*		DESIGNATION OR OFFICE NO. CE34

Any alteration, reproduction or misuse of this certificate may be punishable by a fine not exceeding $1,000 or imprisonment not exceeding 3 years, or both. THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE TITLE 14, CODE OF FEDERAL REGULATIONS (CFR).

FAA Form 8130-7 (04-11) Previous Edition 07/04 May be Used until Depleted *SEE REVERSE SIDE* *NSN: 0052-00-693-4000*

Back

A	This airworthiness certificate is issued under the authority of Public Law 104-6, 49 United States Code (USC) 44704 and Title 14 Code of Federal Regulations (CFR).
B	The airworthiness certificate authorizes the manufacturer named on the reverse side to conduct production fight tests, and only production flight tests, of aircraft registered in his name. No person may conduct production flight tests under this certificate: (1) Carrying persons or property for compensation or hire: and/or (2) Carrying persons not essential to the purpose of the flight.
C	This airworthiness certificate authorizes the flight specified on the reverse side for the purpose shown in Block A.
D	This airworthiness certificate certifies that as of the date of issuance, the aircraft to which issued has been inspected and found to meet the requirements of the applicable CFR. The aircraft does not meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention On International Civil Aviation. No person may operate the aircraft described on the reverse side: (1) except in accordance with the applicable CFR and in accordance with conditions and limitations which may be prescribed by the FAA as part of this certificate; (2) over any foreign country without the special permission of that country.
E	Unless sooner surrendered, suspended, or revoked, this airworthiness certificate is effective for the duration and under the conditions prescribed in 14 CFR, Part 21, Section 21.181 or 21.217.

Figure 4-8. Sample Operating Limitations for Experimental Kit-Built Aircraft

Small Airplane

Directorate
U.S. Department
of Transportation

Federal Aviation Administration

EXPERIMENTAL – KIT BUILT AIRCRAFT
OPERATING LIMITATION

MAKE: Night-Test MODEL: N7-XRay

S/N: NX09 REG. NUMBER: N654GL

1. This aircraft must not be operated outside the assigned test area until it has been shown to comply with Title 14 of the Code of Federal Regulations (14 CFR) § 91.319(b). A logbook entry must be made by the person finding compliance. Flight test area (describe area needed to test aircraft).

2. No person may operate this aircraft for other than the purpose for which the special airworthiness certificate was issued and the aircraft must be operating in accordance with the applicable Federal Aviation Administration (FAA) Air Traffic and General Operating Rules.

3. No operations must be conducted over densely populated areas or in congested airways, except for takeoffs and landings.

4. Operator of this aircraft shall notify the control tower of the experimental nature of this aircraft when operating into or out of airports with operating control towers.

5. Unless appropriately equipped for night and/or instrument flight in accordance with 14 CFR § 91.205, this aircraft shall be operated Day Visual Flight Rules only.

6. This aircraft must contain the placards, markings, etc., required by 14 CFR § 91.9, as applicable.

7. No person may operate this aircraft for carrying persons or property for compensation or hire.

8. The person operating this aircraft shall advise each person carried of the experimental nature of this aircraft.

9. Aerobatic flights are limited to the aerobatics described in the aircraft logbook or contained in placards are permitted.

10. Any major change to this aircraft, as defined by 14 CFR § 21.93, invalidates the special airworthiness certificate issued for this aircraft.

11. FAA-certificated mechanics holding an Airframe and Powerplant rating, and appropriately rated repair station may perform condition inspections in accordance with 14 CFR part 43, appendix D.

12. Condition 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) in accordance with the scope and detail of 14 CFR part 43. appendix D and found to be in a condition for safe operation." The entry will include the aircraft total time-in-service, name, signature, and certificate type and number of the person performing the inspection.

Name Signature Designation or Office No. Date

Figure 4-9. Sample Program Letter,
Research and Development/Showing Compliance
Applicant Program Letter Special Airworthiness Certificate

1. Registered Owner (as shown on Certificate of Aircraft registration)

NAME:

ADDRESS:

2. Aircraft Description

a. Registration Marks **b.** Aircraft **c.** Yr. Mfg.

d. Aircraft Serial No. **e.** Aircraft Model Designation

3. Describe program purpose for which the aircraft is to be used (14 CFR 21.193(d)(1)).

4. Provide the following information as it pertains to your Program Letter.

a. List estimated flight hours required for program. Hrs.:

b. List estimated number of flights required for program. No. Flts:

c. List estimated duration for programs (14 CFR § 21.193(d)(2)). No. Days:

5. Describe the areas over which the flights are to be conducted, and address of base operation (14 CFR 21.193(d)(3)).

6. Describe the aircraft configuration (attach three-view drawings or three-view dimensioned photographs of the aircraft (14 CFR 21.193(d)(4)).

7. Date **Name and Title** (Print or Type) **Signature**

Figure 4-10. Sample FAA Form 8130-12, Eligibility Statement, Amateur-Built Aircraft

Form Approved
OMB NO. 2120-0018

US Department of Transportation
Federal Aviation Administration

ELIGIBILITY STATEMENT
AMATEUR-BUILT AIRCRAFT

Instructions: Print or type all information except signature. Submit original to an authorized FAA representative. Applicant completes Section I thru III. Notary Public Completes Section IV.

I. REGISTERED OWNER INFORMATION

Name(s) _____

Address(es) _____
No. & Street City State Zip

Telephone No.(s) (____) _____ (____) _____
Residence Business

II. AIRCRAFT INFORMATION

Model _____ Engine(s) Make _____

Assigned Serial No. _____ Engine(s) Serial No. _____

Registration No. _____ Prop./Rotor(s) Make _____

Aircraft Fabricated: Plan ☐ Kit ☐ Prop./Rotor(s) Serial No.(s) _____

III. MAJOR PORTION ELIGIBILITY STATEMENT OF APPLICANT

I certify that the major portion of this aircraft (identified in Section II above) was fabricated and assembled by

_____
Names of all builders (Please Print)

solely for my (our) education or recreation, in accordance with 14 CFR part 21, Certification Procedures for Products and Parts, § 21.191(g), Operating amateur-built aircraft. I have records to support this statement and will make them available to the FAA upon request.

During the fabrication and assembly of this project, I/ we used the following commercial assistance (mark N/A if no commercial assistance was used):

_____ _____ _____
Name of company or individual(s) **City & State** **Phone**

_____ _____ _____
Name of company or individual(s) **City & State** **Phone**

-NOTICE-

Whoever in any matter within the jurisdiction of the executive, legislative, or judicial branch of the Government of the United States, knowingly and willfully falsifies, conceals or covers up by any trick, scheme, or device a material fact, or who makes any materially false, fictitious or fraudulent statement or representation, or makes or uses any false writing or document knowing the same to contain any materially false, fictitious or fraudulent statement or entry, shall be fined under this title, imprisoned not more than 5 years or, if the offense involves international or domestic terrorism, imprisoned not more than 8 years, or both.
(U.S. Code, Title 18, Sec. 1001)

APPLICANT'S DECLARATION

I hereby certify that all statements and answers provided by me in this statement 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 to me. I have also read and understand the Privacy Act statement that accompanies this form.

Signature of Applicant (*In Ink*)	Date

IV. NOTARIZATION STATEMENT

FAA Form 8130-12 (08-2009) Supersedes Previous Edition NSN:0052-00-089-9002

Figure 4-11. Sample FAA Form 8000-38, Fabrication/Assembly Operation Checklist

FABRICATION/ASSEMBLY OPERATION CHECKLIST

Company Name _____.
Address _____.
_____.
Aircraft Model _____ Document Name and Date _____.
Type of Aircraft _____.

	Accomplished By	
	Kit Manufacturer	Amateur
FUSELAGE		
1. Fabricate Special Tools or Fixtures		
2. Fabricate Longitudinal Members, Cores or Shells		
3. Fabricate Bulkheads or Cross Members		
4. Assemble Fuselage Basic Structure		
5. Fabricate Brackets and Fittings		
6. Install Brackets and Fittings		
7. Fabricate Cables, Wire, and Lines		
8. Install Cables, Wires, and Lines		
9. Fabricate Fuselage Covering or Skin		
10. Install Fuselage Covering or Skin		
11. Fabricate Windshield/Windows/Canopy		
12. Install Windshield/Windows/Canopy		
WINGS		
1. Fabricate Special Tools or Fixtures		
2. Fabricate Wing Spars		
3. Fabricate Wing Ribs or Cores		
4. Fabricate Wing Leading and Trailing Edge		
5. Fabricate Drag/Anti-Drag Truss Members		
6. Fabricate Wing Brackets and Fittings		
7. Fabricate Wing Tips		
8. Assemble Basic Wing Structures		
9. Install Wing Leading/Trailing Edge and Tips		
10. Install Drag/Anti-Drag Truss		
11. Fabricate Cables, Wires and Lines		
12. Install Cables, Wires, and Lines		
13. Fabricate Wing Covering or Skin		
14. Install Wing Covering or Skin		
15. Fabricate Wing Struts/Wires		
16. Install and Rig Wings and Struts		

FAA Form 8000-38 (12-91)

Figure 4-11. Sample FAA Form 8000-38, Fabrication/Assembly Operation Checklist (Continued)

FABRICATION/ASSEMBLY OPERATION CHECKLIST (Continued)		
	Accomplished By	
	Kit Manufacturer	Amateur
FLIGHT CONTROLS		
1. Fabricate Special Tools or Fixtures		
2. Fabricate Aileron Spars		
3. Fabricate Aileron Ribs or Cores		
4. Assemble Aileron Structure		
5. Fabricate Aileron Leading and Trailing Edge		
6. Assemble Aileron Leading and Trailing Edge		
7. Fabricate Aileron Brackets and Fittings		
8. Install Aileron Brackets and Fittings		
9. Fabricate Aileron Covering or Skin		
10. Install Aileron Covering or Skin		
11. Fabricate Aileron Trim Tab		
12. Install Aileron Trim Tab		
13. Install and Rig Aileron		
14. Fabricate Flap Spars		
15. Fabricate Flap Ribs or Cores		
16. Assemble Flap Structure		
17. Fabricate Flap Leading and Trailing Edge		
18. Assemble Flap Leading and Trailing Edge		
19. Fabricate Flap Brackets and Fittings		
20. Install Flap Brackets and Fittings		
21. Fabricate Flap Covering or Skin		
22. Install Flap Covering or Skin		
23. Install and Rig Flap		
24. Fabricate Elevator Spars		
25. Fabricate Elevator Ribs or Cores		
26. Assemble Elevator Structure		
27. Fabricate Elevator Leading and Trailing Edge		
28. Assemble Elevator Leading and Trailing Edge		
29. Fabricate Elevator Brackets and Fittings		
30. Install Elevator Brackets and Fittings		
31. Fabricate Elevator Covering or Skin		
32. Install Elevator Covering or Skin		
33. Fabricate Elevator Trim Tab		
34. Install Elevator Trim Tab		
35. Install and Rig Elevator		
36. Fabricate Rudder Spar		
37. Fabricate Rudder Ribs or Cores		
38. Assemble Rudder Structure		
39. Fabricate Rudder Leading and Trailing Edge		
40. Assemble Rudder Leading and Trailing Edge		
41. Fabricate Rudder Brackets and Fittings		
42. Install Rudder Brackets and Fittings		
43. Fabricate Rudder Covering or Skin		
44. Install Rudder Covering or Skin		
45. Fabricate Rudder Trim Tab		
46. Install Rudder Trim Tab		
47. Install and Rig Rudder		

FAA Form 8000-38 (12-91)

Figure 4-11. Sample FAA Form 8000-38, Fabrication/Assembly Operation Checklist (Continued)

FABRICATION/ASSEMBLY OPERATION CHECKLIST (Continued)		
	Accomplished By	
	Kit Manufacturer	Amateur
EMPENNAGE		
1. Fabricate Special Tools of Fixtures		
2. Fabricate Spars		
3. Fabricate Ribs or Cores		
4. Fabricate Leading and Trailing Edges		
5. Fabricate Tips		
6. Fabricate Brackets and Fittings		
7. Assemble Empennage Structures		
8. Install Leading/Trailing Edges and Tips		
9. Install Fittings		
10. Fabricate Cables, Wires, and Lines		
11. Install Cables, Wires and Lines		
12. Fabricate Empennage Covering or Skin		
13. Install Empennage Covering or Skin		
CANARD		
1. Fabricate Canard		
2. Assemble Canard Structure		
3. Install and Rig Canard		
LANDING GEAR		
1. Fabricate Special Tools or Fixtures		
2. Fabricate Struts		
3. Fabricate Brakes System		
4. Fabricate Retraction System		
5. Fabricate Cables, Wires and Lines		
6. Assemble Wheels, Brakes, Tires, Landing Gear		
7. Install Landing Gear System Components		
PROPULSION		
1. Fabricate Special Tools of Fixtures		
2. Fabricate Engine Mount		
3. Fabricate Engine Cooling System/Baffles		
4. Fabricate Induction System		
5. Fabricate Exhaust System		
6. Fabricate Engine Controls		
7. Fabricate Brackets and Fittings		
8. Fabricate Cables, Wires and Lines		
9. Assemble Engine		
10. Install Engine and Items Listed Above		
11. Fabricate Engine Cowling		
12. Install Engine Cowling		
13. Fabricate Propeller		
14. Install Propeller		
15. Fabricate Fuel Tank		

FAA Form 8000-38 (12-91)

Figure 4-11. Sample FAA Form 8000-38, Fabrication/Assembly Operation Checklist (Continued)

FABRICATION/ASSEMBLY OPERATION CHECKLIST (Continued)		
	Accomplished By	
	Kit Manufacturer	Amateur
PROPULSION (Continued)		
16. Install Fuel Tank		
17. Fabricate Fuel System Components		
18. Install Fuel System Components		
MAIN ROTOR DRIVE SYSTEMS AND CONTROL MECHANISM(S)		
1. Fabricate Special Static and Dynamic Main Rotor Rigging Tools		
2. Fabricate/Assemble Main Rotor Drive Train		
3. Install Main Rotor Drive Train Assembly		
4. Fabricate/Assemble Main Rotor Shaft and Hub Assembly		
5. Install Main Rotor Shaft and Hub Assembly		
6. Align Main Rotor Shaft-Drive Train, Shaft and Hub Assembly		
7. Fabricate Main Rotor Rotating Controls		
8. Install Main Rotor Rotating Controls		
9. Fabricate Main Rotor Non-Rotating Controls		
10. Rig Main Rotor Rotating and Non-Rotating Controls		
11. Fabricate Main Rotor Blades		
12. Install Main Rotor Blades on Rotor Hub		
13. Statically Balance and Rig Main Rotor System		
14. Dynamically Track and Balance Main Rotor System		
TAIL ROTOR DRIVE SYSTEMS AND CONTROL MECHANISM(S)		
1. Fabricate Special Static Tail Rotor Rigging Tools		
2. Fabricate Vertical Trim Fin		
3. Install Vertical Trim Fin		
4. Fabricate Horizontal Stabilizer		
5. Install Horizontal Stabilizer		
6. Fabricate Tail Rotor Drive System		
7. Install Tail Rotor Drive System		
8. Fabricate Tail Cone or Frame		
9. Install and Rig Tail Cone or Frame		
10. Rig Vertical Trim Fin		
11. Fabricate Tail Rotor Shaft and Hub Assembly		
12. Install Tail Rotor Shaft and Hub Assembly		
13. Fabricate Tail Rotor Rotating and Non-Rotating Controls		
14. Rig Tail Rotor Rotating and Non-Rotating Controls		
15. Fabricate/Assemble Tail Rotor Blades		
16. Install Tail Rotor Blades		
17. Statically Balance and Rig Tail Rotor System		
18. Dynamically Track and Balance Tail Rotor System		

FAA Form 8000-38 (12-91)

Figure 4-11. Sample FAA Form 8000-38, Fabrication/Assembly Operation Checklist (Continued)

FABRICATION/ASSEMBLY OPERATION CHECKLIST (Continued)		
	Accomplished By	
	Kit Manufacturer	Amateur
COCKPIT/INTERIOR		
1. Fabricate Instrument Panel		
2. Install Instrument Panel and Instruments		
3. Fabricate Seats		
4. Install Seats		
5. Fabricate Electrical Wiring, Controls/Switches		
6. Install Electrical System Controls/Switches		
TOTAL		

Comments

Printed Name	Signature	Date

FAA Form 8000-38 (12-91)

Figure 4-12. Sample FAA Form 8130-7, Unlimited

Front

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

SPECIAL AIRWORTHINESS CERTIFICATE

A	CATEGORY/DESIGNATION Experimental		
	PURPOSE AGRICULTURAL		
B	MANU-FACTURER	NAME N/A	
		ADDRESS N/A	
C	FLIGHT	~~FROM~~ SEE ATTACHED OPERATING LIMITATIONS	
		~~TO~~ SEE ITEM D, REVERSE SIDE OF THIS CERTIFICATE	
D	N- 32104		SERIAL NO. 2245
	BUILDER BELL		MODEL 47G-4
E	DATE OF ISSUANCE 01/31/2001		EXPIRY Unlimited
	OPERATING LIMITATIONS DATED 01/31/2001 ARE PART OF THIS CERTIFICATE		
	SIGNATURE OF FAA REPRESENTATIVE Bart J. Johnson *Bart J. Johnson*		DESIGNATION OR OFFICE NO. NW-XX

Any alteration, reproduction or misuse of this certificate may be punishable by a fine not exceeding $1,000 or imprisonment not exceeding 3 years, or both. THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE TITLE 14, CODE OF FEDERAL REGULATIONS (CFR).

FAA Form 8130-7 (04-11) Previous Edition 07/04 May be Used until Depleted *SEE REVERSE SIDE* *NSN: 0052-00-693-4000*

Back

A	This airworthiness certificate is issued under the authority of Public Law 104-6, 49 United States Code (USC) 44704 and Title 14 Code of Federal Regulations (CFR).
B	The airworthiness certificate authorizes the manufacturer named on the reverse side to conduct production fight tests, and only production flight tests, of aircraft registered in his name. No person may conduct production flight tests under this certificate: (1) Carrying persons or property for compensation or hire: and/or (2) Carrying persons not essential to the purpose of the flight.
C	This airworthiness certificate authorizes the flight specified on the reverse side for the purpose shown in Block A.
D	This airworthiness certificate certifies that as of the date of issuance, the aircraft to which issued has been inspected and found to meet the requirements of the applicable CFR. The aircraft does not meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention On International Civil Aviation. No person may operate the aircraft described on the reverse side: (1) except in accordance with the applicable CFR and in accordance with conditions and limitations which may be prescribed by the FAA as part of this certificate; (2) over any foreign country without the special permission of that country.
E	Unless sooner surrendered, suspended, or revoked, this airworthiness certificate is effective for the duration and under the conditions prescribed in 14 CFR, Part 21, Section 21.181 or 21.217.

Figure 4-13. Sample FAA Form 8130-7, Special Flight Permit

Front

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

SPECIAL AIRWORTHINESS CERTIFICATE

A	CATEGORY/DESIGNATION Special Flight Permit		
	PURPOSE Production Flight Testing or Customer Demonstration		
B	MANU-FACTURER	NAME The Boeing Company	
		ADDRESS P.O. Box 767, Renton WA 13567	
C	FLIGHT	FROM N/A	
		TO N/A	
D	N- N/A		SERIAL NO. N/A
	BUILDER N/A		MODEL N/A
E	DATE OF ISSUANCE 01/31/2001		EXPIRY 01/31/2001
	OPERATING LIMITATIONS DATED 01/31/2001 ARE PART OF THIS CERTIFICATE		
	SIGNATURE OF FAA REPRESENTATIVE Sam T. Smith *Sam T. Smith*		DESIGNATION OR OFFICE NO. NM-XX

Any alteration, reproduction or misuse of this certificate may be punishable by a fine not exceeding $1,000 or imprisonment not exceeding 3 years, or both. THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE TITLE 14, CODE OF FEDERAL REGULATIONS (CFR).

FAA Form 8130-7 (04-11) Previous Edition 07/04 May be Used until Depleted *SEE REVERSE SIDE* *NSN: 0052-00-693-4000*

Back

A	This airworthiness certificate is issued under the authority of Public Law 104-6, 49 United States Code (USC) 44704 and Title 14 Code of Federal Regulations (CFR).
B	The airworthiness certificate authorizes the manufacturer named on the reverse side to conduct production fight tests, and only production flight tests, of aircraft registered in his name. No person may conduct production flight tests under this certificate: (1) Carrying persons or property for compensation or hire: and/or (2) Carrying persons not essential to the purpose of the flight.
C	This airworthiness certificate authorizes the flight specified on the reverse side for the purpose shown in Block A.
D	This airworthiness certificate certifies that as of the date of issuance, the aircraft to which issued has been inspected and found to meet the requirements of the applicable CFR. The aircraft does not meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention On International Civil Aviation. No person may operate the aircraft described on the reverse side: (1) except in accordance with the applicable CFR and in accordance with conditions and limitations which may be prescribed by the FAA as part of this certificate; (2) over any foreign country without the special permission of that country.
E	Unless sooner surrendered, suspended, or revoked, this airworthiness certificate is effective for the duration and under the conditions prescribed in 14 CFR, Part 21, Section 21.181 or 21.217.

Figure 4-14. Sample FAA Form 337, Major Repair and Alteration

US Department of Transportation Federal Aviation Administration

MAJOR REPAIR AND ALTERATION
(Airframe, Powerplant, Propeller, or Appliance)

Form Approved OMB No. 2120-0020 2/28/2011

Electronic Tracking Number

For FAA Use Only

INSTRUCTIONS: Print or type all entries. See Title 14 CFR §43.9, Part 43 Appendix B, and AC 43.9-1 (or subsequent revision thereof) for instructions and disposition of this form. This report is required by law (49 U.S.C. §44701). Failure to report can result in a civil penalty for each such violation. (49 U.S.C. §46301(a))

1. Aircraft	Nationality and Registration Mark: N93142	Serial No.: 4312	
	Make: Beech	Model: D50A	Series:
2. Owner	Name *(As shown on registration certificate)*: Ted K. Bauer	Address *(As shown on registration certificate)*: Address 1496 Oak Lane; City Vienna; State VA; Zip 21666; County USA	

3. For FAA Use Only

No person may operate this aircraft, as altered herein, unless it has within it an appropriate and current Special Flight Permit issued under the provisions of 14 CFR part 21.

4. Type		5. Unit Identification			
Repair	Alteration	Unit	Make	Model	Serial No.
☐	☐	AIRFRAME	—	*(As described in Item 1 above)*	—
☐	☐	POWERPLANT			
☐	☐	PROPELLER			
☐	☐	APPLIANCE	Type / Manufacturer		

6. Conformity Statement

A. Agency's Name and Address
Name: Flight Inc.
Address: 419 Harford Road
City: Windsor Locks State: CT
Zip: 06066 County: USA

B. Kind of Agency

	U. S. Certificated Mechanic	☐ Manufacturer
	Foreign Certificated Mechanic	C. Certificate No.
✓	Certificated Repair Station	1234
	Certificated Maintenance Organization	Airframe Class 3

D. I certify that the repair and/or alteration made to the unit(s) identified in item 5 above and described on the reverse or attachments hereto have been made in accordance with the requirements of Part 43 of the U.S. Federal Aviation Regulations and that the information furnished herein is true and correct to the best of my knowledge.

Extended range fuel per 14 CFR Part 43 App. B ☐

Signature/Date of Authorized Individual: S.J. Wilborn/ 11/16/2009

7. Approval for Return to Service

Pursuant to the authority given persons specified below, the unit identified in item 5 was inspected in the manner prescribed by the Administrator of the Federal Aviation Administration and is ☐ Approved ☐ Rejected

BY								
	✓	FAA Flt. Standards Inspector		Manufacturer		Maintenance Organization		Persons Approved by Canadian Department of Transport
		FAA Designee		Repair Station		Inspection Authorization		Other *(Specify)*

Certificate or Designation No.

Signature/Date of Authorized Individual: A.W. Reed/ 11/18/2009

FAA Form 337 (10-06)

Figure 4-15. Sample FAA Form 8130-7, Special Flight Permit LSA

Front

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

SPECIAL AIRWORTHINESS CERTIFICATE

A	CATEGORY/DESIGNATION Special Flight Permit		
	PURPOSE Production Flight Testing LSA		
B	MANU-FACTURER	NAME The Acme Company	
		ADDRESS 420 W Jackson, Mexico MO 65265	
C	FLIGHT	FROM N/A	
		TO N/A	
D	N- 1234LS		SERIAL NO. 0007
	BUILDER Acme Co.		MODEL Pegasus
E	DATE OF ISSUANCE 09/01/2004		EXPIRY 09/08/2004
	OPERATING LIMITATIONS DATED 09/01/2004		ARE PART OF THIS CERTIFICATE
	SIGNATURE OF FAA REPRESENTATIVE Sam T. Smith *Sam T. Smith*		DESIGNATION OR OFFICE NO. CE-XX

Any alteration, reproduction or misuse of this certificate may be punishable by a fine not exceeding $1,000 or imprisonment not exceeding 3 years, or both. THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE TITLE 14, CODE OF FEDERAL REGULATIONS (CFR).

FAA Form 8130-7 (04-11) Previous Edition 07/04 May be Used until Depleted *SEE REVERSE SIDE* *NSN: 0052-00-693-4000*

Back

A	This airworthiness certificate is issued under the authority of Public Law 104-6, 49 United States Code (USC) 44704 and Title 14 Code of Federal Regulations (CFR).
B	The airworthiness certificate authorizes the manufacturer named on the reverse side to conduct production fight tests, and only production flight tests, of aircraft registered in his name. No person may conduct production flight tests under this certificate: (1) Carrying persons or property for compensation or hire: and/or (2) Carrying persons not essential to the purpose of the flight.
C	This airworthiness certificate authorizes the flight specified on the reverse side for the purpose shown in Block A.
D	This airworthiness certificate certifies that as of the date of issuance, the aircraft to which issued has been inspected and found to meet the requirements of the applicable CFR. The aircraft does not meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention On International Civil Aviation. No person may operate the aircraft described on the reverse side: (1) except in accordance with the applicable CFR and in accordance with conditions and limitations which may be prescribed by the FAA as part of this certificate; (2) over any foreign country without the special permission of that country.
E	Unless sooner surrendered, suspended, or revoked, this airworthiness certificate is effective for the duration and under the conditions prescribed in 14 CFR, Part 21, Section 21.181 or 21.217.

Figure 4-16. Sample Special Flight Permit
Operating Limitations for LSA Category Production Flight Testing

U.S. Department
of Transportation

Federal Aviation
Administration

SPECIAL FLIGHT PERMIT
OPERATING LIMITATIONS

MAKE: ACME MODEL: Flyer I

S/N: 00002 REG. NUMBER: NXXXX

1. No person may operate this aircraft for other than the purpose of meeting the requirements of Title 14 of the Code of Federal Regulations (14 CFR) § 21.190(c)(7) during flight testing. In addition, this aircraft must be operated in accordance with applicable air traffic and general operating rules of 14 CFR part 91 and all additional limitations herein prescribed. These operating limitations are a part of a special flight permit and are to be carried in the aircraft at all times and be available to the pilot in command of the aircraft.

2. All flight must be conducted within the geographical area described as follows. The
area must be described 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 area must be that required to safely conduct the anticipated maneuvers and tests.

3. All flights must be conducted and recorded in accordance with the manufacturer's production acceptance test procedure that meets the applicable consensus standard.

4. This aircraft is to be operated under Visual Flight Rules, day only.

5. The test pilot in command of this aircraft must hold at least a private pilot certificate, appropriate category, and class ratings to act as pilot in command, and have a minimum of 100 hours as a pilot in command in that category and class.

6. The production test pilot is to be the sole occupant.

_____ _____

Date FAA Representative Designation

Figure 4-17. Sample FAA Form 8130-7, Special Airworthiness Certificate for LSA Category Aircraft Certificated Under 14 CFR § 21.190

Front

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

SPECIAL AIRWORTHINESS CERTIFICATE

A	CATEGORY/DESIGNATION Light-sport		
	PURPOSE Airplane		
B	MANU-FACTURER	NAME N/A	
		ADDRESS N/A	
C	FLIGHT	FROM N/A	
		TO N/A	
D	N- 2LSA		SERIAL NO. 00002
	BUILDER ACME Co.		MODEL Flyer I
E	DATE OF ISSUANCE 09/28/2004		EXPIRY Unlimited
	OPERATING LIMITATIONS DATED 09/28/2004		ARE PART OF THIS CERTIFICATE
	SIGNATURE OF FAA REPRESENTATIVE Steven Zahrt *Steven Zahrt*		DESIGNATION OR OFFICE NO. CE43

Any alteration, reproduction or misuse of this certificate may be punishable by a fine not exceeding $1,000 or imprisonment not exceeding 3 years, or both. THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE TITLE 14, CODE OF FEDERAL REGULATIONS (CFR).

FAA Form 8130-7 (04-11) Previous Edition 07/04 May be Used until Depleted *SEE REVERSE SIDE* *NSN: 0052-00-693-4000*

Back

A	This airworthiness certificate is issued under the authority of Public Law 104-6, 49 United States Code (USC) 44704 and Title 14 Code of Federal Regulations (CFR).
B	The airworthiness certificate authorizes the manufacturer named on the reverse side to conduct production fight tests, and only production flight tests, of aircraft registered in his name. No person may conduct production flight tests under this certificate: (1) Carrying persons or property for compensation or hire: and/or (2) Carrying persons not essential to the purpose of the flight.
C	This airworthiness certificate authorizes the flight specified on the reverse side for the purpose shown in Block A.
D	This airworthiness certificate certifies that as of the date of issuance, the aircraft to which issued has been inspected and found to meet the requirements of the applicable CFR. The aircraft does not meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention On International Civil Aviation. No person may operate the aircraft described on the reverse side: (1) except in accordance with the applicable CFR and in accordance with conditions and limitations which may be prescribed by the FAA as part of this certificate; (2) over any foreign country without the special permission of that country.
E	Unless sooner surrendered, suspended, or revoked, this airworthiness certificate is effective for the duration and under the conditions prescribed in 14 CFR, Part 21, Section 21.181 or 21.217.

Figure 4-18. Sample FAA Form 8130-7, Special Airworthiness Certificate for Experimental LSA Certificated Under 14 CFR § 21.191

Front

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

SPECIAL AIRWORTHINESS CERTIFICATE

A	CATEGORY/DESIGNATION Experimental		
	PURPOSE Operating Light-Sport Aircraft (PPC)		
B	MANU-FACTURER	NAME N/A	
		ADDRESS N/A	
C	FLIGHT	FROM N/A	
		TO N/A	
D	N- 9777		SERIAL NO. 0022
	BUILDER Powrachute		MODEL Pegasus
E	DATE OF ISSUANCE 12/31/2005		EXPIRY Unlimited
	OPERATING LIMITATIONS DATED 12/31/2005		ARE PART OF THIS CERTIFICATE
	SIGNATURE OF FAA REPRESENTATIVE Johnnie Mulsow J.S. Mulsow		DESIGNATION OR OFFICE NO. CE34

Any alteration, reproduction or misuse of this certificate may be punishable by a fine not exceeding $1,000 or imprisonment not exceeding 3 years, or both. THIS CERTIFICATE MUST BE DISPLAYED IN THE AIRCRAFT IN ACCORDANCE WITH APPLICABLE TITLE 14, CODE OF FEDERAL REGULATIONS (CFR).

FAA Form 8130-7 (04-11) Previous Edition 07/04 May be Used until Depleted *SEE REVERSE SIDE* *NSN: 0052-00-693-4000*

Back

A	This airworthiness certificate is issued under the authority of Public Law 104-6, 49 United States Code (USC) 44704 and Title 14 Code of Federal Regulations (CFR).
B	The airworthiness certificate authorizes the manufacturer named on the reverse side to conduct production fight tests, and only production flight tests, of aircraft registered in his name. No person may conduct production flight tests under this certificate: (1) Carrying persons or property for compensation or hire: and/or (2) Carrying persons not essential to the purpose of the flight.
C	This airworthiness certificate authorizes the flight specified on the reverse side for the purpose shown in Block A.
D	This airworthiness certificate certifies that as of the date of issuance, the aircraft to which issued has been inspected and found to meet the requirements of the applicable CFR. The aircraft does not meet the requirements of the applicable comprehensive and detailed airworthiness code as provided by Annex 8 to the Convention On International Civil Aviation. No person may operate the aircraft described on the reverse side: (1) except in accordance with the applicable CFR and in accordance with conditions and limitations which may be prescribed by the FAA as part of this certificate; (2) over any foreign country without the special permission of that country.
E	Unless sooner surrendered, suspended, or revoked, this airworthiness certificate is effective for the duration and under the conditions prescribed in 14 CFR, Part 21, Section 21.181 or 21.217.

Figure 4-19. Sample FAA Form 8130-15, Light-Sport Aircraft Statement of Compliance

Form Approved
O.M.B. No. 2120-0690

*

U.S. Department of Transportation
Federal Aviation Administration

Light-Sport Aircraft Statement of Compliance

INSTRUCTIONS - Print or type. Present original to an authorized FAA Representative. If additional space is required, use an attachment.

I. Aircraft Identification

1. Manufacturer Name The ACME Company		2. Manufacturer Address (*street, city, zip*) 420 W Jackson, Mexico MO 65265	
3. Aircraft Serial No. 00001	4. Date of Manufacture (*MM dd, yyyy*) 09/02/2005	5. Aircraft Make ACME	6. Aircraft Model Flyer I
7. Maximum Take-off Weight 1,430 lb	8. Maximum Number Occupants 2	9. V_H 120 KCAS	10. V_{S1} 45 KCAS

Class of light-sport aircraft: *(Check all applicable items)* X Operation on Water

X Airplane ☐ Powered Parachute ☐ Weight-Shift-Control ☐ Glider ☐ Lighter-Than-Air

II. Applicable User Manuals

Consensus Standard(s) *(list below or use attachment)* ASTM Standard F2245-04 (design and performance) ASTM Standard F2339-04 (engine) ASTM Standard F2316-054 (airframe emergency parachute)	Revision N/A	Valid Until N/A
Aircraft Operating Instructions (*list applicable items*) ACME-AOI-1st Edition ASTM Standard F2245-04	Revision None Revision N/A	Date issued 08/01/2005 Date N/A
Aircraft Maintenance and Inspection Procedures (*list applicable items*) ACME-MM-1st Edition ASTM Standard F2483-05	Revision Rev A Revision N/A	Date issued 08/15/2005 Date N/A
Aircraft Flight Training Supplement (*list applicable items*) ACME-FTSupp ASTM Standard F2245-04	Revision None Revision N/A	Date issued 08/01/2005 Date N/A

III. Manufacturer's Process Documents

Comments (*any additional statements may be stated here or attached*)
This 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. FIRST OF MAKE AND/OR MODEL

Manufacturer's Quality Assurance System (*list applicable items*) ACME-QCS.001 ASTM Standard F2279-03	Revision Rev C Revision N/A	Date 07/23/2005
Manufacturer's Continued Airworthiness System (*list applicable items*) ACME-CAW.002 ASTM Standard F2295-03	Revision Rev A Revision N/A	Date 10/31/2004

IV. Manufacturer's Certification

CERTIFICATION: I hereby certify that aircraft serial number -00001 complies with the Consensus Standard(s) identified on this statement of compliance and that the Manufacturer's Continued Airworthiness System will be adhered to support the aircraft throughout its life. This aircraft (1) was manufactured following the consensus standard(s) 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, and (4) is in a condition for safe operation. Additionally, at the request of the FAA, the manufacturer will provide unrestricted access to its facilities.

Name: Irving M. Himm	Signature: I M Himm
Title: President, General Manager	Date 9/7/2005
Name:	
Title:	Date

*

FAA Form 8130-15 (09-04)

Figure 4-20. Sample FAA Form 8130-15, Light-Sport Kit-Built Aircraft Statement of Compliance

Form Approved
O.M.B. No. 2120-0690

*

U.S. Department of Transportation
Federal Aviation Administration

Light-Sport Aircraft Statement of Compliance

INSTRUCTIONS - Print or type. Present original to an authorized FAA Representative. If additional space is required, use an attachment.

I. Aircraft Identification

1. Manufacturer Name Express Aircraft		2. Manufacturer Address (*street, city, zip*) 1876 N. Parkview Drive, Chandler, OK 65432	
3. Aircraft Serial No. K-00014	4. Date of Manufacture (*MM dd, yyyy*) Kit – 03/07/2006	5. Aircraft Make Express Flyer	6. Aircraft Model Silver One
7. Maximum Take-off Weight 1,320 lb	8. Maximum Number Occupants 2	9. V_H 120 KCAS	10. V_{S1} 45 KCAS

Class of light-sport aircraft: *(Check all applicable items)* Operation on Water

X Airplane ☐ Powered Parachute ☐ Weight-Shift-Control ☐ Glider ☐ Lighter-Than-Air

II. Applicable User Manuals

Consensus Standard(s) *(list below or use attachment)* Silver One Assembly Instructions, KFSO-1A ASTM Standard F2245-04 (design and performance) ASTM Standard F2563-06 (assembly instructions)	Revision Rev A N/A N/A	Valid Until N/A N/A N/A
Aircraft Operating Instructions (*list applicable items*) Silver One Operating Instructions, SO-OI-1 ASTM Standard F2245-04	Revision None Revision N/A	Date issued 12/11/2005 Date N/A
Aircraft Maintenance and Inspection Procedures (*list applicable items*) Silver One Maintenance Manual, SO-MM-1 ASTM Standard F2483-05	Revision Rev A Revision N/A	Date issued 11/30/2005 Date N/A
Aircraft Flight Training Supplement (*list applicable items*) Silver One Flight Training, SO-FT-1 ASTM Standard F2245-04	Revision None Revision N/A	Date issued 12/11/2005 Date N/A

III. Manufacturer's Process Documents

Comments (*any additional statements may be stated here or attached*)
Express Aircraft manufactured and assembled Express Flyer Silver One, serial number F-0002, N456EF, which was issued a special airworthiness certificate in the light-sport category on 12/01/2005. Express Aircraft Silver One Kit Assembly Instructions, Revision A, meets consensus standards requirements of ASTM F2563-06 and are provided with this Kit.

Manufacturer's Quality Assurance System (*list applicable items*) Express Aircraft QA Manual ASTM Standard F2279-03	Revision Rev C Revision N/A	Date 01/18/2006
Manufacturer's Continued Airworthiness System (*list applicable items*) Express Aircraft CAS documentation located in QA Manual ASTM Standard 2295-03	Revision Rev C Revision N/A	Date

IV. Manufacturer's Certification

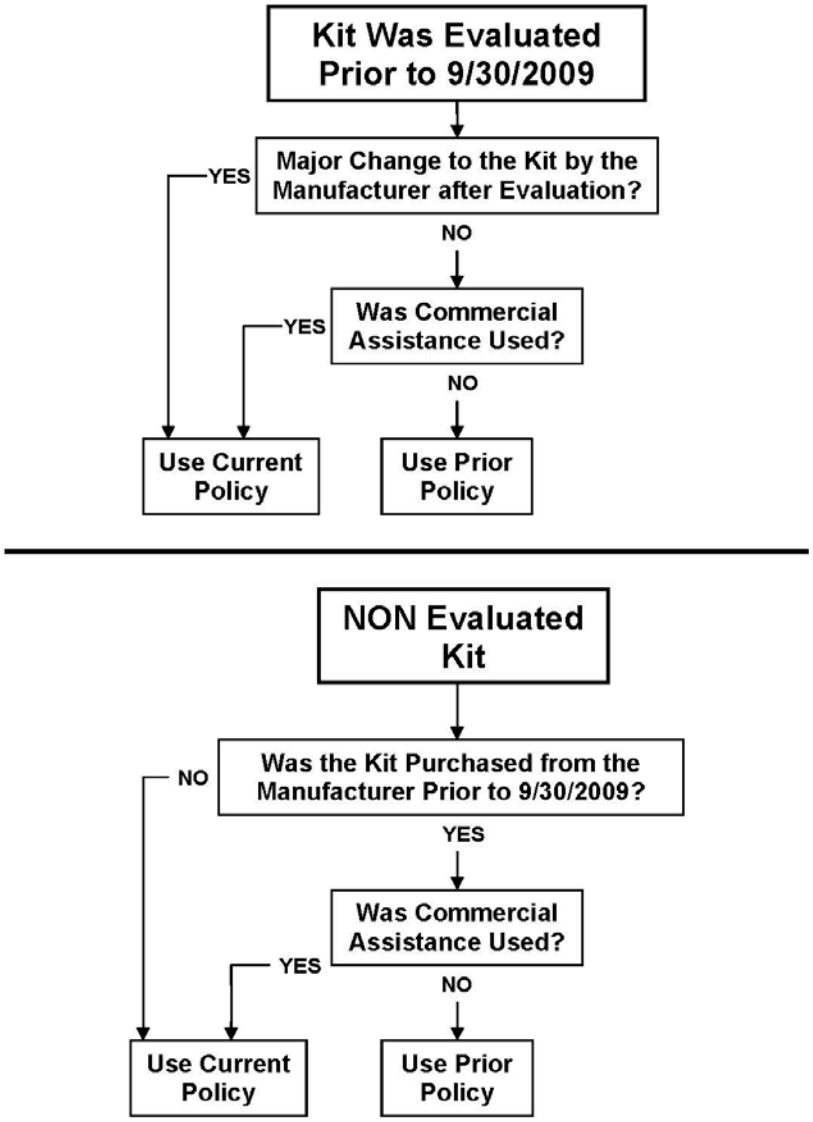
CERTIFICATION: I hereby certify that ~~aircraft~~ kit serial number K-00014 complies with the Consensus Standard(s) identified on this statement of compliance and that the Manufacturer's Continued Airworthiness System will be adhered to support the aircraft throughout its life. This ~~aircraft~~ kit (1) was manufactured following the consensus standard(s) 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, and (4) is in a condition for safe operation~~. Additionally, at the request of the FAA, the manufacturer will provide unrestricted access to its facilities.

Name: Jacob Small	Signature: *Jake Small*
Title: General Manager	Date 03/07/2006
Name:	
Title:	Date

*

FAA Form 8130-15 (09-04)

Figure 4-21. Use of Prior Policy



Notes for figure 4-21:

1. An "evaluated kit" means an FAA-evaluated kit, which may allow an amateur builder to meet the major portion requirement for a Special Airworthiness Certificate in the Experimental Amateur Built category, and be placed on the FAA List of Amateur-Built Aircraft Kits.

2. "Prior policy" means the policy, AC, or checklist in effect prior to 9/30/2009 (for example, Order 8130.2, AC 20-27, and FAA Form 8000-38). AIR-200 will maintain these documents as part of the web-based reference materials section concerning amateur-built aircraft.

3. "Current policy" means the policy contained in FAA Order 8130.2F (change 4) or later, AC 20-27G or latest revision, and the Amateur-Built Aircraft Fabrication and Assembly Checklist (2009) or latest revision,

4. "Major Change to Kit by Manufacturer" means any change that would affect the allocation of task credit.

5. "Commercial assistance" means to provide assistance with fabricating or assembling amateur-built aircraft for cash, services, or other tender. This does not include one builder helping another without compensation.

6. The manufacturer of a previously evaluated kit that was placed on the FAA List of Amateur-Built Aircraft Kits may request to have the kit reevaluated under the current policy.

Chapter 7. Special Flight Authorizations (SFA) for Non-U.S.-Registered Civil Aircraft

700. General.

a. The navigation of non-U.S.-registered civil aircraft in the United States is permitted under 49 U.S.C. § 41703(a). This section is implemented by 14 CFR part 375, Navigation of Foreign Civil Aircraft Within the United States, which sets forth the rules, conditions, and limitations governing the navigation of non-U.S. civil aircraft in the United States 14 CFR part 375 also specifies that non-U.S. civil aircraft being operated in the United States must carry current and effective airworthiness and registration certificates issued or rendered valid by the state of registry. Subject in some cases to prior U.S. Department of Transportation (DOT) approval, 14 CFR part 375 also allows the operation in U.S. airspace of aircraft that do not carry current airworthiness certificates, but that have been issued an SFA by the FAA.

> **Note:** An SFA may be issued for any purpose, but may not be issued when there is any evidence of intent to circumvent any CFR provisions, for example, 14 CFR §21.183(c) or § 21.185(c), or 14 CFR part 129, Operations: Foreign Air Carriers and Foreign Operators of U.S.-Registered Aircraft Engaged in Common Carriage.

b. A non-U.S. civil aircraft that does not have a current airworthiness certificate issued by the state of registry requires an SFA issued by the FAA in accordance with 14 CFR § 91.715(a). An aircraft registered in a country that is not a member of the ICAO ALWAYS requires an authorization from the DOT and an SFA issued by the FAA if it will be operated in the United States.

> **Note:** A listing of ICAO member states is contained on the ICAO website.

701. Eligibility.

a. General. 14 CFR § 91.715 is applicable to a non-U.S. civil aircraft that does 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 Convention on International Civil Aviation. An SFA is required for an aircraft carrying an airworthiness certificate, flight permit, or similar document issued by the state of registry that is equivalent to a U.S. special airworthiness certificate. See 14 CFR § 375.10 for details concerning aircraft manufactured in a country before that country became a member of the ICAO.

* **b. Basic Eligibility.** An SFA may be issued when the following conditions exist: *

(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 Convention on International Civil Aviation requirements, or it has an invalid airworthiness certificate. An aircraft with an invalid airworthiness certificate issued by the aircraft's state of registry may have been repaired, altered, or modified at a U.S.-located facility and requires flight testing.

(2) The aircraft is registered in a non-ICAO member state regardless of the type of airworthiness certificate issued or its planned operation. An SFA also is required and may be issued for such aircraft; however, the issuing ASI should be aware that the airworthiness requirements of the state of registry may be unknown.

(3) If a DOT authorization is required and is being obtained concurrently with the SFA, the SFA should include a limitation stating that a copy of the DOT authorization must be carried in the aircraft when operating under the SFA. Inquiries regarding DOT authorization may be referred to:

Department of Transportation
Office of International Aviation
Foreign Carrier Licensing Division
* 1200 New Jersey Avenue SE. *
Washington, DC 20590

c. Basic Ineligibility. An SFA must not be issued when the following conditions exist:

(1) If the aircraft is of foreign military registry (non-civil) and an SFA is requested, the applicant should be referred 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) 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 non-U.S. owner/operator, or a U.S. individual or firm acting on behalf of the owner/operator, must request overflight clearance from the U.S. Department of State. The request must include the complete itinerary, schedule, and proposed routing through U.S. airspace. For further information, contact FAA, Air Traffic System Operation, AJR-2.

702. Blanket SFAs. An 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, a ferry flight. Therefore, a blanket SFA may be issued when deemed appropriate by the issuing office manager. If it appears the applicant is trying to circumvent U.S. registration and certification requirements, for example, experimental exhibition, the SFA should not be issued.

703. Application.

a. General. The application for an SFA may be in the form of a letter, telegram, or fax from the non-U.S. owner/operator, or from a U.S. individual or firm authorized to act on behalf of the registered owner/operator. The application should be addressed to the Flight Standards Service division manager or Aircraft Certification Service directorate manager of the FAA region in which the applicant is located, or the region within which the U.S. point of entry is located. If the aircraft is coming into the United States for original certification, the SFA should be issued by the supporting MIDO.

Chapter 8. Processing Forms, Reports, and Certification Files

800. General.

a. This chapter describes the requirements for completion and processing of the various forms and certificates used for airworthiness certification. Information entered on these documents should be typewritten when possible. The use of pencil, erasures, strikeovers, etc., on airworthiness forms other than applications and Aeronautical Center Form 8050-72 is not permitted. Application forms may be corrected by the applicant or the FAA, provided the person making the changes initials beside the area of correction.

b. The signature of the ASI or designee on any FAA certificate or form must be made in permanent blue or black ink on the original and required copies. When the reverse side of the certificate is used, the statement "See Reverse Side" must be typed on the face of the certificate. Below the last line of information on a certificate, type the word "END" in the center of the page.

801. Review and Completion of FAA Form 8130-6. 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.

a. The applicant or authorized agent must complete the following sections:

Note: An authorized agent is someone who has a notarized LOA from the registered owner.

(1) For a standard airworthiness certificate, complete sections I, II, and III. Also, complete section IV if the application is for a standard airworthiness certificate—

(a) In accordance with 14 CFR § 21.183(d), or

(b) In accordance with 14 CFR §§ 21.183(h) and 21.6(b)).

(2) For a special airworthiness certificate, complete sections I, II, and III.

(3) For a special flight permit only, complete—

* (a) Sections II, and VI for production flight testing; or

(b) Sections II, and VII for purposes other than production flight testing.

(c) For production flight testing of light-sport category aircraft, complete sections I and II, and items A and C of section VI.

(4) For unmanned aircraft, complete sections I, II, and III (blocks A, B (when applicable), C, and D). *

* **b. Instruction for Verifying the Applicant's Entries and Completing FAA Form 8130-6 (Figure 8-1 of this order).** *

(1) Section I. Aircraft Description. The FAA must verify the applicant's entries from the aircraft registration certificate, aircraft ID plate, TCDS, and/or aircraft specification sheet.

* **Note:** This section is completed when an application is being made for a special flight permit for production flight testing of light-sport category aircraft. *

(a) #1 Registration Mark. The U.S. nationality designator (the letter "N") followed by the registration marks as shown on the aircraft registration certificate is entered.

(b) #2 Aircraft Builder's Name (Make). The name of the builder or manufacturer as it appears on the aircraft ID plate in accordance with 14 CFR § 45.13(a)(1) is entered.

* *1* For amateur-built aircraft, the aircraft make is the name of the builder. Only the name of the individual listed first on the aircraft ID plate is entered. *

2 For LSA assembled from an LSA manufacturer's kit, the builder's name is that of the manufacturer who is identified on the FAA Form 8130-15.

3 For aircraft built from spare and/or surplus articles, the builder's name is the person who assembled the aircraft, not the TC owner/manufacturer who builds the same model of aircraft. When two or more persons are involved, only the name of the individual listed first on the aircraft ID plate is entered.

* *4* For former aircraft of the U.S. Armed Forces (U.S. military aircraft) (not assembled from spare and/or surplus articles), the builder's name must be as listed on the TCDS. *

5 For unmanned aircraft, the builder's name is the manufacturer's company name.

(c) #3 Aircraft Model Designation. The model designation as shown on the aircraft ID plate in accordance with 14 CFR § 45.13(a)(2) is entered. Trade names must not be used.

* *1* If the application is for a surplus U.S. military aircraft, the civil model designation is entered and the military model designation is entered in parentheses. If the TC was issued under 14 CFR § 21.27, the military model designation becomes the civil model designation. *

2 For aircraft built from spare and/or surplus articles, the model designation is the aircraft type design to which the applicant shows conformity.

* *3* For surplus U.S. military aircraft type certificated under 14 CFR § 21.25(a)(2) in the restricted category, only the military designation will be used. *

4 For amateur-built aircraft, the model may be any arbitrary designation as selected by the builder. If the aircraft was purchased as a kit, the model designation assigned by the kit manufacturer should be used.

5 For unmanned aircraft, the model may be any designation selected by the manufacturer.

(d) #4 Year of Manufacture. The year of manufacture if shown on the aircraft ID plate or as reflected in the aircraft's records is entered.

1 For aircraft eligible for standard airworthiness certificates, the year of manufacture is the date (entered by the manufacturer) in the inspection records that reflect when the aircraft was completed and met the FAA-approved type design data.

2 For aircraft other than those in paragraph 801b(1)(d)*1* of this order, the year of manufacture is the date entered by the builder in the inspection records or logbook
* establishing evidence that the aircraft is airworthy and eligible for the requested certificate. *

3 For LSA, the year of manufacture is the date entered by the manufacturer in
* the SOC or by the builder in the inspection records or logbook establishing evidence that the aircraft is eligible for the requested certificate. *

(e) #5 Aircraft Serial Number. The serial number as shown on the aircraft ID plate in accordance with 14 CFR § 45.13(a)(3) is entered.

* *1* For surplus U.S. military aircraft, the manufacturer's civil serial number. *
The military serial number must be placed in parentheses following the civil serial number. If no civil serial number exists, the military number is used.

* *2* For aircraft built from spare and/or surplus articles, the serial number may be *
assigned by the builder. That number should not be confused with the serial number assigned by an original manufacturer who builds the same type of aircraft under a PC. It is suggested that a letter prefix or suffix, such as the builder's name or initials, be used with the serial number to provide for positive ID.

3 For amateur-built aircraft, fabricated and assembled from plans or the builder's own design, the serial number may be any arbitrary number assigned by the builder. For any aircraft fabricated and assembled from a kit, the aircraft should be identified by the serial number assigned by the kit manufacturer or supplier.

(f) #6 Engine Builder's Name (Make). For TC'd engines, the engine make is the name of the manufacturer as it appears on the engine ID plate in accordance with 14 CFR § 45.13(a)(1). Abbreviations may be used, for example, "P&W," "GE," "CMC," etc. For non-TC engines, enter the engine manufacturer's name as it is known. "N/A" is entered when no engines are installed, as in the case of the glider or balloon.

(g) #7 Engine Model Designation. The complete designation as shown on the engine ID plate is entered; for example, "O-320-A1B," "PT6A-20A," or "CFM-56-3C-1," in accordance with 14 CFR § 45.13(a)(2). For non-TC engines, enter the engine manufacturer's engine model designation as it is known. Enter "N/A" for aircraft with no engines.

Note: For LSA, the engine serial number is required in block #7.

(h) #8 Number of Engines. When applicable, the number of engines installed on the aircraft is entered.

(i) #9 Propeller Builder's Name (Make). The name of the manufacturer as shown on the propeller identification marking is entered. "N/A" is entered if propellers are not installed. (See 14 CFR § 45.13(a)(1).)

* (j) #10 Propeller Model Designation. The model designation as shown on the propeller identification marking is entered. Enter "N/A" for aircraft with no propellers. *

(k) #11 Aircraft Is Import. This block must be checked only if the aircraft was manufactured outside the United States and certificated under 14 CFR § 21.29, and the applicant is seeking airworthiness certification under 14 CFR § 21.183(c).

(2) Section II. Certification Requested. The following paragraphs list the applicable 14 CFR references for standard and special airworthiness certificates and aid in the completion of FAA Form 8130-6:

(a) Item A. Standard Airworthiness Certificate. This certificate is issued to type-certificated aircraft in the normal, utility, acrobatic, transport, commuter, and manned free balloon categories; and for special classes of aircraft. Special class aircraft include gliders, airships, and other non-conventional aircraft. Special class application would be indicated by marking the "Standard" and Other blocks (section II A), and entering the type, (for example, glider, VLA, airship, etc.) in the blank space directly above the category blocks. For aircraft type certificated before the adoption of categories, in the open space above the category blocks the basis is entered for certification as shown in that aircraft's aircraft listing, specification sheet, or TCDS (for example, Category "N/A"-Certification basis CAR 04 A (Civil Air Regulations part 4a)). Applicable regulations are as follows:

1 14 CFR § 21.183(a), New aircraft manufactured under a production certificate;

2 14 CFR § 21.183(b), New aircraft manufactured under a type certificate;

3 14 CFR § 21.183(c), Import aircraft;

4 14 CFR § 21.183(d), Used aircraft and surplus aircraft of the U.S. Armed Forces; and

5 14 CFR § 21.183(h), New aircraft manufactured under the provisions of 14 CFR § 21.6(b).

(b) Item B. Special Airworthiness Certificate. This certificate is issued to aircraft that do not meet the requirements for a standard airworthiness certificate. Special airworthiness certificates are identified as primary, limited, provisional, restricted, experimental, special flight
* permit, and light-sport. Applicable regulations are as follows: *

1 Primary Airworthiness Certificate.

(aa) 14 CFR § 21.184(a), New primary category aircraft manufactured under a production certificate;

(bb) 14 CFR § 21.184(b), Imported aircraft;

(cc) 14 CFR § 21.184(c), Aircraft having a current standard airworthiness certificate; and

(dd) 14 CFR § 21.184(d), Other aircraft.

2 Light-Sport Airworthiness Certificate. 14 CFR § 21.190, Issue of airworthiness certificate for LSA category.

3 Limited Airworthiness Certificate. 14 CFR § 21.189, Issue of airworthiness certificate for limited category aircraft.

4 Provisional Airworthiness Certificate.

(aa) 14 CFR § 21.221, Class I provisional airworthiness certificates (may be issued for all categories); and

(bb) 14 CFR § 21.223, Class II provisional airworthiness certificates (transport category only).

5 Restricted Airworthiness Certificate.

(aa) 14 CFR § 21.185(a), Aircraft manufactured under a production certificate or type certificate;

(bb) 14 CFR § 21.185(b), Other aircraft (surplus U.S. military aircraft or one previously type certificated in another category); and

(cc) 14 CFR § 21.185(c), Import aircraft (type certificated in the restricted category in accordance with 14 CFR § 21.29).

6 Experimental Certificate.

(aa) 14 CFR § 21.191(a), Research and development;

(bb) 14 CFR § 21.191(b), Showing compliance with regulations;

(cc) 14 CFR § 21.191(c), Crew training;

(dd) 14 CFR § 21.191(d), Exhibition;

(ee) 14 CFR § 21.191(e), Air racing;

(ff) 14 CFR § 21.191(f), Market surveys;

(gg) 14 CFR § 21.191(g), Operating amateur-built aircraft;

(hh) 14 CFR § 21.191(h), Operating kit-built aircraft (primary category aircraft assembled by a person(s) without the supervision and quality system of the PC holder);

(ii) 14 CFR § 21.191(i), Operating LSA purpose under 14 CFR § 21.191(i)(1), (i)(2), or (i)(3); and

(jj) Unmanned aircraft—Research and development, crew training, and/or market survey.

7 Special Flight Permit.

(aa) 14 CFR § 21.197(a)(1), Flying the aircraft to a base where repairs, alterations, or maintenance are to be performed, or to a point of storage;

(bb) 14 CFR § 21.197(a)(2), Delivering or exporting the aircraft;

(cc) 14 CFR § 21.197(a)(3), Production flight testing new production aircraft;

(dd) 14 CFR § 21.197(a)(4), Evacuating aircraft from areas of impending danger;

(ee) 14 CFR § 21.197 (a)(5), Conducting customer demonstration flights in new production aircraft that have satisfactorily completed production flight tests; and

(ff) 14 CFR § 21.197(b), Operation of an aircraft at a weight in excess of its maximum certificated takeoff weight.

(c) Item C. Multiple Airworthiness Certificates. These certificates are issued to an applicant in the restricted category and one or more other categories except the primary category. 14 CFR § 21.187 identifies the requirements an applicant must comply with before multiple airworthiness certificates are issued.

(3) Section III. Owner's Certification.

Note: This section is not completed when application is being made for a special flight permit.

(a) Registered Owner. The name and address is entered exactly as shown on the aircraft registration certificate. 14 CFR part 47 prescribes the requirements for registering aircraft.

(b) If Dealer, this block is checked. This block must be checked ONLY if the aircraft is registered under a dealer's aircraft registration certificate.

(c) Aircraft Certification Basis (Aircraft Specification or TCDS and/or Aircraft Listing Block, or Applicable Consensus Standard). This item must be completed when application is being made for a standard, primary, light-sport, provisional, limited, restricted, or multiple airworthiness certificate.

1 When application is being made for a multiple airworthiness certificate, the certification basis for each certificate being requested is entered.

2 If the TCDS or specification for a new aircraft or model has been approved, but not yet published, the date of approval, the TC or specification number, and the word "Preliminary" is entered.

* *3* When application is being made for a special airworthiness certificate in light-sport category, the applicable consensus standard for design and performance from the * SOC is entered. If no SOC exists for the aircraft, enter "N/A."

4 "N/A" is entered when the application is being made for an experimental certificate.

(d) Airworthiness Directives. This block must be completed to indicate compliance with all applicable ADs in accordance with 14 CFR part 39 and 14 CFR § 21.99, regardless of the type of airworthiness certificate being requested.

1 The number of the last biweekly supplement to the summary of ADs available as of the date of application is entered, for example, Biweekly 97-06, published on * March 24, 1997. When a special LSA category or experimental LSA is equipped with * certificated equipment or appliances, use the applicable ADs for the certificated equipment * and/or appliances. Compliance also applies to all LSA make- and model-specific ADs.

2 Applicable manufacturer safety directives for all LSA designed and manufactured to consensus standards must be entered. If there are not any manufacturer safety * directives, "NONE." is entered.

(e) Aircraft Listing. This may apply to older aircraft listing ID is entered as appropriate. If no listing ID exists, "N/A" is entered.

(f) Supplemental Type Certificate. This block is applicable to all standard airworthiness certifications and special airworthiness certifications in the restricted, limited, provisional, and primary categories for aircraft with one or more STCs installed, and must be filled out at the time of application. The STC number of each STC installed must be entered. An attachment may be used if more space is required by the applicant.

* **Note:** "N/A" is entered when the application is being made for a special airworthiness certificate in experimental or light-sport categories. *

(g) Aircraft Operation and Maintenance Records.

1 Check If Records Are in Compliance With 14 CFR § 91.417. This block applies to all aircraft covered by this section and must be checked to indicate that the recordkeeping requirements of 14 CFR § 91.417 have been met. For example, to comply with 14 CFR § 91.417(a)(2)(i), the aircraft maintenance record must include the total time-in-service of the airframe, engines, propellers, and rotor; and to comply with 14 CFR § 91.417(a)(2)(ii), the record must include the current status of the life-limited articles of the airframe, engines, propellers, rotor, appliances, and articles. All record entries must be in English.

2 Total Airframe Hours. This block applies to all aircraft covered by this section. The total time-in-service of the aircraft, including production flight test time, should be entered.

* *3* Experimental Only. When submitting an application for the renewal of an experimental certificate, when requesting a change back to a standard certificate, or when requesting a change back to special LSA category certificate, the hours flown since the previous * certificate was issued or renewed must be entered. If the application is for an original issuance of an experimental certificate and the aircraft has no previous operating time, "0" is entered.

(h) Certification. If the signature is by the owner's agent, a notarized letter from the registered owner authorizing the agent to act on the owner's behalf is required.

(4) Section IV. Inspection Agency Verification. This section must be completed only if application is being made for a standard airworthiness certificate in accordance with 14 CFR § 21.183(d). This section must be left blank for all other certification actions.

> **Note:** 14 CFR § 21.183(d)(2) states that an experimentally certificated aircraft that previously had been issued a different airworthiness certificate under 14 CFR § 21.183, and is being returned to the standard airworthiness category, is exempt from the 100-hour inspection set forth in
> * 14 CFR § 43.15. For used aircraft and surplus aircraft of the U.S. Armed Forces, the FAA may accept a previously performed inspection in lieu of a 100-hour inspection that meets the requirements set forth in appendix B to this order. Refer to paragraph 321 of this order for further information. *

(5) 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. Representatives of the FAA authorized under 14 CFR part 183 are not permitted to issue experimental airworthiness certificates for Unmanned aircraft.

(a) Check all applicable blocks in items A and B.

(b) MIDO/FSDO. An ASI must enter the appropriate MIDO or FSDO office designation (that is, the current MIDO/FSDO or branch identifier). Designees and ODA manufacturers must enter the designation of the MIDO or FSDO office geographically responsible for monitoring their activities.

c. Section C.

(1) This section is applicable for a special flight permit for purposes other than production flight testing.

(a) 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.

(b) For production flight testing, enter "N/A" in both spaces.

(c) For all purposes listed in 14 CFR § 21.25(b)(1) through (7), see paragraph 4012 of this order.

(d) For all other special categories, enter "N/A" in both spaces.

(2) When the aircraft is to be flown outside the United States, enter "Subject to D(2) on reverse side" in section C on the face side of the special airworthiness certificate.

d. Section D. This section is applicable to all categories and purposes except production flight testing. If the purpose is production flight testing of other than light-sport category aircraft, enter "N/A" in all spaces. For production flight testing of light-sport category aircraft, section D should include the registration number, aircraft serial number, and aircraft model. For all other categories and purposes, information to complete the entries in this section would be contained in section I of the application for airworthiness certificate.

e. Section E.

(1) Date of Issuance. Enter the date the certificate is issued. However, in those cases where a certificate is being exchanged or replaced, enter the date of the original certificate and insert the letter "E" or "R".

(2) Expiry. Enter the date of expiry if the application is for an experimental or special flight permit. 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. The duration of light-sport, amateur-built, exhibition, and air racing experimental certificates is unlimited unless good cause exists to establish a specific period. Additionally, LSA that have been grandfathered into LSA experimental purpose by rule exception and that have preexisting exemptions have an expiration date. For a provisional certificate, the entry should be in accordance with 14 CFR § 21.217.

(3) Operating Limitations Dated _____ Are a Part of This Certificate. Enter the date of the operating limitations. Do not repeat or paraphrase limitations printed on the back of the certificate. Enter "N/A" if the limitations on the reverse side of the certificate are adequate for the purpose.

(4) Signature of FAA Representative: Designation or Office No. Complete this space for ALL categories and purposes. Entries are the same as those explained in paragraphs 802g and h of this order.

* **804. Instructions for Reviewing a Completed FAA Form 8130-15, Light-Sport Statement of Compliance.** This form is used for manufactured LSA including kit LSA. All information listed below applies to both, unless otherwise indicated. The manufacturer or authorized agent must complete and sign this form. Authorization for an agent's signature must be in writing from the manufacturer and as specified in the manufacturer's quality system process documentation (quality manual).

a. Section I. Aircraft Identification. This section 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. For light-sport kit aircraft, the date of manufacture is the date the light-sport kit was completed by its manufacturer. This section also contains boxes that must be completed for class and type LSA as manufactured.

b. Section II. Applicable User Manuals.

(1) Consensus Standard(s). The FAA-accepted consensus standard for the design and performance of the aircraft must be listed in this block. For example, the entry would be "ASTM F2245-04 (design and performance)." Any other applicable consensus standards not referenced elsewhere on this form also must be listed here. For example, if the engine required a standard, the entry would be "ASTM F2339-04 (design and manufacture of reciprocating spark ignition engines)." If an airframe emergency parachute is installed, the entry would be "ASTM F2316-03 (airframe emergency parachute)." The title of the standard will also be included. For kit-built aircraft, this block also must contain the manufacturer-provided assembly instructions and the consensus standard for the design and performance and assembly instructions.

> **Note:** On FAA Form 8130-15 and all LSA documentation where FAA-accepted consensus standards are identified, the FAA-accepted consensus standard applicable at the time the aircraft was manufactured must be listed. There is a period of time where previous revisions are acceptable. Either the previous revision or the later revision may be used during this period of time, and is contingent on the manufacturer's build (block 4) date, and the "not to exceed" date given in the NOA published in the Federal Register. A matrix of FAA-accepted consensus standards and NOA information is located on the FAA website under Aircraft, General Aviation & Recreational Aircraft, LSA, sub-category standards. Further information on the FAA-accepted consensus standards may be obtained by querying "NOA" on the FAA website. Additionally, the same consensus standards can cover more than one topic and may be listed more than once.

(2) Aircraft operating instructions. This block must list the specific title or company identifier for the AOI provided with the LSA or light-sport kit, including the date and when applicable, the revision level. The block also must contain the FAA-accepted consensus standard used to conform the AOI.

(3) Aircraft Maintenance and Inspection Procedures. This block must list the specific title or company identifier for the Aircraft Maintenance and Inspection Procedures provided with the LSA or light-sport kit, including the date and when applicable, the revision level. The block also must contain the FAA-accepted consensus standard used to develop the maintenance and inspection procedures.

(4) Aircraft Flight Training Supplement. This block must list the specific title or company identifier for the Aircraft Flight Training Supplement provided with the LSA or light-sport kit, including the date and when applicable, the revision level. The block also must contain the FAA-accepted consensus standard used to develop the supplement. The manufacturer may choose to include the Aircraft Flight Training Supplement as a part of, or a section within, the AOI. If so, a statement to that effect must be entered in this block.

c. Section III. Manufacturer's Process Documents.

(1) Comments. This block will provide any additional information not contained elsewhere on the form. It may be used to expand on the information in the Consensus Standard(s) block in Section II or to provide other information the manufacturer or the FAA deems necessary. For all LSA SOCs (except for first of make and/or model), this block should be used to provide evidence that an aircraft of the same make and model was issued a U.S. special airworthiness certificate in the light-sport category. When the LSA SOC is for the manufacturer's first of make and/or model, evidence of a previously issued U.S. special airworthiness certificate is omitted, and the statement "FIRST OF MAKE AND/OR MODEL" is included. The "first of make and/or model" statement must be used on SOCs when applicable, and only for special LSA category certification. For kit LSA only, there must be the manufacturer's statement identifying the kit assembly instructions, including the date and revision level, that meet the applicable consensus standard noted.

(2) Manufacturer's Quality Assurance System. This block must provide the specific title or company identifier for the company's quality assurance system used in the production of the LSA or light-sport kit, including the date and the revision level. The block also must contain the FAA-accepted consensus standard used to conform the quality assurance system.

(3) Manufacturer's Continued Airworthiness System. This block must provide the specific title or company identifier for the company's continued airworthiness system used by the company to support the aircraft, including the date and when applicable, the revision level. The block also must contain the FAA-accepted consensus standard used to conform the continued airworthiness system.

d. Section IV. Manufacturer's Certification.

(1) This section must contain the manufacturer's certifying statement as printed on the form including the following:

(a) Aircraft or kit serial number in the blank provided.

* (b) For kit LSA, the word “aircraft” in the first sentence (right before “serial number”) and in the second sentence “aircraft” (right before “was”) must be lined through and the word “kit” added above it using permanent ink.

(c) For kit LSA, the following words will also be lined through: “(3) was ground and flight tested successfully and (4) is in a condition for safe operation.” (See figure 4-20 of this order, Sample FAA Form 8130-15.)

(2) This section must contain the name and title of the manufacturer’s chief executive officer or chief quality officer, and/or the manufacturer’s authorized agent who complete and sign this form.

(a) Authorization for an agent’s signature will be in writing from the manufacturer with all authorized signatory names and titles specified within the manufacturer’s quality system process documentation (quality manual). In some cases the manufacturer’s quality assurance system will require two signatures, one at the production facility and one for any precertification work to include reassembly after transport, shipment, and/or flight testing, assembly, and installations. This also must have signatory authorization by names and titles within the manufacturer’s quality system process documentation.

(b) The kit LSA assembler can not sign or amend the Form 8130-15. *

805. Completion of FAA Form 8130-4.

a. FAA Form 8130-4 must be filled out in duplicate. The original remains with the product and the duplicate is forwarded to AFS-750.

b. Place the Export Certificate Number Assignment Card number in the No. block at the top right corner of the form.

c. In the space provided in the certifying statement, enter the information identified in accordance with note (1) at the bottom of FAA Form 8130-4.

d. Product, manufacturer, model, etc., items are self-explanatory.

e. In the Exceptions block enter any noncompliance(s) to type design, requirements for the importing country, and the addition of any temporary installations required for delivery. If there are no exceptions, enter the word “None.”

f. If other information is deemed necessary, enter “Additional Information” in the Exceptions block. For example, some importing countries want a statement that the product complies with a type design approved by their country’s CAA.

g. The rest of the items are self-explanatory.

h. Lost FAA Form 8130-4.

(1) When FAA Form 8130-4 has been declared lost, the following information is required:

(a) A written statement from the importer stating the tag has been lost; and

(b) Evidence of previous export, traceable by invoice to model and serial number from the exporter.

(2) When these actions have been taken, a copy of the original form can be provided, if available. The replacement approval or a copy of the original lost approval must have an original signature and the same data as the lost FAA Form 8130-4.

806. Completion of FAA Form 8130-1. The applicant must complete part I of the application for aircraft. The applicant may complete part II of the application for aircraft engines, propellers, and articles but these applications may also be made orally. Part III is for FAA use only. All items are self-explanatory except as noted. Instructions for completion of parts I and II are used to help the FAA review the form as submitted by the applicant. A copy of the completed FAA Form 8130-1 must be filed in the district office and retained for a minimum of 2 years, then destroyed in accordance with standard agency procedures. Chapter 5 of this order contains further information on the use of this form.

a. Export Certificate No. This block is left blank by the applicant. The FAA must enter the serial number from Aeronautical Center Form 8050-72.

b. Part I (For Aircraft).

(1) Item Nos. 1-4. Self-explanatory.

(2) Item No. 5. Description of Product(s). Self-explanatory, except as follows:

(a) For an aircraft not under U.S. registry, insert in the Identification No. block the nationality and registration marks supplied by the state of registry or intended registry that are displayed on the aircraft. For U.S.-registered aircraft, insert the ID marks as assigned under 14 CFR part 47. Any questions concerning the marking requirements of the importing country/jurisdiction must be resolved between the exporter/importer and the CAA of that country/jurisdiction.

(b) Under FAA Spec. No., enter the pertinent specification number or the TCDS number, as applicable.

(c) For new and used aircraft, enter in the Operating Time (Hours) block the number of operating hours since the annual type inspection, and the total time-in-service. Aircraft engines and propellers are no longer required to be new, as long as the importing country/jurisdiction 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 true copy of documents stating that the product will be acceptable with the deviations listed, as received from the CAA of the importing country/jurisdiction.

(4) Item No. 8. This item provides a means of establishing the date the ownership of the stated product 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. It is recommended that all products be appropriately treated for corrosion and damage prevention.

(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. In addition, list the documents that the regulation requires to be submitted with the application under the provisions of 14 CFR § 21.327. After review by the FAA, the documents required to be furnished to the importing country/jurisdiction under 14 CFR § 21.335 will be supplied to the applicant.

(7) Item No. 11. The authorized representative of the exporter must sign this certificate in permanent blue or black ink and ensure it is dated. The typed name, title, and signature must be legible.

c. Part II (For Aircraft Engines, Propellers, and Articles). If not making application orally, complete as follows:

(1) Item Nos. 12-14. Self-explanatory.

(2) Item No. 15. Use the instructions for entering eligibility information from FAA Order 8130.21.

Note: No entry is required in the FAA Spec No. box.

(3) Item No. 16. Self-explanatory.

(4) Item No. 17. This item provides for the description and listing of the aircraft engine, propellers, and articles being exported. Select the first check box and list the aircraft engine, propellers, and articles in the space provided. If the entire list of the aircraft engine, propellers, and articles cannot fit in the space provided, select the second check box and, on the line provided, specifically identify the exporter's shipping document covering the aircraft engine, propellers, and articles concerned. Attach a copy of this document to the form. In either case, if more than one type of aircraft engine, propeller, and article is involved, they are to be listed according to the aircraft engine, propeller, or article for which they are eligible. List the name, part number (or equivalent means of identifying each physical aircraft engine, propeller, or article), and quantity of each article.

(5) Item No. 18. This item is self-explanatory. If the No box is checked, explain the noncompliance in item No. 10 and attach the original, or a true copy, of the documents stating that the product will be acceptable with the deviation(s) listed, as received from the CAA of the importing country/jurisdiction.

(6) Item No. 19. This item provides a means of documenting the preservation and packaging methods used to protect against corrosion and damage. It is recommended that all products be appropriately treated for corrosion and damage prevention.

(7) Item No. 20. The authorized representative of the exporter must date and sign this certification in permanent blue or black ink above the typed or printed name and title.

d. Part III. Approval (For FAA Use Only).

(1) Item No. 21. The ASI or designee's signature must be legible and in permanent blue or black ink above the typed name (a copy, fax, or PDF copy with an original signature may be submitted). The number should be the office identifier or designee designation number. ODA manufacturers must use their authorization number as assigned by the FAA.

(2) Item No. 22. The ASI or authorized designee must enter the quantity of FAA Forms 8130-3 issued for the articles described in part II of the form.

(3) Item No. 23. A completed spot check of the file is indicated by the signature of the supervising ASI in permanent blue or black ink above the typed name. The district or regional office number and date must be entered in the appropriate boxes.

807. Examination, Review, and Routing of Certification Files.

a. It is the responsibility of all ASIs and designees to examine in detail each certification file processed to ensure accuracy, completeness, legibility, and compliance with applicable requirements, including all necessary attachments. The following list represents the primary data that must be retained in the permanent files. For aircraft, these documents must be submitted to AFS-750 no later than 30 days after receipt by the field offices. Do not include any documentation that is not required in support of the certification action.

(1) Airworthiness Certificates.

(a) The original FAA Form 8130-6.

* **Note:** The original notarized letter or a true copy of the original notarized letter authorizing an agent to sign for the registered owner, if applicable, must be included in the certification file forwarded to AFS-750. *

(b) Applications for special flight permits for operation of overweight aircraft only in accordance with 14 CFR § 21.197(b).

(c) Applications for an experimental airworthiness certificate must include the data required by 14 CFR § 21.193, as applicable.

(d) The original FAA Form 8130-9.

* (e) A copy of FAA Form 8130-31 or any other data, drawings, photographs, etc., as applicable. *

(f) A copy of FAA Form 337, as applicable. Do not include referenced data forming the basis for approval of the repair or alteration.

(g) A copy of FAA Form 8100-2, or FAA Form 8130-7, as applicable. When FAA Form 8130-7 is issued as a special flight permit, submit only those copies which permit operation of overweight aircraft in accordance with 14 CFR § 21.197(b). Superseded, terminated, or canceled airworthiness certificates must be included if a recurrent certificate is issued.

(h) A copy of operating limitations, if issued.

(i) A copy of the checklist and inspection record for aircraft built from spare and surplus articles.

(j) The foreign airworthiness certificate for imported aircraft, as applicable.

* (k) FAA Form 8130-15, Statement of Compliance for special light-sport category and kit experimental LSA.

(l) A copy of the manufacturer's production flight test record(s) for special light-sport category.

(m) FAA Form 8130-12.

(n) A copy of the applicant's program letter. *

(2) Export of an Aircraft.

(a) The original FAA Form 8130-1.

(b) The statement of acceptance from an importing country/jurisdiction listing the specific noncompliance(s), as applicable.

(c) A copy of FAA Form 8130-4, GPO pad only.

(d) The original Aeronautical Center Form 8050-72.

(3) Export of Aircraft Engines, Propellers, and Articles. Retain the following in the district or regional office. DMIRs and ODAs may retain the records at their facility as long as their authorization is valid. DARs shall retain a copy of the records at a location acceptable to the district or regional managing office.

(a) The original application (if made in writing for articles) along with any data showing acceptance of deviations from the CAA of the country/jurisdiction of import.

(b) A copy of FAA Form 8130-3.

(c) The original FAA Form 8100-1.

(4) Import of a Product Manufactured in a Bilateral Country. Retain the following in the district or regional office:

(a) Aircraft. The Export C of A issued by the CAA of the State of Manufacture that states the aircraft conforms to its type design and is in a condition for safe operation.

(b) Aircraft Engine and Propeller. The certification from the aircraft State of Manufacture for engines and propellers that was submitted when deemed they were a part of, or were to be installed on, an aircraft.

Note: A certification may be accepted from a third party country when the acceptance is permitted by the BAA or BASA IPA.

(c) The applicable documents listed in paragraph 807a(1) of this order.

b. In addition to the above-mentioned data, the district or regional offices must maintain copies of any other data they deem appropriate to substantiate the certification of the product and/or article. This includes FAA Form 8100-1, eligibility statements, program letters, etc.

c. The appropriate district or regional office must ensure that all airworthiness actions processed by FAA designees are submitted to the district or regional office for review prior to transmittal to AFS-750.

Appendix D. Acronyms

AC	Advisory Circular
ACO	Aircraft Certification Office
AD	Airworthiness Directive
AEG	Aircraft Evaluation Group
AOI	Aircraft Operating Instructions
ASI	Aviation Safety Inspector
ATF	Bureau of Alcohol, Tobacco, and Firearms
BAA	Bilateral Airworthiness Agreement
BASA	Bilateral Aviation Safety Agreement
CAA	Civil Aviation Authority
CAGE	Commercial and Government Entity
CAM	Civil Aeronautics Manual
CAMP	Continuous Airworthiness Maintenance Program
CAR	Civil Air Regulation
CFR	Code of Federal Regulations
14 CFR	Title 14 of the Code of Federal Regulations
CG	Center of Gravity
CHDO	Certificate Holding District Office
CMACO	Certificate Management Aircraft Certification Office
CMO	Certificate Management Office
CMU	Certificate Management Unit
C of A	Certificate of Airworthiness
CO	Certificating Office
DA	Department of the Army
DAR	Designated Airworthiness Representative
DD 1427	DOD Form 1427, Notice of Award, Statement, and Release Document
DER	Designated Engineering Representative
DGAC	Direction Générale de l'Aviation Civile
DMIR	Designated Manufacturing Inspection Representative
DOD	Department of Defense
DOT	Department of Transportation
DRMO	Defense Reutilization Marketing Office
EAA	Experimental Aircraft Association
EASA	European Aviation Safety Agency
ELSA	Experimental Light-Sport Aircraft
ELT	Emergency Locator Transmitter
FAA	Federal Aviation Administration
FSIMS	Flight Standards Information Management System
FSCAP	Flight Safety-Critical Aircraft Part
FSDO	Flight Standards District Office
GPO	Government Printing Office
ICAO	International Civil Aviation Organization
ICAW	Instructions for Continued Airworthiness
ID	Identification

IFO	International Field Office
IFR	Instrument Flight Rules
IPA	Implementation Procedures for Airworthiness
IPC	Illustrated Parts Catalog
JAR	Joint Aviation Requirements
LBA	Luftfahrt-Bundesamt
LOA	Letter of Authorization
LSA	Light-Sport Aircraft
MCAI	Mandatory Continuing Airworthiness Information
MIDO	Manufacturing Inspection District Office
MIO	Manufacturing Inspection Office
MIP	Maintenance Implementation Procedure
MISO	Manufacturing Inspection Satellite Office
NOA	Notice of Availability
NTSB	National Transportation Safety Board
ODA	Organization Designation Authorization
OMT	Organization Management Team
PAH	Production Approval Holder
PC	Production Certificate
PCA	Primary Category Aircraft
PI	Principal Inspector
PMA	Parts Manufacturer Approval
* **POH**	Pilot’s Operating Handbook *
R&D	Research and Development
RPM	Revolutions Per Minute
SFA	Special Flight Authorization
SIF	Special Interest Flight
SFAR	Special Federal Aviation Regulation
SOC	Statement of Compliance
STC	Supplemental Type Certificate
49 U.S.C.	Title 49, United States Code
TC	Type Certificate
TCCA	Transport Canada Civil Aviation
TCDS	Type Certificate Data Sheet
TPA	Turbine-Powered Aircraft
TSO	Technical Standard Order
U.S.	United States
VFR	Visual Flight Rules
VLA	Very Light Aircraft

Appendix E. Definitions

a. Aircraft Category. The term "category," as used with respect to the certification of aircraft, means a grouping of aircraft based on their intended use or operating limitations, for example, normal, utility, acrobatic, or primary. For purposes of this order, gliders and balloons will be referred to as categories rather than classifications.

b. Aircraft Classification. The term "classification," as used with respect to the certification of aircraft, means a broad grouping of aircraft having similar characteristics of propulsion, flight, or landing, that is, airplane, rotorcraft, glider, or balloon.

c. Amateur-Built Aircraft. Sometimes referred to as home-built aircraft. These aircraft have been issued an experimental certificate under Title 14 of the Code of Federal Regulations (14 CFR) § 21.191(g).

d. Authorized Instructor. A person who holds a valid ground instructor certificate under 14 CFR part 61 or part 142, or a person who holds a current flight instructor certificate issued under 14 CFR part 61.

e. Bilateral Agreement. The term "bilateral agreement" means an executive agreement between the U.S. Government and the government of another country which facilitates the airworthiness approval or acceptance of civil aeronautical products exported from one country (contracting state) to the other. These agreements are not trade agreements, but rather technical cooperation agreements. These agreements are intended to provide a framework for the airworthiness authority of the importing country to give maximum practicable credit to airworthiness certification functions performed by the airworthiness authority of the exporting country using its own certification system.

f. Category of Special Airworthiness Certificates. The term "category" also is used to identify the six specific certification processes and the seven types of special airworthiness certificates issued.

g. Certification Office. The FAA certification office at which the applicant applies for airworthiness certification or related approval: Manufacturing Inspection District Office (MIDO), Manufacturing Inspection Satellite Office (MISO), Flight Standards District Office (FSDO), International Field Office (IFO), Certificate Management Office (CMO), or Certificate Management Unit (CMU).

h. Classification of Airworthiness Certificates. The term "classification" also is used to distinguish between the standard and special airworthiness certification processes and certificates.

i. 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.

* **j. Continued Airworthiness System.** For the purpose of eligibility in certificating Light-Sport Aircraft (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. *

* **k. 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. *

* **l. U.S. Department of Defense (DOD) Commercial and Government Entity (CAGE) Code.** The DOD CAGE code identifies the manufacturer of the article or product produced under government contract. *

* **m. Dual-Use Product or Article.** Any product or article manufactured for civil application by a production approval holder (PAH) authorized by the 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 which currently holds a normal, utility, acrobatic, or transport type certificate (TC) issued under 14 CFR part 21, Certification Procedures for Products and Parts. *

* **n. Exception.** A case in which a rule, general principle, etc., does not apply. *

* **o. Exemption.** Approval to be free from current regulations in 14 CFR. *

* **p. Experimental Light-Sport Aircraft.** An aircraft issued an experimental operating light-sport category aircraft airworthiness certificate. Experimental Light-Sport Aircraft (ELSA) applies to those aircraft for which the certificate is issued regardless of the purpose within 14 CFR § 21.191(i). *

* **q. Export.** When a product or article is found to be airworthy, meets the special conditions of the importing country/jurisdiction, and is transferred from one civil aviation authority's (CAA) regulatory authority to another CAA's regulatory authority. *

* **r. Flight Safety-Critical Aircraft Part.** 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. *

* **s. Heavy Ultralight.** An ultralight vehicle that does not meet 14 CFR part 103 requirements because of its weight, speed, or fuel capacity. It also may not meet the requirements for an experimental operating amateur-built airworthiness certificate as described in 14 CFR § 21.191(g). *

* **t. Light-Sport Aircraft (LSA).** A category of simple, very basic, small, lightweight, low-performance aircraft. It is an aircraft other than a helicopter or powered-lift. Also see definition in 14 CFR § 1.1. *

* **u. Light-Sport Category.** With respect to aircraft certification, the light-sport category adds a group of aircraft based on the definition in 14 CFR § 1.1, limiting size, weight, and speed, and how the aircraft is equipped. This category contains four classes of aircraft: airplanes and gliders, powered parachutes, weight-shift-control, and lighter-than-air aircraft. *

* **v. 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 Light-Sport Aircraft (LSA) airworthiness certificate. Once built, the owner-assembled kit aircraft is eligible for the experimental, operating LSA certificate. *

* **w. Manufacturer.** A person who causes a product or article thereof to be produced. *

* **x. 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. *

* **y. 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 type design or production approval holder (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. *

* **z. Part Out.** To remove an article from or disassemble an aircraft, engine, propeller, or article(s). *

* **aa. Powered Parachute.** A powered aircraft comprised of a flexible or semi-rigid wing connected to a fuselage so that the wing is not in position for flight until the aircraft is in motion. The fuselage of a powered parachute contains the aircraft engine and a seat for each occupant, and is attached to the aircraft's landing gear. *

* **bb. Pre-certification.** An aircraft's state of condition before the issuance of an airworthiness certificate for that aircraft. *

* **cc. Production Approval Holder (PAH).** A holder of a production certificate (PC), a parts manufacturer approval (PMA), or a technical standard order (TSO) authorization who controls the design and quality of a product or article thereof. *

* **dd. Light-Sport Aircraft (LSA) Statement of Compliance.** A signed statement made by the aircraft manufacturer stating that the aircraft (specific by serial number) was designed, manufactured, and is supported with a monitoring and correction of safety-of-flight within a continued airworthiness system, in accordance with the appropriate consensus standards. *

* **ee. Two-Place Ultralight Training Vehicle.** This is a two-place, noncertificated vehicle operated under a valid training exemption to 14 CFR part 103. *

* **ff. Ultralight-like Vehicle.** A vehicle that is similar to an ultralight but does not meet the definition or requirements of 14 CFR § 103.1. *

* **gg. Ultralight Vehicle.** As defined in 14 CFR part 103, an ultralight vehicle is a vehicle that— *

(1) Is used or intended to be used for manned operation in the air by a single occupant;

(2) Is used or intended to be used for recreation or sport purposes only;

(3) Does not have a U.S. or foreign airworthiness certificate; and

(4) If un-powered weighs less than 155 pounds; or

(5) If powered, weighs less than 254 pounds empty weight, excluding floats and safety devices intended for deployment in a potentially catastrophic situation; has a fuel capacity not exceeding 5 U.S. gallons; is not capable of more than 55 knots calibrated airspeed at full power in level flight; and has a power-off stall speed that does not exceed 24 knots calibrated airspeed.

* **hh. Weight-Shift Control Aircraft.** A powered aircraft with a framed pivoting wing and a fuselage controllable only in pitch and roll by the pilot's ability to change the aircraft's center of gravity with respect to the wing. Flight control of the aircraft depends on the wing's ability to flexibly deform rather than the use of control surfaces. *